

# Untitled-Copy1

June 9, 2022

## Stock Market Analysis And Price Prediction

### 0.0.1 Problem statement:

Pick the stocks from S&P 500 which gives us the best returns after 1 year. Give details and information regarding the stocks which are expected to give good returns that will help us choose the right and safe stocks for our portfolio.

### 0.0.2 Data Overview

Taken data from <https://www.kaggle.com/code/azmainmorshed/stock-price-analysis/data>

#### Data Information

Historical stock market data for current S&P 500 companies, from 2014-2017. Each day's trading is represented in a record which includes the ticker name, volume, high, low, open and close prices.

#### Stock Market Analysis

This is done under two headings Fundamental analysis and Technical analysis. On the basis of the current business environment and financial performance, analyzing the company's future stock prices is the fundamental analysis and the Technical analysis is identifying the trends in the market with the help of the charts and statistical graphs. There are other factors like news, interest rates, economy, politics, etc which can influence the markets but are not easy to predict.

#### Business problem

Pick the stocks from S&P 500 which gives us the best return in a year. We are looking for atleast 10% increase in the price of the stock, since even non risky investments like FD give around 9% interest per year. Get the best profit percentage to expect. Further remove risky stocks who are even though expected to give good profits based on criteria like Decrease in Institution investors etc.

#### Business constraints

No low-latency requirement

Interpretability is important so as to explain why we are suggesting a specific stock.

Errors can be very costly.

We should be giving lower limit or stoploss.

Percentage of increase to each stock is needed.

Performance metric

Stockmarket closing prices are in float hence will come under regression problems. We will be using 2 regression performance metric most suited for our problem.

Mean Squared Error (MSE)

Mean Squared Error is a popular error metric for regression problems. The MSE is the mean of the squared differences between predicted and expected target values in a data set.

$$\text{MSE} = 1 / N * (\text{summation for } i \text{ to } N (y_i - y_{i\_pred})^2)$$

Where  $y_i$  is the  $i$ th expected value in the dataset and  $y_{i\_pred}$  is the  $i$ th predicted value predicted by us.

Mean absolute percentage error (MAPE)

The mean absolute percentage error (MAPE) is a measure of how accurate a forecast system is.

$$\text{MAPE} = 100\% / N * (\text{summation for } i \text{ to } N (y_i - y_{i\_pred} / y_i))$$

Mean absolute percentage error is commonly used as a loss function for regression problems and in model evaluation, because of its very intuitive interpretation in terms of relative error.

```
[1]: import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
import plotly.express as px
import plotly
import itertools
```

```
[2]: import plotly.io as pio
pio.renderers
```

[2]: Renderers configuration

```
-----
Default renderer: 'plotly_mimetype+notebook'
Available renderers:
['plotly_mimetype', 'jupyterlab', 'interact', 'vscode',
 'notebook', 'notebook_connected', 'kaggle', 'azure', 'colab',
 'cocalc', 'databricks', 'json', 'png', 'jpeg', 'jpg', 'svg',
 'pdf', 'browser', 'firefox', 'chrome', 'chromium', 'iframe',
 'iframe_connected', 'sphinx_gallery', 'sphinx_gallery_png']
```

```
[3]: from tensorflow.keras.optimizers import Adam, RMSprop, SGD
from tensorflow.keras.wrappers.scikit_learn import KerasClassifier
from tensorflow.keras.wrappers.scikit_learn import KerasRegressor
from sklearn.model_selection import GridSearchCV
import tensorflow as tf
from tensorflow.keras.models import Sequential
from tensorflow.keras.layers import Dense
```

```
from tensorflow.keras.layers import LSTM
from sklearn.preprocessing import MinMaxScaler
from keras.layers import Dense, LSTM
```

```
[4]: plotly.offline.init_notebook_mode()
```

```
[5]: data = pd.read_csv("stock_prices.csv")
```

Reading Data

First we print and take a look the dataset provided to us

```
[6]: print(data.head())
```

	symbol	date	open	high	low	close	volume
0	AAL	2014-01-02	25.0700	25.8200	25.0600	25.3600	8998943
1	AAPL	2014-01-02	79.3828	79.5756	78.8601	79.0185	58791957
2	AAP	2014-01-02	110.3600	111.8800	109.2900	109.7400	542711
3	ABBV	2014-01-02	52.1200	52.3300	51.5200	51.9800	4569061
4	ABC	2014-01-02	70.1100	70.2300	69.4800	69.8900	1148391

```
[7]: data.tail()
```

```
[7]:
```

	symbol	date	open	high	low	close	volume
497467	XYL	2017-12-29	68.53	68.80	67.92	68.20	1046677
497468	YUM	2017-12-29	82.64	82.71	81.59	81.61	1347613
497469	ZBH	2017-12-29	121.75	121.95	120.62	120.67	1023624
497470	ZION	2017-12-29	51.28	51.55	50.81	50.83	1261916
497471	ZTS	2017-12-29	72.55	72.76	72.04	72.04	1704122

Observation :

There are 497472 rows in the dataframe

There are 7 collumns in the the dataframe excluding the index

The collumns are symbol, date , open, high, low, close, volume

Each row depicts the symbol i.e. short form of name of stock, date and the respective opening price(open), high price(high) , low price(low), closing price(close) and volume on that date.

Data set column analysis:

Symbol - stock symbol is an unique abbreviation used to identify publicly traded shares of a particular stock on a particular stock exchange

date - date on which those stocks are being traded

open - Open is the price at which the stock starts on a specific day

high - The highest price reached by a stock in a specific day

low - The lowest price reached by a stock in a specific day

close - The price at which the specific stock closes

Volume - Volume measures the number of shares traded in a stock or contracts traded in futures or options

Exploratory Data Analysis(EDA)

A brief description of the dataset

```
[8]: data.describe()
```

```
[8]:
```

	open	high	low	close \
count	497461.000000	497464.000000	497464.000000	497472.000000
mean	86.352275	87.132562	85.552467	86.369082
std	101.471228	102.312062	100.570957	101.472407
min	1.620000	1.690000	1.500000	1.590000
25%	41.690000	42.090000	41.280000	41.703750
50%	64.970000	65.560000	64.353700	64.980000
75%	98.410000	99.230000	97.580000	98.420000
max	2044.000000	2067.990000	2035.110000	2049.000000

	volume
count	4.974720e+05
mean	4.253611e+06
std	8.232139e+06
min	0.000000e+00
25%	1.080166e+06
50%	2.084896e+06
75%	4.271928e+06
max	6.182376e+08

```
[9]: data.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 497472 entries, 0 to 497471
Data columns (total 7 columns):
#   Column  Non-Null Count  Dtype  
---  -
0   symbol  497472 non-null   object 
1   date    497472 non-null   object 
2   open    497461 non-null   float64
3   high    497464 non-null   float64
4   low     497464 non-null   float64
5   close   497472 non-null   float64
6   volume  497472 non-null   int64  
dtypes: float64(4), int64(1), object(2)
memory usage: 26.6+ MB
```

Data Cleaning

Checking for Null values

```
[10]: dfnul = data[data.isna().any(axis=1)]
```

```
[11]: print(dfnul)
```

	symbol	date	open	high	low	close	volume
166348	VRTX	2015-05-12	NaN	NaN	NaN	124.0800	569747
175557	REGN	2015-06-09	NaN	NaN	NaN	526.0900	12135
182011	WRK	2015-06-26	NaN	NaN	NaN	61.9000	100
188547	DHR	2015-07-17	NaN	88.76	88.24	88.7200	2056819
188578	ES	2015-07-17	NaN	48.49	47.85	47.9200	1246786
188760	O	2015-07-17	NaN	47.31	46.83	46.9900	1229513
249223	DHR	2016-01-12	NaN	NaN	NaN	88.5500	0
249438	O	2016-01-12	NaN	NaN	NaN	52.4300	0
278801	UA	2016-04-07	NaN	NaN	NaN	41.5600	0
308365	FTV	2016-07-01	NaN	NaN	NaN	49.5400	0
442107	BHF	2017-07-26	NaN	NaN	NaN	69.0842	3

Observation :

The above found 11 rows contained null values. But in all of them the the Close and Volume are not null meaning the null values is because the stock did not trade on that day. Also we will mostly be using Volume and Close column values mostly so we will not be concerned by the null value at the moment.

<li>If needed we can replace the null values with the previous day values.</li>

```
[12]: data2 = data.sort_values(by=['symbol'],)
```

Sorted the data based on symbols and stored it in dataframe data2. This ways its easier to see how a stock changes day after day.

```
[13]: data2
```

```
[13]:
```

	symbol	date	open	high	low	close	volume
492480	A	2017-12-15	66.88	67.86	66.6900	67.61	2871925
283878	A	2016-04-22	41.98	41.98	41.5500	41.80	1396272
284375	A	2016-04-25	41.71	41.86	41.5300	41.63	1500449
420532	A	2017-05-24	58.50	59.34	58.0725	59.23	4105470
284872	A	2016-04-26	41.82	41.88	41.2600	41.32	1868970
...	...	...	...	...	...	...	...
41093	ZTS	2014-05-05	30.42	30.63	30.1100	30.53	4425246
320125	ZTS	2016-08-04	51.53	51.99	51.1881	51.41	4520261
150239	ZTS	2015-03-25	47.17	47.38	46.2200	46.27	4148401
394938	ZTS	2017-03-10	53.70	53.76	53.1950	53.34	2833539
497471	ZTS	2017-12-29	72.55	72.76	72.0400	72.04	1704122

[497472 rows x 7 columns]

Changing the date values to dateval type inorder to be able to sort the date and perform some other arithmetic operations

```
[14]: data2['date'] = pd.to_datetime(data2['date'])
```

```
[15]: data2 = data2.sort_values(by=['symbol','date'], ascending=True)
data2.head()
```

```
[15]:
```

	symbol	date	open	high	low	close	volume
57	A	2014-01-02	57.10	57.100	56.15	56.21	1916160
540	A	2014-01-03	56.39	57.345	56.26	56.92	1866651
1023	A	2014-01-06	57.40	57.700	56.56	56.64	1777472
1506	A	2014-01-07	56.95	57.630	56.93	57.45	1463208
1989	A	2014-01-08	57.33	58.540	57.17	58.39	2659468

Adding New Collums for Interpretability and Analysis

Adding a new feature/column called day. This column will tell us the day of the respective date. Knowing the day we can analyze which day the volume is highest, which day volatility is high etc which are very important for making buy sell decisions on a stock

```
[16]: data2['day'] = data2['date'].dt.day_name()
```

```
[17]: data2.head()
```

```
[17]:
```

	symbol	date	open	high	low	close	volume	day
57	A	2014-01-02	57.10	57.100	56.15	56.21	1916160	Thursday
540	A	2014-01-03	56.39	57.345	56.26	56.92	1866651	Friday
1023	A	2014-01-06	57.40	57.700	56.56	56.64	1777472	Monday
1506	A	2014-01-07	56.95	57.630	56.93	57.45	1463208	Tuesday
1989	A	2014-01-08	57.33	58.540	57.17	58.39	2659468	Wednesday

```
[18]: data2 = data2.reset_index(drop=True)
data2.head()
```

```
[18]:
```

	symbol	date	open	high	low	close	volume	day
0	A	2014-01-02	57.10	57.100	56.15	56.21	1916160	Thursday
1	A	2014-01-03	56.39	57.345	56.26	56.92	1866651	Friday
2	A	2014-01-06	57.40	57.700	56.56	56.64	1777472	Monday
3	A	2014-01-07	56.95	57.630	56.93	57.45	1463208	Tuesday
4	A	2014-01-08	57.33	58.540	57.17	58.39	2659468	Wednesday

Observation

The 5 working days (Week days) are now shown according to the respective dates.

Checking if all the companies have all 4 years of data

```
[19]: jan14close = data2[data2['date']== '2014-01-02']
jan14close.shape
```

```
[19]: (483, 8)
```

```
[20]: Dec14close = data2[data2['date']== '2014-12-31'].copy()  
Dec14close.shape
```

```
[20]: (488, 8)
```

```
[21]: jan15close = data2[data2['date']== '2015-01-02']  
jan15close.shape
```

```
[21]: (489, 8)
```

```
[22]: Dec15close = data2[data2['date']== '2015-12-31']  
Dec15close.shape
```

```
[22]: (495, 8)
```

```
[23]: jan16close = data2[data2['date']== '2016-01-04']  
jan16close.shape
```

```
[23]: (495, 8)
```

```
[24]: Dec16close = data2[data2['date']== '2016-12-30']  
Dec16close.shape
```

```
[24]: (499, 8)
```

```
[25]: jan17close = data2[data2['date']== '2017-01-03']  
jan17close.shape
```

```
[25]: (499, 8)
```

```
[26]: Dec17close = data2[data2['date']== '2017-12-29']  
Dec17close.shape
```

```
[26]: (505, 8)
```

#### Observation

The number of rows are different in all four years meaning some Companies may have gotten added into S&P and some may have been removed because they don't fit the criteria to be in the S&P. This means the newly added and removed stocks don't have complete data for 4 years.

#### Solution

We need adequate data in order to make good predictions. So stocks which don't have complete 4 years data are removed.

```
[27]: symbollist1 = jan14close['symbol'].tolist()
```

Collect all the stocks on 2014-01-02 and check if they are present in all the other years.

```
[28]: nootin = []
      for i in symbollist1:
          if i not in Dec14close['symbol'].values:
              nootin.append(i)
          if i not in jan15close['symbol'].values:
              nootin.append(i)
          if i not in Dec15close['symbol'].values:
              nootin.append(i)
          if i not in jan16close['symbol'].values:
              nootin.append(i)
          if i not in Dec16close['symbol'].values:
              nootin.append(i)
          if i not in jan17close['symbol'].values:
              nootin.append(i)
          if i not in Dec17close['symbol'].values:
              nootin.append(i)
      print(nootin)
```

```
[]
```

Observation

The above output shows that all the stocks present in 2014-01-02 are present in all 4 year or have complete 4 year data. So any stock (symbol) not present in 2014-01-02 is removed as they are bound to have incomplete data.

```
[29]: symbollist1 = pd.Series(symbollist1)
```

```
[30]: symbollist1
```

```
[30]: 0      A
      1     AAL
      2     AAP
      3    AAPL
      4    ABBV
      ...
      478   XYL
      479   YUM
      480   ZBH
      481   ZION
      482   ZTS
      Length: 483, dtype: object
```

Removing all stocks except for the 483 stocks present on 2014-01-02 for not having complete four year data.

```
[31]: data3 = data2[(data2['symbol'].isin(symbollist1.values))]
```



```
[32]: data3
```

```
[32]:
```

	symbol	date	open	high	low	close	volume	day
0	A	2014-01-02	57.10	57.100	56.15	56.21	1916160	Thursday
1	A	2014-01-03	56.39	57.345	56.26	56.92	1866651	Friday
2	A	2014-01-06	57.40	57.700	56.56	56.64	1777472	Monday
3	A	2014-01-07	56.95	57.630	56.93	57.45	1463208	Tuesday
4	A	2014-01-08	57.33	58.540	57.17	58.39	2659468	Wednesday
...	...	...	...	...	...	...	...	...
497467	ZTS	2017-12-22	72.30	72.370	71.79	71.99	1345683	Friday
497468	ZTS	2017-12-26	72.40	72.550	71.90	72.34	792134	Tuesday
497469	ZTS	2017-12-27	72.59	72.690	72.25	72.45	1159771	Wednesday
497470	ZTS	2017-12-28	72.49	72.600	72.14	72.39	710499	Thursday
497471	ZTS	2017-12-29	72.55	72.760	72.04	72.04	1704122	Friday

[486346 rows x 8 columns]

```
[33]: data3.info()
```

```
<class 'pandas.core.frame.DataFrame'>
Int64Index: 486346 entries, 0 to 497471
Data columns (total 8 columns):
#   Column  Non-Null Count  Dtype
---  -
0   symbol  486346 non-null   object
1   date    486346 non-null   datetime64[ns]
2   open    486339 non-null   float64
3   high    486342 non-null   float64
4   low     486342 non-null   float64
5   close   486346 non-null   float64
6   volume  486346 non-null   int64
7   day     486346 non-null   object
dtypes: datetime64[ns](1), float64(4), int64(1), object(2)
memory usage: 33.4+ MB
```

Checking the percentage of data remaining after removing stocks whose data is not available for all 4 years

```
[34]: (data3.size)/(data2.size)*100
```

```
[34]: 97.76349221664738
```

Observations

1.The total number of rows went down from 497472 to 486346 rows after we remove stocks who have incomplete data

2.The percentage of data left after removing the incomplete stocks is 97.76 %

Checking if the 483 stocks left have all the 1007 (Working days/Trading days) data.

```
[35]: count_df = data3.groupby(['symbol'])['symbol'].count()
```

```
[36]: count_dfnot = count_df[count_df != 1007]
count_dfnot
```

```
[36]: symbol
DHR      995
ES       997
ICE     1006
0        995
Name: symbol, dtype: int64
```

Observations

The above 4 stocks dont have data for all the 1007 trading days, So removing them.

```
[37]: data3 = data3[(data3.symbol != 'DHR') & (data3.symbol != 'ES') & (data3.symbol != 'ICE') & (data3.symbol != '0')]
```

```
[38]: (data3['symbol'].size*1.0)/(data2['symbol'].size*1.0)*100
```

```
[38]: 96.96083397658562
```

```
[39]: data3
```

```
[39]:
```

	symbol	date	open	high	low	close	volume	day
0	A	2014-01-02	57.10	57.100	56.15	56.21	1916160	Thursday
1	A	2014-01-03	56.39	57.345	56.26	56.92	1866651	Friday
2	A	2014-01-06	57.40	57.700	56.56	56.64	1777472	Monday
3	A	2014-01-07	56.95	57.630	56.93	57.45	1463208	Tuesday
4	A	2014-01-08	57.33	58.540	57.17	58.39	2659468	Wednesday
...	...	...	...	...	...	...	...	...
497467	ZTS	2017-12-22	72.30	72.370	71.79	71.99	1345683	Friday
497468	ZTS	2017-12-26	72.40	72.550	71.90	72.34	792134	Tuesday
497469	ZTS	2017-12-27	72.59	72.690	72.25	72.45	1159771	Wednesday
497470	ZTS	2017-12-28	72.49	72.600	72.14	72.39	710499	Thursday
497471	ZTS	2017-12-29	72.55	72.760	72.04	72.04	1704122	Friday

[482353 rows x 8 columns]

Observations

1.The total number of rows went down from 486346 to 482353 rows after we remove stocks who do not have all 1007 days data

2.The percentage of data left after removing the incomplete stocks is 96.96 %

Bivariate Analysis:Volume vs Day

it is inferred from the source

<https://moneymint.com/best-worst-weekdays-for-trading-in-stocks/#:~:text=According%20to%20a%20book%20>

that there is a connection between days of the week and volume of stock being traded. So lets plot and observe.

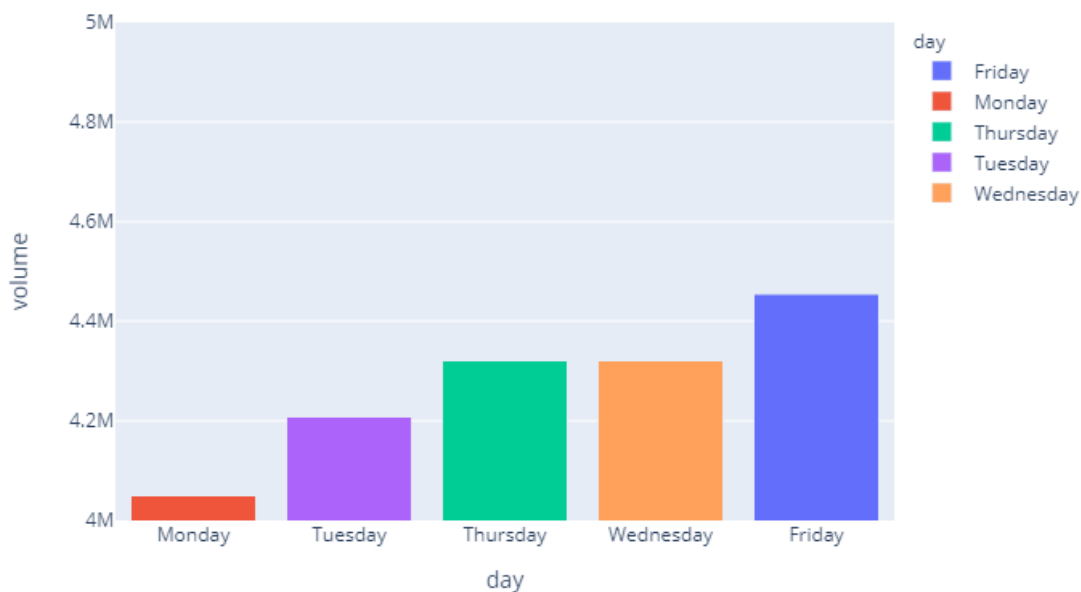
```
[40]: Volmean = data3.groupby('day').mean()
      Volmean
```

```
[40]:
```

	open	high	low	close	volume
day					
Friday	86.377485	87.139821	85.586565	86.379007	4.454258e+06
Monday	86.179309	86.943733	85.396031	86.183342	4.049658e+06
Thursday	86.171057	86.978683	85.350899	86.189898	4.319425e+06
Tuesday	86.113796	86.885292	85.332876	86.135911	4.207033e+06
Wednesday	86.242352	87.039744	85.422975	86.282099	4.319502e+06

```
[41]: fig1 = px.bar(Volmean, x=Volmean.index, y=Volmean['volume'], color=Volmean.
      ↪index)
      fig1.update_yaxes(range=[4000000, 5000000])
      fig1.update_layout(barmode='stack', xaxis={'categoryorder':'total ascending'})

      fig1.show(renderer="png")
```



Observation

The above plot tells us that Volume is highest on Fridays and lowest on Mondays.

<li> The volume gradually increases as we reach the weekend. </li>

It indicates Fridays are better for dumping or buying lots of stock as volume is high on that day.

Usually volatility is also high when volume is higher. So if target price is achieved then we must sell before Friday as stock may see big dip or increase in price

Analysing The Correlation Between All Variables Using Heatmap

Heatmap – A heatmap is a 2d representation of data that tells how much a variable is correlated to other variables. It contains values from -1 to 1.

When the correlation between x and y is -1 i.e negative correlation, then if the value of x increases, the value of y would decrease.

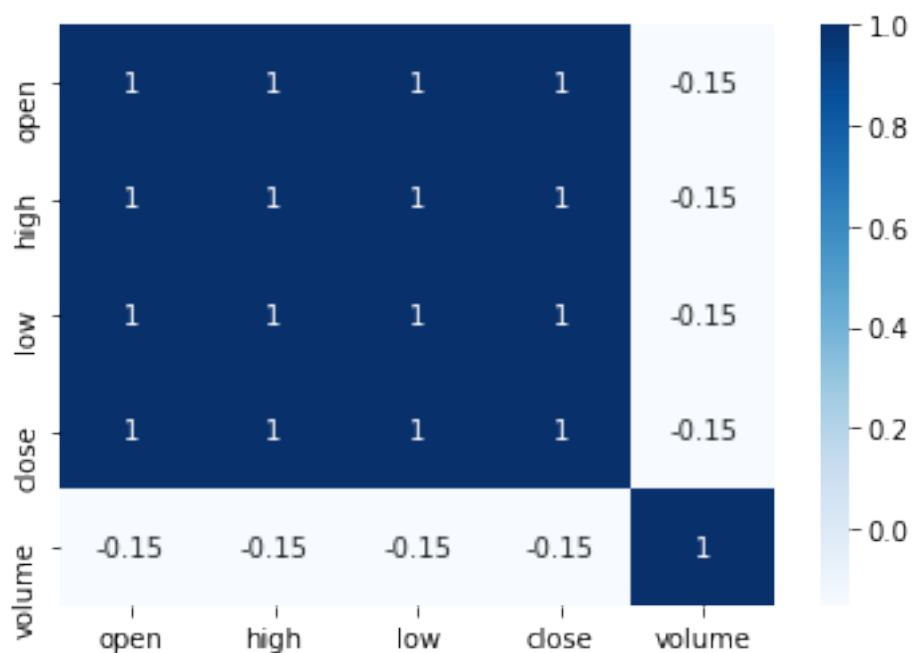
When the correlation between x and y is 0. It means that x and y have no correlation and are independent.

When the correlation between x and y is 1 i.e positive correlation then whenever x increases, y increases.

Reference ==> <https://www.analyticsvidhya.com/blog/2021/11/exploratory-data-analysis-on-uber-stocks-dataset/>

```
[42]: sns.heatmap(data3.corr(), cmap='Blues', annot=True)
```

```
[42]: <AxesSubplot:>
```



Observation

Almost all the values are giving the value 1, this could be because all the values are very similar to each other, so we take the differences or change in values and then compare them.

```
[43]: data4 = data3.copy()
```

```
[44]: data4['open-high'] = data4['open']-data4['high']
data4['open-low'] = data4['open'] - data4['low']
data4['close-high'] = data4['close']-data4['high']
data4['close-low'] = data4['close'] - data4['low']
data4['high-low'] = data4['high'] - data4['low']
data4['open-close'] = data4['open'] - data4['close']
data4.head()
```

```
[44]:
```

	symbol	date	open	high	low	close	volume	day	\
0	A	2014-01-02	57.10	57.100	56.15	56.21	1916160	Thursday	
1	A	2014-01-03	56.39	57.345	56.26	56.92	1866651	Friday	
2	A	2014-01-06	57.40	57.700	56.56	56.64	1777472	Monday	
3	A	2014-01-07	56.95	57.630	56.93	57.45	1463208	Tuesday	
4	A	2014-01-08	57.33	58.540	57.17	58.39	2659468	Wednesday	

	open-high	open-low	close-high	close-low	high-low	open-close
0	0.000	0.95	-0.890	0.06	0.950	0.89
1	-0.955	0.13	-0.425	0.66	1.085	-0.53
2	-0.300	0.84	-1.060	0.08	1.140	0.76
3	-0.680	0.02	-0.180	0.52	0.700	-0.50
4	-1.210	0.16	-0.150	1.22	1.370	-1.06

```
[45]: data4
```

```
[45]:
```

	symbol	date	open	high	low	close	volume	day	\
0	A	2014-01-02	57.10	57.100	56.15	56.21	1916160	Thursday	
1	A	2014-01-03	56.39	57.345	56.26	56.92	1866651	Friday	
2	A	2014-01-06	57.40	57.700	56.56	56.64	1777472	Monday	
3	A	2014-01-07	56.95	57.630	56.93	57.45	1463208	Tuesday	
4	A	2014-01-08	57.33	58.540	57.17	58.39	2659468	Wednesday	
...	...	...	...	...	...	...	...	...	
497467	ZTS	2017-12-22	72.30	72.370	71.79	71.99	1345683	Friday	
497468	ZTS	2017-12-26	72.40	72.550	71.90	72.34	792134	Tuesday	
497469	ZTS	2017-12-27	72.59	72.690	72.25	72.45	1159771	Wednesday	
497470	ZTS	2017-12-28	72.49	72.600	72.14	72.39	710499	Thursday	
497471	ZTS	2017-12-29	72.55	72.760	72.04	72.04	1704122	Friday	

	open-high	open-low	close-high	close-low	high-low	open-close
0	0.000	0.95	-0.890	0.06	0.950	0.89
1	-0.955	0.13	-0.425	0.66	1.085	-0.53
2	-0.300	0.84	-1.060	0.08	1.140	0.76
3	-0.680	0.02	-0.180	0.52	0.700	-0.50

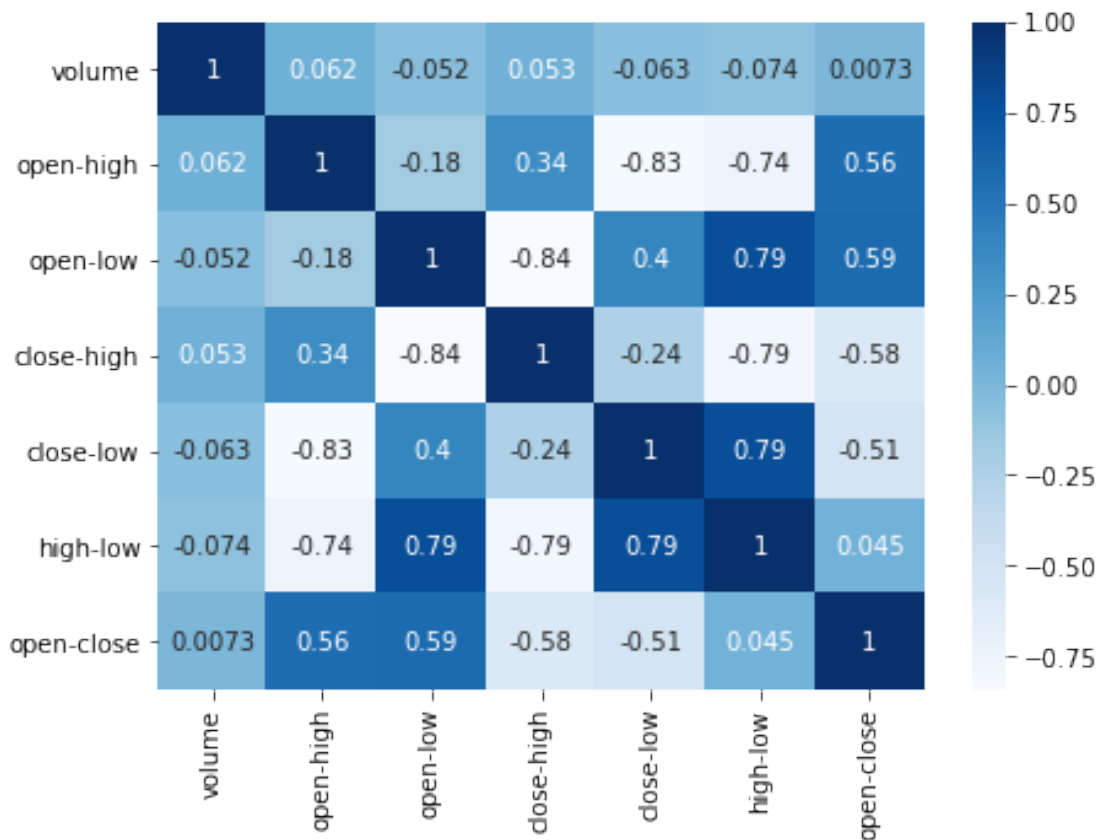
4	-1.210	0.16	-0.150	1.22	1.370	-1.06
...	...	...	...	...	...	...
497467	-0.070	0.51	-0.380	0.20	0.580	0.31
497468	-0.150	0.50	-0.210	0.44	0.650	0.06
497469	-0.100	0.34	-0.240	0.20	0.440	0.14
497470	-0.110	0.35	-0.210	0.25	0.460	0.10
497471	-0.210	0.51	-0.720	0.00	0.720	0.51

[482353 rows x 14 columns]

focussing on Volume wrt the differences, as Volume is very important feature in finding the inc and dec in stock prices.

```
[46]: data4 = data4.drop(['open', 'high', 'low', 'close'], axis=1)
plt.figure(figsize=(7,5))
sns.heatmap(data4.corr(), cmap='Blues', annot=True)
```

[46]: <AxesSubplot:>



Observation

The highest positive value is between Volume and open-high 0.062, meaning days a stock price is increased after open will be accompanied by high volume of the stock being traded.

- <li> The next one is open-low and it has a negative value -0.052, meaning days a stock price is
- <li> The next one is close-high and it has a positive value 0.053, meaning if difference between
- <li> The next one is close-low and it has a negative value -0.063, meaning if difference between
- <li> The next one is high-low i.e <b>(Volatility)</b> and it has a negative value -0.074, mean
- <li> The next one is open-close and it has a negative value 0.0073, and it has the lowest posi

## Feature Engineering

Checking if the same numbers of stocks are present in all 4 years & finding the Annual rate of return for each of the 4 years

### Annual Rate of Return

Source: == <https://www.indeed.com/career-advice/career-development/annual-rate-of-return>

Annual rate of return (ROR) is the amount earned on an investment over a 12-month period, and is usually expressed as a percentage.

beginning of year price = BYP

end of year price = EYP

Annual Rate of Return =  $[(EYP - BYP) / BYP] \times 100$

```
[47]: jan14close = data3[data3['date']== '2014-01-02'].reset_index(drop=True)
      jan14close.shape
```

```
[47]: (479, 8)
```

```
[48]: Dec14close = data3[data3['date']== '2014-12-31'].reset_index(drop=True)
      Dec14close.shape
```

```
[48]: (479, 8)
```

```
[49]: Dec14close['1styrreturn'] = ((Dec14close['close'] - jan14close['close'])/
      ↪jan14close['close'])*100
```

```
[50]: jan15close = data3[data3['date']== '2015-01-02'].reset_index(drop=True)
      jan15close.shape
```

```
[50]: (479, 8)
```

```
[51]: Dec15close = data3[data3['date']== '2015-12-31'].reset_index(drop=True)
      Dec15close.shape
```

```
[51]: (479, 8)
```

```
[52]: Dec15close['2ndyrreturn'] = ((Dec15close['close'] - jan15close['close'])/
      ↪jan15close['close'])*100
```

```
[53]: jan16close = data3[data3['date']== '2016-01-04'].reset_index(drop=True)
      jan16close.shape
```

```
[53]: (479, 8)
```

```
[54]: Dec16close = data3[data3['date']== '2016-12-30'].reset_index(drop=True)
      Dec16close.shape
```

```
[54]: (479, 8)
```

```
[55]: Dec16close['3rdyrreturn'] = ((Dec16close['close'] - jan16close['close'])/
      ↪jan16close['close'])*100
```

```
[56]: jan17close = data3[data3['date']== '2017-01-03'].reset_index(drop=True)
      jan17close.shape
```

```
[56]: (479, 8)
```

```
[57]: Dec17close = data3[data3['date']== '2017-12-29'].reset_index(drop=True)
      Dec17close.shape
```

```
[57]: (479, 8)
```

```
[58]: Dec17close['4thyrreturn'] = ((Dec17close['close'] - jan17close['close'])/
      ↪jan17close['close'])*100
```

Observation :

All the 4 years have same number of companies ,ie 479.

Adding new set of features

Adding the Yearly Rate of Return of each stock in the year 2014, 2015, 2016, 2017 as 1styrreturn, 2ndyrreturn, 3rdyrreturn, 4thyrreturn respectively to the data3 table as columns.

```
[59]: data3 = pd.merge(data3,Dec14close[['symbol','1styrreturn']],on='symbol',
      ↪how='left')
```

```
[60]: data3 = pd.merge(data3,Dec15close[['symbol','2ndyrreturn']],on='symbol',
      ↪how='left')
```

```
[61]: data3 = pd.merge(data3,Dec16close[['symbol','3rdyrreturn']],on='symbol',
      ↪how='left')
```

```
[62]: data3 = pd.merge(data3,Dec17close[['symbol','4thyrreturn']],on='symbol',
      ↪how='left')
```

```
[63]: data3.head()
```



```
[63]:
```

	symbol	date	open	high	low	close	volume	day
0	A	2014-01-02	57.10	57.100	56.15	56.21	1916160	Thursday
1	A	2014-01-03	56.39	57.345	56.26	56.92	1866651	Friday
2	A	2014-01-06	57.40	57.700	56.56	56.64	1777472	Monday
3	A	2014-01-07	56.95	57.630	56.93	57.45	1463208	Tuesday
4	A	2014-01-08	57.33	58.540	57.17	58.39	2659468	Wednesday

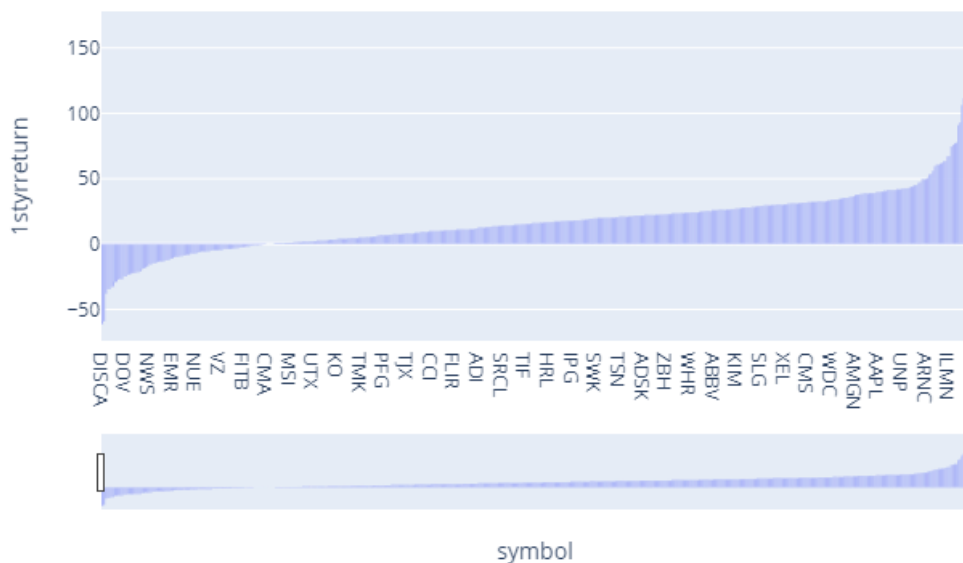
  

	1styrreturn	2ndyrreturn	3rdyrreturn	4thyrreturn
0	-27.165985	3.081854	11.968543	44.052484
1	-27.165985	3.081854	11.968543	44.052484
2	-27.165985	3.081854	11.968543	44.052484
3	-27.165985	3.081854	11.968543	44.052484
4	-27.165985	3.081854	11.968543	44.052484

Bar graph of all returns of all the stocks in year 2014

```
[64]: Dec14close = Dec14close.sort_values("1styrreturn", ascending = True)
```

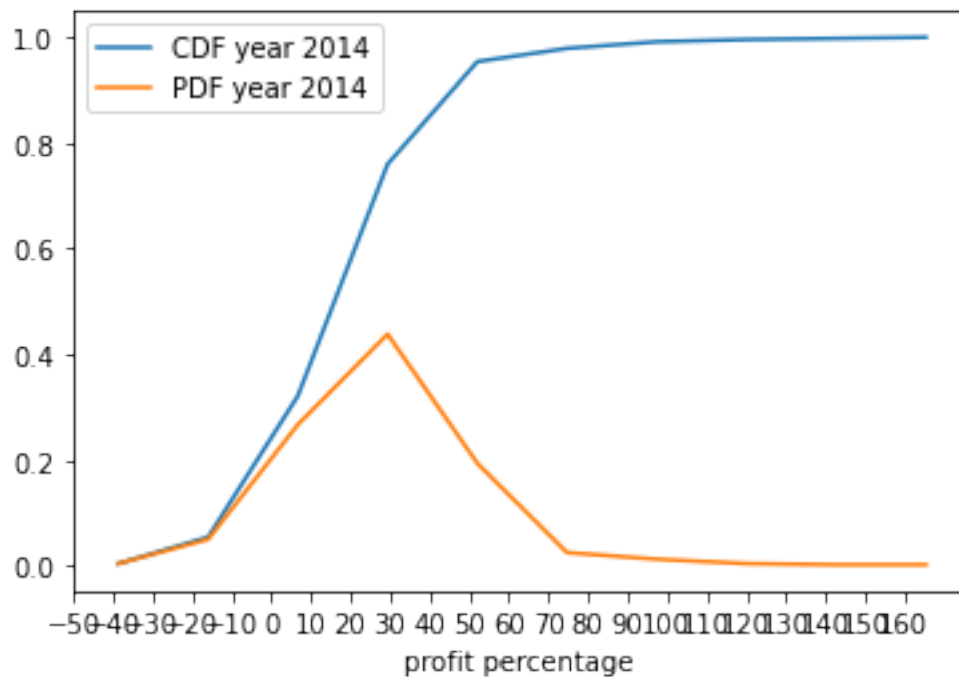
```
[65]: name = Dec14close['symbol']
price = Dec14close['1styrreturn']
fig = px.bar(Dec14close, x='symbol', y='1styrreturn')
fig.update_xaxes(rangeslider_visible=True)
fig.show(renderer="png")
```



Plotting CDF Of Annual Rate Of Return Of Stocks In Year 2014

```
[66]: count, bins_count = np.histogram(price, bins=10)
pdf = count / sum(count)
cdf = np.cumsum(pdf)
plt.plot(bins_count[1:], cdf, label="CDF year 2014")
plt.plot(bins_count[1:], pdf, label="PDF year 2014")
plt.xlabel('profit percentage')
plt.rcParams["figure.figsize"] = (25,7)
plt.xticks(np.arange(-50, 170, 10))
plt.legend()
```

[66]: <matplotlib.legend.Legend at 0x1ffbc271580>



## OBSERVATIONS

Roughly 20% of the stocks gave negative returns in the year 2014

Around 80% of the stocks gave positive returns in the year 2014

Around 50% of the stocks gave more than 15% returns in the year 2014

Around 30% of the stocks gave more than 25% returns in the year 2014

95% stocks gave less than or equal to 50% returns in the year 2014

```
[67]: profitable_stocks_yr1 = price[price > 15].count()
print((profitable_stocks_yr1/483)*100)
```

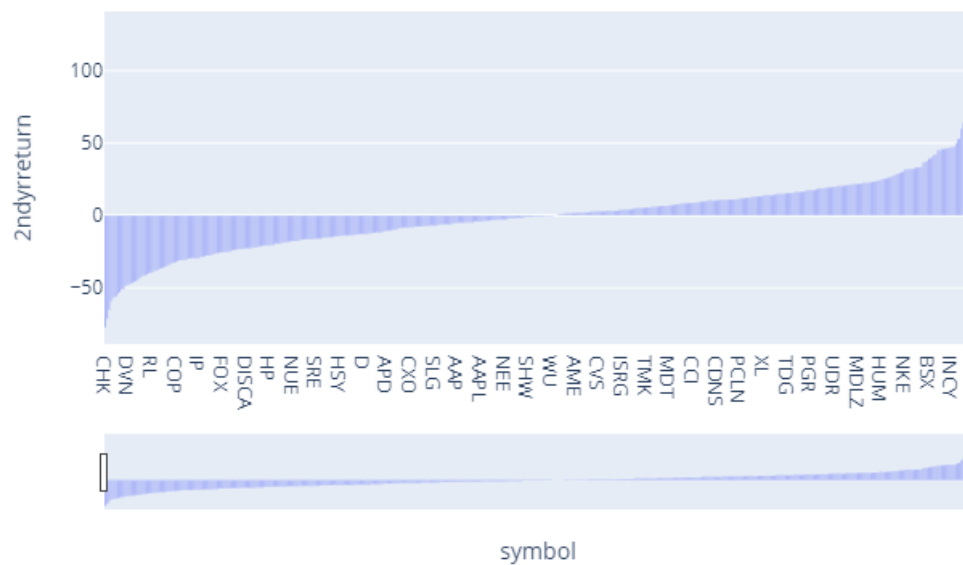
51.13871635610766

% of stocks having more than 15% inc in price after first year is 51.1

```
[68]: Dec15close = Dec15close.sort_values("2ndyrreturn", ascending = True)
Dec16close = Dec16close.sort_values("3rdyrreturn", ascending = True)
Dec17close = Dec17close.sort_values("4thyrreturn", ascending = True)
```

Bar graph of returns of all the stocks in year 2015

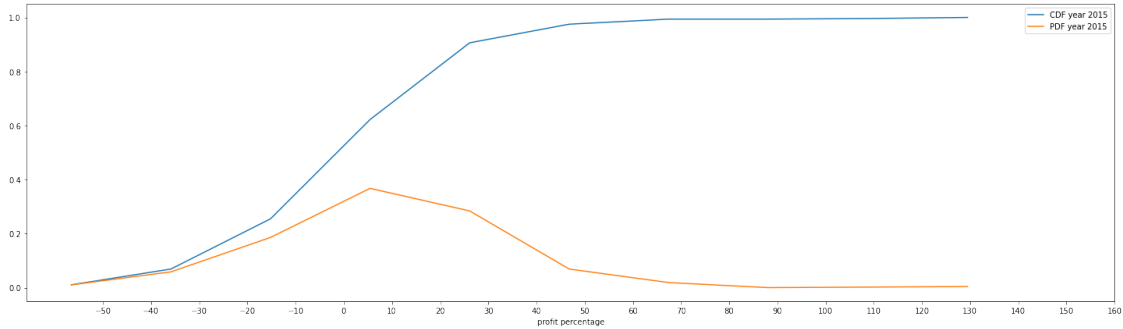
```
[69]: name2 = Dec15close['symbol']
price2 = Dec15close['2ndyrreturn']
fig2 = px.bar(Dec15close, x='symbol', y='2ndyrreturn')
fig2.update_xaxes(rangeslider_visible=True)
fig2.show(renderer="png")
```



Plotting CDF Of Annual Rate Of Return Of Stocks In Year 2015

```
[70]: count, bins_count = np.histogram(price2, bins=10)
pdf = count / sum(count)
cdf = np.cumsum(pdf)
plt.plot(bins_count[1:], cdf, label="CDF year 2015")
plt.plot(bins_count[1:], pdf, label="PDF year 2015")
plt.xlabel('profit percentage')
plt.xticks(np.arange(-50, 170, 10))
plt.legend()
```

[70]: <matplotlib.legend.Legend at 0x1ffbc37b940>



## OBSERVATIONS

Roughly 45% of the stocks gave negative returns in the year 2015

Around 55% of the stocks gave positive returns in the year 2015

Around 20% of the stocks gave more than 15% returns in the year 2015

Around 10% of the stocks gave more than 25% returns in the year 2015

99% stocks gave less than or equal to 50% returns in the year 2015

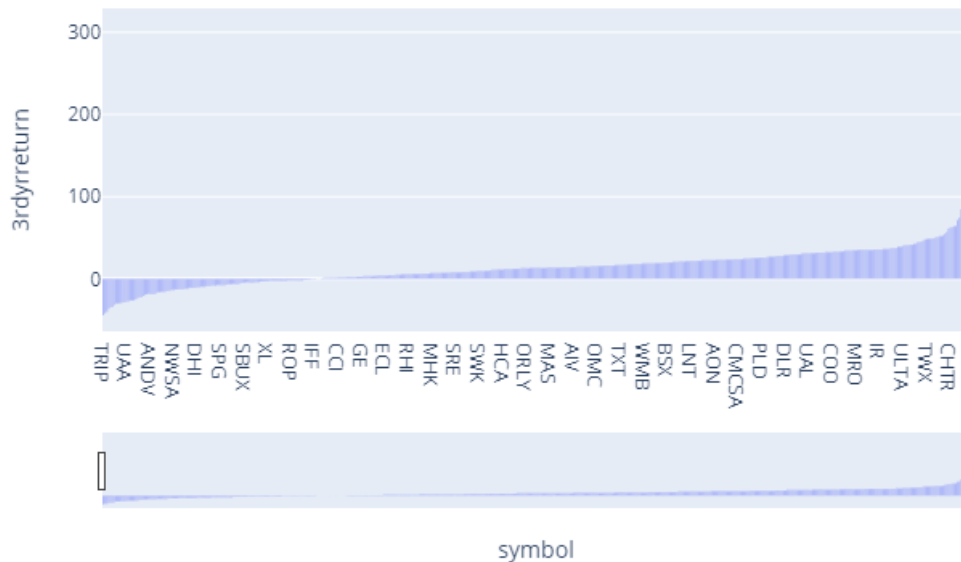
```
[71]: count2 = price2[price2 > 15].count()
      print((count2/483)*100)
```

21.325051759834366

% of stocks having more than 15% inc in price in second year is 21.3

Bar graph of all returns of all the stocks in year 2016

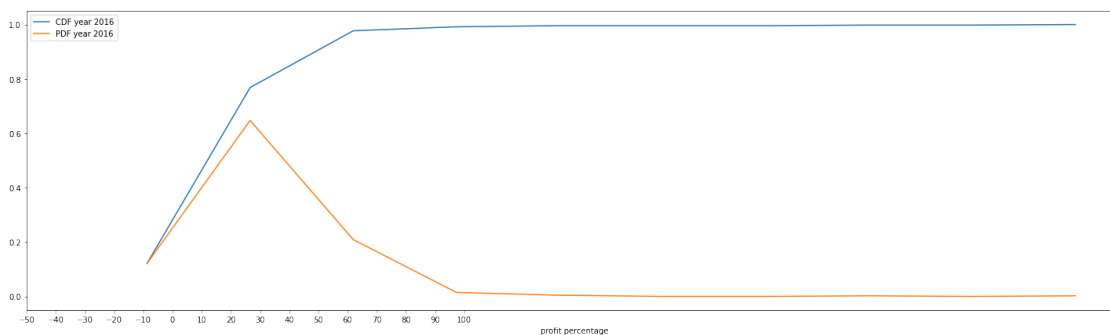
```
[72]: name3 = Dec16close['symbol']
      price3 = Dec16close['3rdyrreturn']
      fig3 = px.bar(Dec16close, x='symbol', y='3rdyrreturn')
      fig3.update_xaxes(rangeslider_visible=True)
      fig3.show(renderer="png")
```



Plotting CDF Of Annual Rate Of Return Of Stocks In Year 2016

```
[73]: count, bins_count = np.histogram(price3, bins=10)
pdf = count / sum(count)
cdf = np.cumsum(pdf)
plt.plot(bins_count[1:], cdf, label="CDF year 2016")
plt.plot(bins_count[1:], pdf, label="PDF year 2016")
plt.xlabel('profit percentage')
plt.xticks(np.arange(-50, 110, 10))
plt.legend()
```

[73]: <matplotlib.legend.Legend at 0x1ffbc3199d0>



## OBSERVATIONS

Roughly 20% of the stocks gave negative returns in the year 2016

Around 80% of the stocks gave positive returns in the year 2016

Around 50% of the stocks gave more than 15% returns in the year 2016

Around 30% of the stocks gave more than 25% returns in the year 2016

90% stocks gave less than or equal to 50% returns in the year 2016

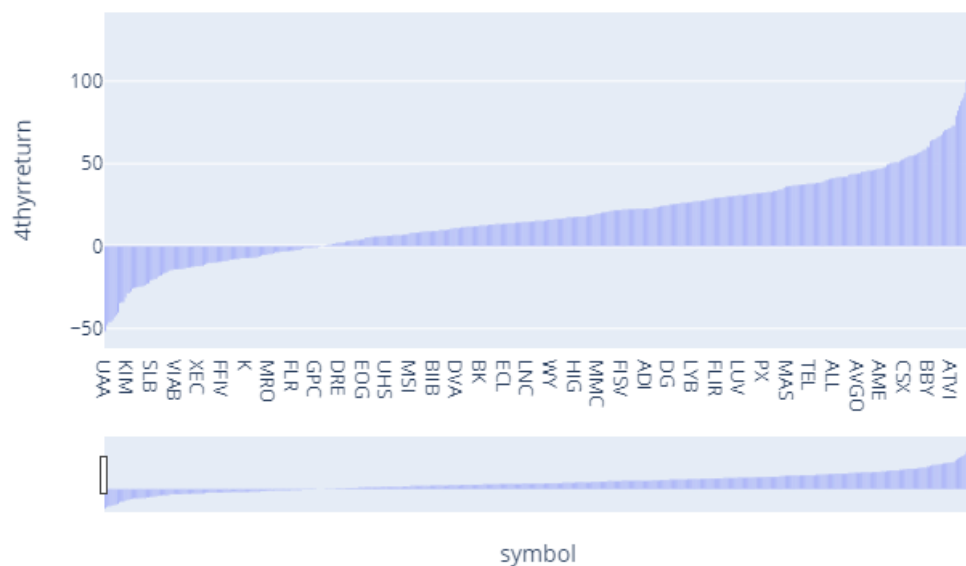
```
[74]: count3 = price3[price3 > 15].count()
      print((count3/483)*100)
```

43.68530020703933

% of stocks having more than 15% inc in price in third year is 43.6

Bar graph of all returns of all the stocks in year 2017

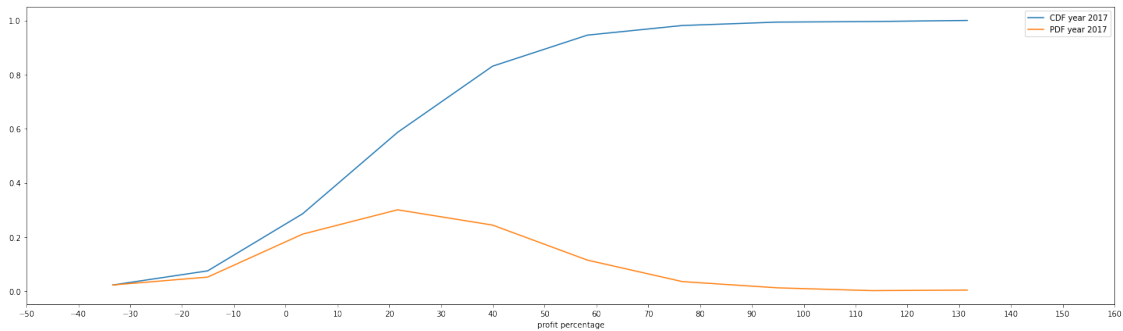
```
[75]: name4 = Dec17close['symbol']
      price4 = Dec17close['4thyrreturn']
      fig4 = px.bar(Dec17close, x='symbol', y='4thyrreturn')
      fig4.update_xaxes(rangeslider_visible=True)
      fig4.show(renderer="png")
```



Plotting CDF Of Annual Rate Of Return Of Stocks In Year 2017

```
[76]: count, bins_count = np.histogram(price4, bins=10)
pdf = count / sum(count)
cdf = np.cumsum(pdf)
plt.plot(bins_count[1:], cdf, label="CDF year 2017")
plt.plot(bins_count[1:], pdf, label="PDF year 2017")
plt.xlabel('profit percentage')
plt.xticks(np.arange(-50, 170, 10))
plt.legend()
```

[76]: <matplotlib.legend.Legend at 0x1ffbc478790>



## OBSERVATIONS

Roughly 25% of the stocks gave negative returns in the year 2017

Around 75% of the stocks gave positive returns in the year 2017

Around 55% of the stocks gave more than 15% returns in the year 2017

Around 35% of the stocks gave more than 25% returns in the year 2017

85% stocks gave less than or equal to 50% returns in the year 2017

```
[77]: count4 = price4[price4 > 15].count()
print((count4/483)*100)
```

50.31055900621118

% of stocks having more than 15% inc in price in fourth year is 50.3

Objective Observation

From the above data I conclude that We should try to find stocks which give atleast 15% returns as our objective, as 3 out of the 4 years we have atleast 45% stocks which give more than 15% return. Hence making it a safe value.

```
[78]: data3
```

```
[78]:
```

	symbol	date	open	high	low	close	volume	day \
0	A	2014-01-02	57.10	57.100	56.15	56.21	1916160	Thursday
1	A	2014-01-03	56.39	57.345	56.26	56.92	1866651	Friday
2	A	2014-01-06	57.40	57.700	56.56	56.64	1777472	Monday
3	A	2014-01-07	56.95	57.630	56.93	57.45	1463208	Tuesday
4	A	2014-01-08	57.33	58.540	57.17	58.39	2659468	Wednesday
...	...	...	...	...	...	...	...	...
482348	ZTS	2017-12-22	72.30	72.370	71.79	71.99	1345683	Friday
482349	ZTS	2017-12-26	72.40	72.550	71.90	72.34	792134	Tuesday
482350	ZTS	2017-12-27	72.59	72.690	72.25	72.45	1159771	Wednesday
482351	ZTS	2017-12-28	72.49	72.600	72.14	72.39	710499	Thursday
482352	ZTS	2017-12-29	72.55	72.760	72.04	72.04	1704122	Friday

	1styrreturn	2ndyrreturn	3rdyrreturn	4thyrreturn
0	-27.165985	3.081854	11.968543	44.052484
1	-27.165985	3.081854	11.968543	44.052484
2	-27.165985	3.081854	11.968543	44.052484
3	-27.165985	3.081854	11.968543	44.052484
4	-27.165985	3.081854	11.968543	44.052484
...	...	...	...	...
482348	32.972806	10.644193	13.243072	34.428065
482349	32.972806	10.644193	13.243072	34.428065
482350	32.972806	10.644193	13.243072	34.428065
482351	32.972806	10.644193	13.243072	34.428065
482352	32.972806	10.644193	13.243072	34.428065

[482353 rows x 12 columns]

### 50 Day Moving Average

The 50-day moving average is calculated by taking the sum of the past 50 days closing price and then dividing the result by 50.

Stock price above the 50 day moving average is usually considered bullish.

Stock price below the 50 day moving average is usually considered bearish.

Adding the 50 day moving Average as a feature Column(50daySMA) .

```
[79]: data3['50daySMA'] = (data3.groupby(['symbol', 'date'])['close'].
    ↪rolling(window=50, min_periods=1).mean().reset_index(level=[0,1], drop=True))
```

```
[80]: data3.head()
```

```
[80]:
```

	symbol	date	open	high	low	close	volume	day \
0	A	2014-01-02	57.10	57.100	56.15	56.21	1916160	Thursday
1	A	2014-01-03	56.39	57.345	56.26	56.92	1866651	Friday
2	A	2014-01-06	57.40	57.700	56.56	56.64	1777472	Monday
3	A	2014-01-07	56.95	57.630	56.93	57.45	1463208	Tuesday



```
4      A 2014-01-08  57.33  58.540  57.17  58.39  2659468  Wednesday
```

	1styrreturn	2ndyrreturn	3rdyrreturn	4thyrreturn	50daySMA
0	-27.165985	3.081854	11.968543	44.052484	56.21
1	-27.165985	3.081854	11.968543	44.052484	56.92
2	-27.165985	3.081854	11.968543	44.052484	56.64
3	-27.165985	3.081854	11.968543	44.052484	57.45
4	-27.165985	3.081854	11.968543	44.052484	58.39

```
[81]: data3[1005:1010]
```

```
[81]:      symbol      date  open  high  low  close  volume      day \
1005      A 2017-12-28  67.44  67.48  67.02  67.45   607022  Thursday
1006      A 2017-12-29  67.50  67.58  66.93  66.97  1064895   Friday
1007     AAL 2014-01-02  25.07  25.82  25.06  25.36   8998943  Thursday
1008     AAL 2014-01-03  25.75  26.75  25.51  26.54  13836062   Friday
1009     AAL 2014-01-06  26.62  27.20  26.60  27.03  11272273   Monday
```

	1styrreturn	2ndyrreturn	3rdyrreturn	4thyrreturn	50daySMA
1005	-27.165985	3.081854	11.968543	44.052484	67.45
1006	-27.165985	3.081854	11.968543	44.052484	66.97
1007	111.474763	-21.443146	14.128575	12.375810	25.36
1008	111.474763	-21.443146	14.128575	12.375810	26.54
1009	111.474763	-21.443146	14.128575	12.375810	27.03

## 200 Day Moving Average

The 200-day moving average is calculated by taking the sum of the past 200 days closing price and then dividing the result by 200.

Stock price above the 200 day moving average is usually considered bullish.

Stock price below the 200 day moving average is usually considered bearish.

As long as a stock price remains above the 200 day moving average on the daily time frame, the stock is generally considered to be in an overall uptrend

```
[82]: data3['200daySMA'] = (data3.groupby(['symbol', 'date'])['close'].
    ↪rolling(window=200, min_periods=1).mean().reset_index(level=[0,1],
    ↪drop=True))
```

```
[83]: data3.head()
```

```
[83]:      symbol      date  open  high  low  close  volume      day \
0      A 2014-01-02  57.10  57.100  56.15  56.21  1916160  Thursday
1      A 2014-01-03  56.39  57.345  56.26  56.92  1866651   Friday
2      A 2014-01-06  57.40  57.700  56.56  56.64  1777472   Monday
3      A 2014-01-07  56.95  57.630  56.93  57.45  1463208   Tuesday
4      A 2014-01-08  57.33  58.540  57.17  58.39  2659468  Wednesday
```

	1styrreturn	2ndyrreturn	3rdyrreturn	4thyrreturn	50daySMA	200daySMA
0	-27.165985	3.081854	11.968543	44.052484	56.21	56.21
1	-27.165985	3.081854	11.968543	44.052484	56.92	56.92
2	-27.165985	3.081854	11.968543	44.052484	56.64	56.64
3	-27.165985	3.081854	11.968543	44.052484	57.45	57.45
4	-27.165985	3.081854	11.968543	44.052484	58.39	58.39

Train - Test Split

Taking the first 3 years as training data i.e 2014-01-02 to 2016-12-30

<li> Taking the fourth year as test data i.e 2017-01-03 to 2017-12-29 </li>

```
[105]: X_Train_Fbp = data3[data3['date'] < '2017-01-03']
```

```
[106]: X_Train_Fbp.head()
```

```
[106]:
```

	symbol	date	open	high	low	close	volume	day	\
0	A	2014-01-02	57.10	57.100	56.15	56.21	1916160	Thursday	
1	A	2014-01-03	56.39	57.345	56.26	56.92	1866651	Friday	
2	A	2014-01-06	57.40	57.700	56.56	56.64	1777472	Monday	
3	A	2014-01-07	56.95	57.630	56.93	57.45	1463208	Tuesday	
4	A	2014-01-08	57.33	58.540	57.17	58.39	2659468	Wednesday	

	1styrreturn	2ndyrreturn	3rdyrreturn	4thyrreturn	50daySMA	200daySMA
0	-27.165985	3.081854	11.968543	44.052484	56.21	56.21
1	-27.165985	3.081854	11.968543	44.052484	56.92	56.92
2	-27.165985	3.081854	11.968543	44.052484	56.64	56.64
3	-27.165985	3.081854	11.968543	44.052484	57.45	57.45
4	-27.165985	3.081854	11.968543	44.052484	58.39	58.39

```
[107]: X_Test_Fbp = data3[data3['date'] > '2016-12-30']
```

```
[108]: X_Test_Fbp.head()
```

```
[108]:
```

	symbol	date	open	high	low	close	volume	day	\
756	A	2017-01-03	45.93	46.750	45.7400	46.49	1739726	Tuesday	
757	A	2017-01-04	46.93	47.380	46.8162	47.10	1821264	Wednesday	
758	A	2017-01-05	47.05	47.070	46.3550	46.54	1503763	Thursday	
759	A	2017-01-06	46.63	48.070	46.5600	47.99	2883483	Friday	
760	A	2017-01-09	48.01	48.555	47.9050	48.14	2575328	Monday	

	1styrreturn	2ndyrreturn	3rdyrreturn	4thyrreturn	50daySMA	200daySMA
756	-27.165985	3.081854	11.968543	44.052484	46.49	46.49
757	-27.165985	3.081854	11.968543	44.052484	47.10	47.10
758	-27.165985	3.081854	11.968543	44.052484	46.54	46.54
759	-27.165985	3.081854	11.968543	44.052484	47.99	47.99

760    -27.165985        3.081854        11.968543        44.052484        48.14        48.14

#### Baseline Model 1 - FBPREDICTION

```
[90]: from fbprophet import Prophet
```

```
[109]: X_Train_Fbp = X_Train_Fbp.drop(['open', 'high', 'low', 'volume', 'day',  
    ↪, '1styrreturn', '2ndyrreturn', '3rdyrreturn', '4thyrreturn', '50daySMA', '200daySMA'],  
    ↪axis=1)
```

```
[110]: X_Train_Fbp.rename(columns={'date': 'ds', 'close': 'y'}, inplace=True)
```

```
[93]: stocks = X_Train_Fbp.groupby('symbol')  
predi = []  
for sym in stocks.groups:  
    print(sym)  
    stock = stocks.get_group(sym)  
    m = Prophet(daily_seasonality=False)  
    m.fit(stock)  
    stockdf = m.make_future_dataframe(periods=251)  
    stockprediction = m.predict(stockdf)  
    predi.extend(stockprediction.iloc[756:1007].yhat.tolist())  
len(predi)
```

A  
AAL  
AAP  
AAPL  
ABBV  
ABC  
ABT  
ACN  
ADBE  
ADI  
ADM  
ADP  
ADS  
ADSK  
AEE  
AEP  
AES  
AET  
AFL  
AGN  
AIG  
AIV  
AIZ  
AJG

AKAM  
ALB  
ALGN  
ALK  
ALL  
ALLE  
ALXN  
AMAT  
AMD  
AME  
AMG  
AMGN  
AMP  
AMT  
AMZN  
ANDV  
ANSS  
ANTM  
AON  
AOS  
APA  
APC  
APD  
APH  
ARE  
ARNC  
ATVI  
AVB  
AVGO  
AVY  
AWK  
AXP  
AYI  
AZO  
BA  
BAC  
BAX  
BBT  
BBY  
BDX  
BEN  
BF.B  
BIIB  
BK  
BLK  
BLL  
BMY  
BRK.B

BSX  
BWA  
BXP  
C  
CA  
CAG  
CAH  
CAT  
CB  
CBG  
CBOE  
CBS  
CCI  
CCL  
CDNS  
CELG  
CERN  
CF  
CHD  
CHK  
CHRW  
CHTR  
CI  
CINF  
CL  
CLX  
CMA  
CMCSA  
CME  
CMG  
CMI  
CMS  
CNC  
CNP  
COF  
COG  
COL  
COO  
COP  
COST  
COTY  
CPB  
CRM  
CSCO  
CSX  
CTAS  
CTL  
CTSH

CTXS  
CVS  
CVX  
CXO  
D  
DAL  
DE  
DFS  
DG  
DGX  
DHI  
DIS  
DISCA  
DISCK  
DISH  
DLR  
DLTR  
DOV  
DPS  
DRE  
DRI  
DTE  
DUK  
DVA  
DVN  
EA  
EBAY  
ECL  
ED  
EFX  
EIX  
EL  
EMN  
EMR  
EOG  
EQIX  
EQR  
EQT  
ESRX  
ESS  
ETFC  
ETN  
ETR  
EW  
EXC  
EXPD  
EXPE  
EXR

F  
FAST  
FB  
FBHS  
FCX  
FDX  
FE  
FFIV  
FIS  
FISV  
FITB  
FL  
FLIR  
FLR  
FLS  
FMC  
FOX  
FOXA  
FRT  
FTI  
GD  
GE  
GGP  
GILD  
GIS  
GLW  
GM  
GOOGL  
GPC  
GPN  
GPS  
GRMN  
GS  
GT  
GW  
GWV  
HAL  
HAS  
HBAN  
HBI  
HCA  
HCN  
HCP  
HD  
HES  
HIG  
HII  
HOG  
HOLX

HON  
HP  
HRB  
HRL  
HRS  
HSIC  
HST  
HSY  
HUM  
IBM  
IDXX  
IFF  
ILMN  
INCY  
INTC  
INTU  
IP  
IPG  
IQV  
IR  
IRM  
ISRG  
IT  
ITW  
IVZ  
JBHT  
JCI  
JEC  
JNJ  
JNPR  
JPM  
JWN  
K  
KEY  
KIM  
KLAC  
KMB  
KMI  
KMX  
KO  
KORS  
KR  
KSS  
KSU  
L  
LB  
LEG  
LEN



LH  
LKQ  
LLL  
LLY  
LMT  
LNC  
LNT  
LOW  
LRCX  
LUK  
LUV  
LYB  
M  
MA  
MAA  
MAC  
MAR  
MAS  
MAT  
MCD  
MCHP  
MCK  
MCO  
MDLZ  
MDT  
MET  
MGM  
MHK  
MKC  
MLM  
MMC  
MMM  
MNST  
MO  
MON  
MOS  
MPC  
MRK  
MRO  
MS  
MSFT  
MSI  
MTB  
MTD  
MU  
MYL  
NBL  
NCLH

NDAQ  
NEE  
NEM  
NFLX  
NFX  
NI  
NKE  
NLSN  
NOC  
NOV  
NRG  
NSC  
NTAP  
NTRS  
NUE  
NVDA  
NWL  
NWS  
NWSA  
OKE  
OMC  
ORCL  
ORLY  
OXY  
PAYX  
PBCT  
PCAR  
PCG  
PCLN  
PDCO  
PEG  
PEP  
PFE  
PFG  
PG  
PGR  
PH  
PHM  
PKG  
PKI  
PLD  
PM  
PNC  
PNR  
PNW  
PPG  
PPL  
PRGO

PRU  
PSA  
PSX  
PVH  
PWR  
PX  
PXD  
QCOM  
RCL  
RE  
REG  
REGN  
RF  
RHI  
RHT  
RJF  
RL  
RMD  
ROK  
ROP  
ROST  
RRC  
RSG  
RTN  
SBAC  
SBUX  
SCG  
SCHW  
SEE  
SHW  
SIG  
SJM  
SLB  
SLG  
SNA  
SNI  
SNPS  
SO  
SPG  
SPGI  
SRCL  
SRE  
STI  
STT  
STX  
STZ  
SWK  
SWKS

SYK  
SYMC  
SYY  
T  
TAP  
TDG  
TEL  
TGT  
TIF  
TJX  
TMK  
TMO  
TPR  
TRIP  
TROW  
TRV  
TSCO  
TSN  
TSS  
TWX  
TXN  
TXT  
UAA  
UAL  
UDR  
UHS  
ULTA  
UNH  
UNM  
UNP  
UPS  
URI  
USB  
UTX  
V  
VAR  
VFC  
VIAB  
VLO  
VMC  
VNO  
VRSK  
VRSN  
VRTX  
VTR  
VZ  
WAT  
WBA

WDC  
WEC  
WFC  
WHR  
WM  
WMB  
WMT  
WU  
WY  
WYN  
WYNN  
XEC  
XEL  
XL  
XLNX  
XOM  
XRAY  
XRX  
XYL  
YUM  
ZBH  
ZION  
ZTS

[93]: 120229

```
[95]: X_Test_Fbp = X_Test_Fbp.copy()
```

```
[96]: X_Test_Fbp['Fbprediction'] = predi
```

```
[97]: from sklearn.metrics import mean_squared_error
```

```
[98]: Closee = X_Test_Fbp['close'].tolist()
```

```
[99]: Closee_Pred = X_Test_Fbp['Fbprediction'].tolist()
```

```
[100]: MSE_FB = mean_squared_error(Closee,Closee_Pred)
```

```
[101]: MSE_FB
```

[101]: 950.0519138971056

The mean squared error for FbProphet prediction is 950.05

Baseline Model 2 - Linear Regression

```
[91]: X_Train_LR = data3[data3['date'] < '2017-01-03']  
X_Test_LR = data3[data3['date'] > '2016-12-30']
```

```
[92]: X_Train_LR = X_Train_LR.copy()
      X_Test_LR = X_Test_LR.copy()
```

```
[93]: X_Train_LR['date0r'] = X_Train_LR['date'].apply(lambda x: x.toordinal())
      X_Test_LR['date0r'] = X_Test_LR['date'].apply(lambda x: x.toordinal())
```

```
[94]: X = np.array(X_Train_LR.date0r).reshape(-1, 1)
```

```
[95]: X
```

```
[95]: array([[735235],
            [735236],
            [735239],
            ...,
            [736326],
            [736327],
            [736328]], dtype=int64)
```

```
[96]: Y = X_Train_LR.close
```

```
[97]: from sklearn.linear_model import SGDRegressor
      clf = SGDRegressor(loss='squared_loss')
      clf.fit(X, Y)
```

```
[97]: SGDRegressor(alpha=0.0001, average=False, early_stopping=False, epsilon=0.1,
                  eta0=0.01, fit_intercept=True, l1_ratio=0.15,
                  learning_rate='invscaling', loss='squared_loss', max_iter=1000,
                  n_iter_no_change=5, penalty='l2', power_t=0.25, random_state=None,
                  shuffle=True, tol=0.001, validation_fraction=0.1, verbose=0,
                  warm_start=False)
```

```
[98]: X_Test = np.array(X_Test_LR.date0r).reshape(-1, 1)
```

```
[99]: X_Test
```

```
[99]: array([[736332],
            [736333],
            [736334],
            ...,
            [736690],
            [736691],
            [736692]], dtype=int64)
```

```
[100]: y_pred=clf.predict(X_Test)
```

```
[101]: y_test = X_Test_LR.close
```

```
[106]: MSE_LR = mean_squared_error(y_test,y_pred)
```

```
[107]: MSE_LR
```

```
[107]: 6.345581267428657e+39
```

The mean squared error for Linear Regression prediction before Hyperparameter tuning is 6.776538418924989e+39

```
[108]: X_Train_LR = data3[data3['date'] < '2017-01-03']  
X_Test_LR = data3[data3['date'] > '2016-12-30']
```

```
[109]: X_Train_LR = X_Train_LR.copy()  
X_Test_LR = X_Test_LR.copy()
```

```
[110]: X_Train_LR['date0r'] = X_Train_LR['date'].apply(lambda x: x.toordinal())  
X_Test_LR['date0r'] = X_Test_LR['date'].apply(lambda x: x.toordinal())
```

```
[111]: X = np.array(X_Train_LR.date0r).reshape(-1, 1)  
Y = X_Train_LR.close
```

```
[112]: X_Test = np.array(X_Test_LR.date0r).reshape(-1, 1)
```

```
[113]: y_test = X_Test_LR.close
```

```
[114]: alpha = [10 ** x for x in range(-5, 1)]  
MSE=[]  
for i in alpha:  
    clf = SGDRegressor(alpha=i, penalty='l2', loss='squared_loss')  
    clf.fit(X, Y)  
    y_pred=clf.predict(X_Test)  
    MSE.append(mean_squared_error(y_test,y_pred))
```

```
[116]: alpha
```

```
[116]: [1e-05, 0.0001, 0.001, 0.01, 0.1, 1]
```

```
[115]: MSE
```

```
[115]: [4.5669810268456325e+38,  
5.790811302009568e+36,  
3.9492858274087294e+39,  
2.3586771807762508e+38,  
9.404898272406711e+38,  
4.148200012415202e+38]
```

```
[117]: MSE.sort()
```

```
[118]: MSE
```

```
[118]: [5.790811302009568e+36,  
2.3586771807762508e+38,  
4.148200012415202e+38,  
4.5669810268456325e+38,  
9.404898272406711e+38,  
3.9492858274087294e+39]
```

Best Alpha is 0.0001

```
[119]: clf = SGDRegressor(loss='squared_loss',alpha = 0.0001, penalty='l2')  
clf.fit(X, Y)  
y_pred=clf.predict(X_Test)  
MSE_LR = mean_squared_error(y_test,y_pred)  
MSE_LR
```

```
[119]: 6.587946089200638e+38
```

The mean squared error for Linear Regression prediction before Hyperparameter tuning is 6.587946089200638e+38

Fb Prophet Hyperparameter tuning

```
[84]: from fbprophet.diagnostics import cross_validation  
from fbprophet.diagnostics import performance_metrics
```

Source == » <https://facebook.github.io/prophet/docs/diagnostics.html>

```
[131]: all_params = [{'changepoint_prior_scale': 0.001},{'changepoint_prior_scale': 0.  
↪01},{'changepoint_prior_scale': 0.1},{'changepoint_prior_scale': 0.5}]
```

```
[132]: all_params
```

```
[132]: [{'changepoint_prior_scale': 0.001},  
{'changepoint_prior_scale': 0.01},  
{'changepoint_prior_scale': 0.1},  
{'changepoint_prior_scale': 0.5}]
```

```
[130]: type(all_params)
```

```
[130]: list
```

```
[133]: import logging  
logging.getLogger('fbprophet').setLevel(logging.WARNING)
```

```
[95]: stocks = X_Train_Fbp.groupby('symbol')  
predi = []  
best_params = {}
```



```

for sym in stocks.groups:
    stock = stocks.get_group(sym)
    rmse = []
    min_param = {}
    for params in all_params:
        m = Prophet(**params,daily_seasonality=False).fit(stock)
        df_cv = cross_validation(m, horizon='60 days', period='30 days',
        ↪parallel="processes")
        df_p = performance_metrics(df_cv, rolling_window=1)
        rmse.append(df_p['rmse'].values[0])

    tuning_results = pd.DataFrame(all_params)
    tuning_results['rmse'] = rmse
    print(sym)
    min_param = all_params[np.argmin(rmse)]
    best_params[sym] = min_param['changepoint_prior_scale']
print(best_params)

```

A  
AAL  
AAP  
AAPL  
ABBV  
ABC  
ABT  
ACN  
ADBE  
ADI  
ADM  
ADP  
ADS  
ADSK  
AEE  
AEP  
AES  
AET  
AFL

WARNING:fbprophet.models:Optimization terminated abnormally. Falling back to Newton.

AGN  
AIG  
AIV  
AIZ  
AJG  
AKAM  
ALB

ALGN  
ALK  
ALL  
ALLE  
ALXN  
AMAT

WARNING:fbprophet.models:Optimization terminated abnormally. Falling back to Newton.

AMD  
AME  
AMG  
AMGN  
AMP  
AMT  
AMZN  
ANDV  
ANSS  
ANTM  
AON  
AOS  
APA  
APC  
APD  
APH  
ARE  
ARNC  
ATVI  
AVB  
AVGO  
AVY  
AWK  
AXP  
AYI  
AZO

WARNING:fbprophet.models:Optimization terminated abnormally. Falling back to Newton.

BA  
BAC  
BAX  
BBT  
BBY  
BDX  
BEN  
BF.B  
BIIB  
BK

BLK  
BLL  
BMY  
BRK.B  
BSX  
BWA  
BXP  
C  
CA  
CAG  
CAH  
CAT  
CB  
CBG  
CBOE  
CBS  
CCI  
CCL  
CDNS  
CELG  
CERN  
CF  
CHD  
CHK  
CHRW  
CHTR  
CI  
CINF  
CL  
CLX

WARNING:fbprophet.models:Optimization terminated abnormally. Falling back to Newton.

CMA  
CMCSA  
CME  
CMG  
CMI  
CMS

WARNING:fbprophet.models:Optimization terminated abnormally. Falling back to Newton.

CNC  
CNP  
COF  
COG  
COL  
COO

COP  
COST

WARNING:fbprophet.models:Optimization terminated abnormally. Falling back to Newton.

COTY  
CPB  
CRM  
CSCO  
CSX  
CTAS  
CTL  
CTSH  
CTXS  
CVS  
CVX  
CXO  
D  
DAL  
DE  
DFS  
DG  
DGX  
DHI  
DIS

WARNING:fbprophet.models:Optimization terminated abnormally. Falling back to Newton.

WARNING:fbprophet.models:Optimization terminated abnormally. Falling back to Newton.

DISCA  
DISCK  
DISH  
DLR  
DLTR  
DOV  
DPS  
DRE  
DRI  
DTE  
DUK  
DVA  
DVN  
EA  
EBAY  
ECL  
ED  
EFX

EIX  
EL  
EMN  
EMR  
EOG  
EQIX  
EQR  
EQT  
ESRX  
ESS  
ETFC  
ETN  
ETR  
EW  
EXC  
EXPD  
EXPE  
EXR  
F  
FAST  
FB

WARNING:fbprophet.models:Optimization terminated abnormally. Falling back to Newton.

FBHS  
FCX  
FDX  
FE  
FFIV  
FIS

WARNING:fbprophet.models:Optimization terminated abnormally. Falling back to Newton.

FISV  
FITB  
FL  
FLIR  
FLR

WARNING:fbprophet.models:Optimization terminated abnormally. Falling back to Newton.

FLS  
FMC  
FOX  
FOXA  
FRT  
FTI  
GD

GE  
GGP  
GILD  
GIS  
GLW  
GM  
GOOGL  
GPC  
GPN  
GPS

WARNING:fbprophet.models:Optimization terminated abnormally. Falling back to Newton.

GRMN  
GS  
GT  
GWW  
HAL  
HAS  
HBAN

WARNING:fbprophet.models:Optimization terminated abnormally. Falling back to Newton.

HBI  
HCA  
HCN  
HCP  
HD  
HES  
HIG  
HII  
HOG  
HOLX  
HON  
HP  
HRB  
HRL  
HRS  
HSIC  
HST  
HSY  
HUM  
IBM  
IDXX  
IFF

WARNING:fbprophet.models:Optimization terminated abnormally. Falling back to Newton.

ILMN  
INCY  
INTC  
INTU  
IP  
IPG  
IQV  
IR  
IRM  
ISRG  
IT  
ITW  
IVZ  
JBHT  
JCI

WARNING:fbprophet.models:Optimization terminated abnormally. Falling back to Newton.

JEC  
JNJ  
JNPR  
JPM  
JWN  
K

WARNING:fbprophet.models:Optimization terminated abnormally. Falling back to Newton.

KEY  
KIM  
KLAC  
KMB  
KMI  
KMX  
KO  
KORS  
KR  
KSS  
KSU  
L  
LB  
LEG  
LEN  
LH  
LKQ  
LLL  
LLY  
LMT

WARNING:fbprophet.models:Optimization terminated abnormally. Falling back to Newton.

LNC  
LNT  
LOW

WARNING:fbprophet.models:Optimization terminated abnormally. Falling back to Newton.

LRCX  
LUK  
LUV  
LYB  
M  
MA  
MAA  
MAC  
MAR  
MAS  
MAT  
MCD  
MCHP  
MCK  
MCO  
MDLZ  
MDT  
MET  
MGM  
MHK  
MKC  
MLM  
MMC  
MMM  
MNST  
MO  
MON  
MOS  
MPC  
MRK  
MRO

WARNING:fbprophet.models:Optimization terminated abnormally. Falling back to Newton.

MS  
MSFT  
MSI  
MTB  
MTD



MU  
MYL  
NBL  
NCLH  
NDAQ  
NEE  
NEM  
NFLX  
NFX  
NI  
NKE  
NLSN  
NOC  
NOV  
NRG  
NSC  
NTAP  
NTRS  
NUE

WARNING:fbprophet.models:Optimization terminated abnormally. Falling back to Newton.

NVDA  
NWL  
NWS

WARNING:fbprophet.models:Optimization terminated abnormally. Falling back to Newton.

NWSA  
OKE  
OMC  
ORCL  
ORLY  
OXY  
PAYX  
PBCT  
PCAR  
PCG  
PCLN  
PDCO  
PEG  
PEP  
PFE  
PFG  
PG  
PGR  
PH  
PHM

PKG  
PKI  
PLD  
PM  
PNC  
PNR  
PNW  
PPG  
PPL  
PRGO

WARNING:fbprophet.models:Optimization terminated abnormally. Falling back to Newton.

PRU  
PSA  
PSX

WARNING:fbprophet.models:Optimization terminated abnormally. Falling back to Newton.

PVH  
PWR  
PX  
PXD  
QCOM  
RCL  
RE  
REG  
REGN

WARNING:fbprophet.models:Optimization terminated abnormally. Falling back to Newton.

RF  
RHI  
RHT  
RJF  
RL  
RMD  
ROK  
ROP  
ROST  
RRC  
RSG  
RTN  
SBAC  
SBUX  
SCG  
SCHW  
SEE

SHW  
SIG  
SJM  
SLB  
SLG  
SNA  
SNI  
SNPS  
SO  
SPG  
SPGI  
SRCL  
SRE  
STI  
STT  
STX  
STZ  
SWK  
SWKS  
SYK  
SYMC  
SYY  
T  
TAP  
TDG  
TEL  
TGT  
TIF  
TJX  
TMK  
TMO  
TPR  
TRIP  
TROW  
TRV  
TSCO  
TSN  
TSS  
TWX  
TXN

WARNING:fbprophet.models:Optimization terminated abnormally. Falling back to Newton.

TXT  
UAA  
UAL  
UDR

WARNING:fbprophet.models:Optimization terminated abnormally. Falling back to Newton.

UHS  
ULTA  
UNH  
UNM  
UNP

WARNING:fbprophet.models:Optimization terminated abnormally. Falling back to Newton.

UPS  
URI  
USB  
UTX  
V  
VAR  
VFC  
VIAB  
VLO  
VMC  
VNO  
VRSK

WARNING:fbprophet.models:Optimization terminated abnormally. Falling back to Newton.

VRSN  
VRTX  
VTR  
VZ  
WAT  
WBA  
WDC  
WEC  
WFC  
WHR  
WM  
WMB  
WMT  
WU  
WY  
WYN  
WYNN  
XEC  
XEL  
XL  
XLNX  
XOM

XRAY  
XRX  
XYL  
YUM  
ZBH

WARNING:fbprophet.models:Optimization terminated abnormally. Falling back to Newton.

ZION  
ZTS

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```

```

[92]: def save_dict_to_file(dic):
        f = open('dict3.txt', 'w')
        f.write(str(dic))
        f.close()

```

```
[ ]: save_dict_to_file(best_params)
```

```
[ ]:
```

```
[134]: def load_dict_from_file():  
        f = open('dict3.txt','r')  
        bestparams =f.read()  
        f.close()  
        return eval(bestparams)
```

```
[135]: stockparams = load_dict_from_file()
```

```
[136]: type(stockparams)
```

```
[136]: dict
```

```
[137]: stockparams['AAL']
```

```
[137]: 0.01
```

```
[101]: stocks = X_Train_Fbp.groupby('symbol')  
        predi = []  
        for sym in stocks.groups:  
            stock = stocks.get_group(sym)  
            m = Prophet(daily_seasonality=False, changepoint_prior_scale =  
↪stockparams[sym])  
            m.fit(stock)  
            stockdf = m.make_future_dataframe(periods=251)  
            stockprediction = m.predict(stockdf)  
            predi.extend(stockprediction.iloc[756:1007].yhat.tolist())  
            print(sym)  
        len(predi)
```

A  
AAL  
AAP  
AAPL  
ABBV  
ABC  
ABT  
ACN  
ADBE  
ADI  
ADM  
ADP  
ADS  
ADSK

AEE  
AEP  
AES  
AET  
AFL  
AGN  
AIG  
AIV  
AIZ  
AJG  
AKAM  
ALB  
ALGN  
ALK  
ALL  
ALLE  
ALXN  
AMAT  
AMD  
AME  
AMG  
AMGN  
AMP  
AMT  
AMZN  
ANDV  
ANSS  
ANTM  
AON  
AOS  
APA  
APC  
APD  
APH  
ARE  
ARNC  
ATVI  
AVB  
AVGO  
AVY  
AWK  
AXP  
AYI  
AZO

WARNING:fbprophet.models:Optimization terminated abnormally. Falling back to Newton.

BA



BAC  
BAX  
BBT  
BBY  
BDX  
BEN  
BF.B  
BIIB  
BK  
BLK  
BLL  
BMY  
BRK.B  
BSX  
BWA  
BXP  
C  
CA  
CAG  
CAH  
CAT  
CB  
CBG  
CBOE  
CBS  
CCI  
CCL  
CDNS  
CELG  
CERN  
CF  
CHD  
CHK  
CHRW  
CHTR  
CI  
CINF  
CL  
CLX  
CMA  
CMCSA  
CME  
CMG  
CMI  
CMS  
CNC  
CNP  
COF

COG  
COL  
COO  
COP  
COST  
COTY  
CPB  
CRM  
CSCO  
CSX  
CTAS  
CTL  
CTSH  
CTXS  
CVS  
CVX  
CXO  
D  
DAL  
DE  
DFS  
DG  
DGX  
DHI  
DIS  
DISCA  
DISCK  
DISH  
DLR  
DLTR  
DOV  
DPS  
DRE  
DRI  
DTE  
DUK  
DVA  
DVN  
EA  
EBAY  
ECL  
ED  
EFX  
EIX  
EL  
EMN  
EMR  
EOG

EQIX  
EQR  
EQT  
ESRX  
ESS  
ETFC  
ETN  
ETR  
EW  
EXC  
EXPD  
EXPE  
EXR  
F  
FAST  
FB  
FBHS  
FCX  
FDX  
FE  
FFIV  
FIS  
FISV  
FITB  
FL  
FLIR  
FLR  
FLS  
FMC  
FOX  
FOXA  
FRT  
FTI  
GD  
GE  
GGP  
GILD  
GIS  
GLW  
GM  
GOOGL  
GPC  
GPN  
GPS  
GRMN  
GS  
GT  
GWW

HAL  
HAS  
HBAN  
HBI  
HCA  
HCN  
HCP  
HD  
HES  
HIG  
HII  
HOG  
HOLX  
HON  
HP  
HRB  
HRL  
HRS  
HSIC  
HST  
HSY  
HUM  
IBM  
IDXX  
IFF  
ILMN  
INCY  
INTC  
INTU  
IP  
IPG  
IQV  
IR  
IRM  
ISRG  
IT  
ITW  
IVZ  
JBHT  
JCI  
JEC  
JNJ  
JNPR  
JPM  
JWN  
K  
KEY  
KIM

KLAC  
KMB  
KMI  
KMX  
KO  
KORS  
KR  
KSS  
KSU  
L  
LB  
LEG  
LEN  
LH  
LKQ  
LLL  
LLY  
LMT  
LNC  
LNT  
LOW  
LRCX  
LUK  
LUV  
LYB  
M  
MA  
MAA  
MAC  
MAR  
MAS  
MAT  
MCD  
MCHP  
MCK  
MCO  
MDLZ  
MDT  
MET  
MGM  
MHK  
MKC  
MLM  
MMC  
MMM  
MNST  
MO  
MON

MOS  
MPC  
MRK  
MRO  
MS  
MSFT  
MSI  
MTB  
MTD  
MU  
MYL  
NBL  
NCLH  
NDAQ  
NEE  
NEM  
NFLX  
NFX  
NI  
NKE  
NLSN  
NOC  
NOV  
NRG  
NSC  
NTAP  
NTRS  
NUE  
NVDA  
NWL  
NWS  
NWSA  
OKE  
OMC  
ORCL  
ORLY  
OXY  
PAYX  
PBCT  
PCAR  
PCG  
PCLN  
PDCO  
PEG  
PEP  
PFE  
PFG  
PG

PGR  
PH  
PHM  
PKG  
PKI  
PLD  
PM  
PNC  
PNR  
PNW  
PPG  
PPL

WARNING:fbprophet.models:Optimization terminated abnormally. Falling back to Newton.

PRGO  
PRU  
PSA  
PSX  
PVH  
PWR  
PX  
PXD  
QCOM  
RCL  
RE  
REG  
REGN  
RF  
RHI  
RHT  
RJF  
RL  
RMD  
ROK  
ROP  
ROST  
RRC  
RSG  
RTN  
SBAC  
SBUX  
SCG  
SCHW  
SEE  
SHW  
SIG  
SJM

SLB  
SLG  
SNA  
SNI  
SNPS  
SO  
SPG  
SPGI  
SRCL  
SRE  
STI  
STT  
STX  
STZ  
SWK  
SWKS  
SYK  
SYMC  
SYY  
T  
TAP  
TDG  
TEL  
TGT  
TIF  
TJX  
TMK  
TMO  
TPR  
TRIP  
TROW  
TRV  
TSCO  
TSN  
TSS  
TWX  
TXN  
TXT  
UAA  
UAL  
UDR  
UHS  
ULTA  
UNH  
UNM  
UNP  
UPS  
URI



USB  
UTX  
V  
VAR  
VFC  
VIAB  
VLO  
VMC  
VNO  
VRSK  
VRSN  
VRTX  
VTR  
VZ  
WAT  
WBA  
WDC  
WEC  
WFC  
WHR  
WM  
WMB  
WMT  
WU  
WY  
WYN  
WYNN  
XEC  
XEL  
XL  
XLNX  
XOM  
XRAY  
XRX  
XYL  
YUM  
ZBH  
ZION  
ZTS

[101]: 120229

```
[102]: X_Test_Fbp = X_Test_Fbp.copy()  
X_Test_Fbp['Fbprediction'] = predi
```

```
[103]: from sklearn.metrics import mean_squared_error
```

```
[105]: Closee = X_Test_Fbp['close'].tolist()
```

```
[106]: Closee_Pred = X_Test_Fbp['Fbprediction'].tolist()
```

```
[107]: MSE_FB = mean_squared_error(Closee,Closee_Pred)
```

```
[108]: MSE_FB
```

```
[108]: 937.4263928170676
```

The Mean squared error for Fb prophet after hyper parameter tuning is 937.4263928170676

Neuro Prophet

```
[111]: from neuralprophet import NeuralProphet
```

```
[112]: import pickle
```

```
[114]: import logging
logging.getLogger('neuralprophet').setLevel(logging.WARNING)
```

```
[116]: stocks = X_Train_Fbp.groupby('symbol')
predi = []
for sym in stocks.groups:
    stock = stocks.get_group(sym)
    #X_Train_Fbp = X_Train_Fbp.drop(['open', 'high', 'low', 'volume', 'day'
    ↪, '1styrreturn', '2ndyrreturn', '3rdyrreturn', '4thyrrreturn', '50daySMA', '200daySMA'],
    ↪axis=1)
    stock = stock.drop(['symbol'], axis=1)
    m = NeuralProphet(learning_rate=0.1)
    m.fit(stock)
    stockdf = m.make_future_dataframe(stock,periods=251)
    stockprediction = m.predict(stockdf)
    predi.extend(stockprediction.iloc[0:251].yhat1.tolist())
    print(sym)
len(predi)
```

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 96.429% of the data.

INFO:NP.df\_utils:Major frequency B corresponds to 96.429% of the data.

INFO - (NP.df\_utils.\_infer\_frequency) - Dataframe freq automatically defined as B

INFO:NP.df\_utils:Dataframe freq automatically defined as B

INFO - (NP.config.init\_data\_params) - Setting normalization to global as only one dataframe provided for training.

INFO:NP.config:Setting normalization to global as only one dataframe provided for training.

INFO - (NP.utils.set\_auto\_seasonalities) - Disabling daily seasonality. Run

```

NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[213/213]: 100%|          | 213/213 [00:19<00:00, 10.70it/s,
SmoothL1Loss=0.00164, MAE=1.05, RMSE=1.36, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.36, MAE=46.7, RMSE=55.7, RegLoss=0]

```

A

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.57it/s,
SmoothL1Loss=0.0029, MAE=1.54, RMSE=1.92, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
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frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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frequency - B
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
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INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
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INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 1/213 [00:00<00:23,  9.14it/s,
SmoothL1Loss=0.473, MAE=58.9, RMSE=72.2, RegLoss=0]
```

AAL

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.42it/s,
SmoothL1Loss=0.00478, MAE=5.06, RMSE=6.57, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.562, MAE=54.6, RMSE=66.7, RegLoss=0]

AAP

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.62it/s,
SmoothL1Loss=0.00198, MAE=2.84, RMSE=3.51, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.17, MAE=35.5, RMSE=44.8, RegLoss=0]

AAPL

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.42it/s,
SmoothL1Loss=0.00399, MAE=1.6, RMSE=1.94, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

INFO:NP.df\_utils:Major frequency B corresponds to 99.602% of the data.  
INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B  
INFO:NP.df\_utils:Defined frequency is equal to major frequency - B  
INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 96.429% of the data.  
INFO:NP.df\_utils:Major frequency B corresponds to 96.429% of the data.  
INFO - (NP.df\_utils.\_infer\_frequency) - Dataframe freq automatically defined as B  
INFO:NP.df\_utils:Dataframe freq automatically defined as B  
INFO - (NP.config.init\_data\_params) - Setting normalization to global as only one dataframe provided for training.  
INFO:NP.config:Setting normalization to global as only one dataframe provided for training.  
INFO - (NP.utils.set\_auto\_seasonalities) - Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.  
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.  
INFO - (NP.config.set\_auto\_batch\_epoch) - Auto-set batch\_size to 16  
INFO:NP.config:Auto-set batch\_size to 16  
INFO - (NP.config.set\_auto\_batch\_epoch) - Auto-set epochs to 213  
INFO:NP.config:Auto-set epochs to 213  
Epoch[1/213]: 0%| | 1/213 [00:00<00:23, 8.89it/s, SmoothL1Loss=1.92, MAE=121, RMSE=140, RegLoss=0]  
ABBV  
Epoch[213/213]: 100%| | 213/213 [00:20<00:00, 10.45it/s, SmoothL1Loss=0.00143, MAE=2.09, RMSE=2.65, RegLoss=0]  
INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 96.429% of the data.  
INFO:NP.df\_utils:Major frequency B corresponds to 96.429% of the data.  
INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B  
INFO:NP.df\_utils:Defined frequency is equal to major frequency - B  
INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 99.602% of the data.  
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INFO:NP.df\_utils:Defined frequency is equal to major frequency - B  
INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 96.429% of the data.

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|          | 1/213 [00:00<00:27,  7.75it/s,
SmoothL1Loss=2.14, MAE=35.5, RMSE=39.8, RegLoss=0]

ABC

Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.61it/s,
SmoothL1Loss=0.00384, MAE=0.938, RMSE=1.16, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```



INFO:NP.config:Setting normalization to global as only one dataframe provided for training.

INFO - (NP.utils.set\_auto\_seasonalities) - Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

INFO - (NP.config.set\_auto\_batch\_epoch) - Auto-set batch\_size to 16

INFO:NP.config:Auto-set batch\_size to 16

INFO - (NP.config.set\_auto\_batch\_epoch) - Auto-set epochs to 213

INFO:NP.config:Auto-set epochs to 213

Epoch[1/213]: 0%| | 0/213 [00:00<?, ?it/s,  
SmoothL1Loss=1.16, MAE=69.1, RMSE=83.9, RegLoss=0]

ABT

Epoch[213/213]: 100%| | 213/213 [00:20<00:00, 10.41it/s,  
SmoothL1Loss=0.00182, MAE=2.15, RMSE=2.56, RegLoss=0]

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 96.429% of the data.

INFO:NP.df\_utils:Major frequency B corresponds to 96.429% of the data.

INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

INFO:NP.df\_utils:Defined frequency is equal to major frequency - B

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 99.602% of the data.

INFO:NP.df\_utils:Major frequency B corresponds to 99.602% of the data.

INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

INFO:NP.df\_utils:Defined frequency is equal to major frequency - B

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 99.602% of the data.

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INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

INFO:NP.df\_utils:Defined frequency is equal to major frequency - B

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 96.429% of the data.

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INFO - (NP.df\_utils.\_infer\_frequency) - Dataframe freq automatically defined as B

INFO:NP.df\_utils:Dataframe freq automatically defined as B

INFO - (NP.config.init\_data\_params) - Setting normalization to global as only one dataframe provided for training.

INFO:NP.config:Setting normalization to global as only one dataframe provided for training.

INFO - (NP.utils.set\_auto\_seasonalities) - Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.46, MAE=40.5, RMSE=48.8, RegLoss=0]

ACN

Epoch[213/213]: 100%|      | 213/213 [00:19<00:00, 10.75it/s,
SmoothL1Loss=0.00178, MAE=2.23, RMSE=2.79, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.654, MAE=26.3, RMSE=32.2, RegLoss=0]

```

ADBE

```
Epoch[213/213]: 100%|          | 213/213 [00:19<00:00, 10.73it/s,
SmoothL1Loss=0.00312, MAE=1.53, RMSE=1.93, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.729, MAE=24.5, RMSE=29.3, RegLoss=0]
```

ADI

```
Epoch[213/213]: 100%|          | 213/213 [00:19<00:00, 10.87it/s,
SmoothL1Loss=0.00289, MAE=1.25, RMSE=1.59, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.686, MAE=26, RMSE=30.9, RegLoss=0]

ADM

Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.41it/s,
SmoothL1Loss=0.00583, MAE=1.96, RMSE=2.49, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.62, MAE=125, RMSE=156, RegLoss=0]

ADP

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.58it/s,
SmoothL1Loss=0.00433, MAE=9.17, RMSE=11.3, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.98, MAE=42.2, RMSE=50.7, RegLoss=0]

```

ADS

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Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.38it/s,
SmoothL1Loss=0.00368, MAE=2.02, RMSE=2.51, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```

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INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.2, MAE=26.8, RMSE=33.1, RegLoss=0]

ADSK

Epoch[213/213]: 100%|                             | 213/213 [00:19<00:00, 10.70it/s,
SmoothL1Loss=0.00215, MAE=0.855, RMSE=1.06, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```

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INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.475, MAE=17.8, RMSE=22, RegLoss=0]

AEE

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.56it/s,
SmoothL1Loss=0.00197, MAE=1.05, RMSE=1.3, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```



```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.531, MAE=6.11, RMSE=7.13, RegLoss=0]

AEP

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.52it/s,
SmoothL1Loss=0.00144, MAE=0.273, RMSE=0.339, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.884, MAE=77.1, RMSE=95.6, RegLoss=0]

```

AES

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.29it/s,
SmoothL1Loss=0.00118, MAE=2.14, RMSE=2.82, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.485, MAE=15.3, RMSE=18.4, RegLoss=0]
```

AET

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.37it/s,
SmoothL1Loss=0.00286, MAE=1.03, RMSE=1.29, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.32, MAE=258, RMSE=305, RegLoss=0]

AFL

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.46it/s,
SmoothL1Loss=0.00218, MAE=7.65, RMSE=9.45, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```

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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.772, MAE=20.3, RMSE=24.6, RegLoss=0]

AGN

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.30it/s,
SmoothL1Loss=0.00353, MAE=1.15, RMSE=1.43, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.796, MAE=23.4, RMSE=28.2, RegLoss=0]

```

AIG

```

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.48it/s,
SmoothL1Loss=0.00155, MAE=0.87, RMSE=1.07, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|          | 1/213 [00:00<00:22,  9.37it/s,
SmoothL1Loss=0.693, MAE=33.1, RMSE=40, RegLoss=0]

AIV

Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.64it/s,
SmoothL1Loss=0.00306, MAE=1.83, RMSE=2.29, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```

INFO:NP.config:Setting normalization to global as only one dataframe provided for training.

INFO - (NP.utils.set\_auto\_seasonalities) - Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

INFO - (NP.config.set\_auto\_batch\_epoch) - Auto-set batch\_size to 16

INFO:NP.config:Auto-set batch\_size to 16

INFO - (NP.config.set\_auto\_batch\_epoch) - Auto-set epochs to 213

INFO:NP.config:Auto-set epochs to 213

Epoch[1/213]: 0%| | 0/213 [00:00<?, ?it/s,  
SmoothL1Loss=0.744, MAE=16.7, RMSE=19.8, RegLoss=0]

AIZ

Epoch[213/213]: 100%| | 213/213 [00:19<00:00, 10.71it/s,  
SmoothL1Loss=0.00256, MAE=0.82, RMSE=1, RegLoss=0]

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 96.429% of the data.

INFO:NP.df\_utils:Major frequency B corresponds to 96.429% of the data.

INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

INFO:NP.df\_utils:Defined frequency is equal to major frequency - B

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 99.602% of the data.

INFO:NP.df\_utils:Major frequency B corresponds to 99.602% of the data.

INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

INFO:NP.df\_utils:Defined frequency is equal to major frequency - B

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 99.602% of the data.

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INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

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INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 96.429% of the data.

INFO:NP.df\_utils:Major frequency B corresponds to 96.429% of the data.

INFO - (NP.df\_utils.\_infer\_frequency) - Dataframe freq automatically defined as B

INFO:NP.df\_utils:Dataframe freq automatically defined as B

INFO - (NP.config.init\_data\_params) - Setting normalization to global as only one dataframe provided for training.

INFO:NP.config:Setting normalization to global as only one dataframe provided for training.

INFO - (NP.utils.set\_auto\_seasonalities) - Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.06, MAE=53.2, RMSE=64.4, RegLoss=0]

AJG

Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.25it/s,
SmoothL1Loss=0.00291, MAE=2.14, RMSE=2.68, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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frequency - B
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of the data.
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NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.93, MAE=58.7, RMSE=70.4, RegLoss=0]

```



AKAM

```
Epoch[213/213]: 100%|          | 213/213 [00:19<00:00, 10.67it/s,
SmoothL1Loss=0.00165, MAE=2, RMSE=2.44, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.935, MAE=68.1, RMSE=84.8, RegLoss=0]
```

ALB

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.43it/s,
SmoothL1Loss=0.00125, MAE=1.92, RMSE=2.44, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.22, MAE=75.9, RMSE=92.8, RegLoss=0]

ALGN

Epoch[213/213]: 100%|                             | 213/213 [00:19<00:00, 10.66it/s,
SmoothL1Loss=0.00195, MAE=2.16, RMSE=2.77, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.492, MAE=19.4, RMSE=23.6, RegLoss=0]

ALK

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.62it/s,
SmoothL1Loss=0.00195, MAE=1.08, RMSE=1.36, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
  0%|
| 0/213 [00:00<?, ?it/s]

ALL

Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.49it/s,
SmoothL1Loss=0.00177, MAE=1.26, RMSE=1.6, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.87, MAE=107, RMSE=129, RegLoss=0]

ALLE

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.41it/s,
SmoothL1Loss=0.00642, MAE=7.43, RMSE=9.23, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```

```

INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.712, MAE=17.6, RMSE=21.4, RegLoss=0]

ALXN

Epoch[213/213]: 100%|                           | 213/213 [00:19<00:00, 10.79it/s,
SmoothL1Loss=0.00103, MAE=0.56, RMSE=0.7, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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for training.
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NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.

```

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.33, MAE=10.5, RMSE=12.1, RegLoss=0]

AMAT

Epoch[213/213]: 100%|      | 213/213 [00:19<00:00, 10.85it/s,
SmoothL1Loss=0.00186, MAE=0.274, RMSE=0.351, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.02, MAE=16.6, RMSE=20.5, RegLoss=0]

```

AMD

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.52it/s,
SmoothL1Loss=0.00644, MAE=1.05, RMSE=1.29, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 1/213 [00:00<00:27,  7.77it/s,
SmoothL1Loss=0.773, MAE=124, RMSE=151, RegLoss=0]
```

AME

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.26it/s,
SmoothL1Loss=0.00283, MAE=6.34, RMSE=7.73, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```



```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.921, MAE=82.2, RMSE=99, RegLoss=0]

AMG

Epoch[213/213]: 100%|                             | 213/213 [00:19<00:00, 10.70it/s,
SmoothL1Loss=0.00363, MAE=4.17, RMSE=5.12, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.46, MAE=111, RMSE=123, RegLoss=0]

AMGN

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.56it/s,
SmoothL1Loss=0.00265, MAE=3.23, RMSE=4.09, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.09, MAE=55.4, RMSE=67.9, RegLoss=0]

AMP

Epoch[213/213]: 100%|      | 213/213 [00:19<00:00, 10.75it/s,
SmoothL1Loss=0.00226, MAE=1.99, RMSE=2.41, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
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```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.972, MAE=693, RMSE=822, RegLoss=0]

AMT

Epoch[213/213]: 100%|                             | 213/213 [00:19<00:00, 10.79it/s,
SmoothL1Loss=0.000938, MAE=16.8, RMSE=21, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```

INFO:NP.config:Setting normalization to global as only one dataframe provided for training.

INFO - (NP.utils.set\_auto\_seasonalities) - Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

INFO - (NP.config.set\_auto\_batch\_epoch) - Auto-set batch\_size to 16

INFO:NP.config:Auto-set batch\_size to 16

INFO - (NP.config.set\_auto\_batch\_epoch) - Auto-set epochs to 213

INFO:NP.config:Auto-set epochs to 213

Epoch[1/213]: 0%| | 0/213 [00:00<?, ?it/s,  
SmoothL1Loss=0.678, MAE=63.3, RMSE=77.7, RegLoss=0]

AMZN

Epoch[213/213]: 100%| | 213/213 [00:20<00:00, 10.29it/s,  
SmoothL1Loss=0.00239, MAE=3.11, RMSE=3.97, RegLoss=0]

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 96.429% of the data.

INFO:NP.df\_utils:Major frequency B corresponds to 96.429% of the data.

INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

INFO:NP.df\_utils:Defined frequency is equal to major frequency - B

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 99.602% of the data.

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INFO - (NP.df\_utils.\_infer\_frequency) - Dataframe freq automatically defined as B

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INFO - (NP.config.init\_data\_params) - Setting normalization to global as only one dataframe provided for training.

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INFO - (NP.utils.set\_auto\_seasonalities) - Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

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```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.2, MAE=37.4, RMSE=43.6, RegLoss=0]

ANDV

Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.18it/s,
SmoothL1Loss=0.00381, MAE=1.46, RMSE=1.92, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 1/213 [00:00<00:24, 8.76it/s,
SmoothL1Loss=0.777, MAE=90, RMSE=110, RegLoss=0]

```

ANSS

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.21it/s,
SmoothL1Loss=0.00118, MAE=2.84, RMSE=3.62, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=2.61, MAE=109, RMSE=117, RegLoss=0]
```

ANTM

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.58it/s,
SmoothL1Loss=0.00166, MAE=1.6, RMSE=1.99, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.951, MAE=35.9, RMSE=43.9, RegLoss=0]

AON

Epoch[213/213]: 100%|          | 213/213 [00:19<00:00, 10.93it/s,
SmoothL1Loss=0.000994, MAE=0.92, RMSE=1.14, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```



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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO:NP.df_utils:Dataframe freq automatically defined as B
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one dataframe provided for training.
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=2.04, MAE=163, RMSE=190, RegLoss=0]

AOS

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.29it/s,
SmoothL1Loss=0.00159, MAE=2.91, RMSE=3.61, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```

INFO:NP.df\_utils:Major frequency B corresponds to 99.602% of the data.  
INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B  
INFO:NP.df\_utils:Defined frequency is equal to major frequency - B  
INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 96.429% of the data.  
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INFO - (NP.df\_utils.\_infer\_frequency) - Dataframe freq automatically defined as B  
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INFO - (NP.config.init\_data\_params) - Setting normalization to global as only one dataframe provided for training.  
INFO:NP.config:Setting normalization to global as only one dataframe provided for training.  
INFO - (NP.utils.set\_auto\_seasonalities) - Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.  
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.  
INFO - (NP.config.set\_auto\_batch\_epoch) - Auto-set batch\_size to 16  
INFO:NP.config:Auto-set batch\_size to 16  
INFO - (NP.config.set\_auto\_batch\_epoch) - Auto-set epochs to 213  
INFO:NP.config:Auto-set epochs to 213  
Epoch[1/213]: 0%| | 1/213 [00:00<00:24, 8.77it/s, SmoothL1Loss=1.58, MAE=158, RMSE=189, RegLoss=0]

APA

Epoch[213/213]: 100%| | 213/213 [00:20<00:00, 10.26it/s, SmoothL1Loss=0.00117, MAE=2.96, RMSE=3.69, RegLoss=0]  
INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 96.429% of the data.  
INFO:NP.df\_utils:Major frequency B corresponds to 96.429% of the data.  
INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B  
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```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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NeuralProphet with daily_seasonality=True to override this.
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.992, MAE=69.5, RMSE=83.4, RegLoss=0]

APC

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.32it/s,
SmoothL1Loss=0.00323, MAE=3.27, RMSE=3.89, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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frequency - B
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B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```

INFO:NP.config:Setting normalization to global as only one dataframe provided for training.

INFO - (NP.utils.set\_auto\_seasonalities) - Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

INFO - (NP.config.set\_auto\_batch\_epoch) - Auto-set batch\_size to 16

INFO:NP.config:Auto-set batch\_size to 16

INFO - (NP.config.set\_auto\_batch\_epoch) - Auto-set epochs to 213

INFO:NP.config:Auto-set epochs to 213

Epoch[1/213]: 0%| | 0/213 [00:00<?, ?it/s,  
SmoothL1Loss=0.342, MAE=16.7, RMSE=21, RegLoss=0]

APD

Epoch[213/213]: 100%| | 213/213 [00:20<00:00, 10.60it/s,  
SmoothL1Loss=0.00147, MAE=1.03, RMSE=1.29, RegLoss=0]

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 96.429% of the data.

INFO:NP.df\_utils:Major frequency B corresponds to 96.429% of the data.

INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

INFO:NP.df\_utils:Defined frequency is equal to major frequency - B

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 99.602% of the data.

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INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

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INFO - (NP.df\_utils.\_infer\_frequency) - Dataframe freq automatically defined as B

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INFO - (NP.config.init\_data\_params) - Setting normalization to global as only one dataframe provided for training.

INFO:NP.config:Setting normalization to global as only one dataframe provided for training.

INFO - (NP.utils.set\_auto\_seasonalities) - Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=2.65, MAE=145, RMSE=156, RegLoss=0]

APH

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.55it/s,
SmoothL1Loss=0.00168, MAE=2.15, RMSE=2.65, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.979, MAE=45.7, RMSE=56, RegLoss=0]

```

ARE

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.34it/s,
SmoothL1Loss=0.00196, MAE=1.62, RMSE=1.99, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.731, MAE=30.2, RMSE=37.3, RegLoss=0]
```

ARNC

```
Epoch[213/213]: 100%|          | 213/213 [00:21<00:00,  9.73it/s,
SmoothL1Loss=0.000866, MAE=0.864, RMSE=1.08, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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frequency - B
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.91, MAE=90.3, RMSE=108, RegLoss=0]

ATVI

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.41it/s,
SmoothL1Loss=0.00185, MAE=3.26, RMSE=4.07, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 1/213 [00:00<00:24, 8.78it/s,
SmoothL1Loss=0.881, MAE=158, RMSE=192, RegLoss=0]

AVB

Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.41it/s,
SmoothL1Loss=0.000804, MAE=3.96, RMSE=4.8, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```



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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 1/213 [00:00<00:25, 8.42it/s,
SmoothL1Loss=1.05, MAE=53.1, RMSE=64.3, RegLoss=0]

AVGO

Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.40it/s,
SmoothL1Loss=0.00128, MAE=1.48, RMSE=1.79, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.12, MAE=57.1, RMSE=69.7, RegLoss=0]

AVY

Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.36it/s,
SmoothL1Loss=0.000677, MAE=1.07, RMSE=1.33, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```

```

INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=2.28, MAE=117, RMSE=132, RegLoss=0]

AWK

Epoch[213/213]: 100%|                           | 213/213 [00:19<00:00, 10.72it/s,
SmoothL1Loss=0.00132, MAE=1.72, RMSE=2.14, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.

```

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.58, MAE=323, RMSE=364, RegLoss=0]

AXP

Epoch[213/213]: 100%|                           | 213/213 [00:19<00:00, 10.70it/s,
SmoothL1Loss=0.00175, MAE=7.36, RMSE=9.17, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.09, MAE=494, RMSE=595, RegLoss=0]

```

AYI

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.54it/s,
SmoothL1Loss=0.0012, MAE=13, RMSE=15.7, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.624, MAE=45.7, RMSE=55.6, RegLoss=0]
```

AZO

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.61it/s,
SmoothL1Loss=0.00512, MAE=3.52, RMSE=4.43, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.871, MAE=9.08, RMSE=10.9, RegLoss=0]

BA

Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.30it/s,
SmoothL1Loss=0.00419, MAE=0.517, RMSE=0.632, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.85, MAE=98, RMSE=115, RegLoss=0]

BAC

Epoch[213/213]: 100%|                           | 213/213 [00:19<00:00, 10.87it/s,
SmoothL1Loss=0.00245, MAE=1.85, RMSE=2.78, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.36, MAE=20.4, RMSE=24.3, RegLoss=0]

BAX

Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.64it/s,
SmoothL1Loss=0.00358, MAE=0.773, RMSE=0.941, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.

```



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INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.908, MAE=24.1, RMSE=29.2, RegLoss=0]

BBT

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.42it/s,
SmoothL1Loss=0.00386, MAE=1.19, RMSE=1.53, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```

```

INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.881, MAE=90.8, RMSE=113, RegLoss=0]

BBY

Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.45it/s,
SmoothL1Loss=0.000953, MAE=2.42, RMSE=3.01, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.

```

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.821, MAE=32.8, RMSE=40.6, RegLoss=0]

BDX

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.48it/s,
SmoothL1Loss=0.00129, MAE=1.06, RMSE=1.33, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.07, MAE=24, RMSE=28.3, RegLoss=0]

```

BEN

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.59it/s,
SmoothL1Loss=0.00271, MAE=0.905, RMSE=1.15, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.07, MAE=287, RMSE=335, RegLoss=0]
BF.B
```

```
Epoch[213/213]: 100%|          | 213/213 [00:19<00:00, 10.74it/s,
SmoothL1Loss=0.00324, MAE=11.9, RMSE=14.9, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.04, MAE=20.6, RMSE=23.8, RegLoss=0]

BIIB

Epoch[213/213]: 100%|                           | 213/213 [00:19<00:00, 10.81it/s,
SmoothL1Loss=0.00351, MAE=0.943, RMSE=1.14, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.81, MAE=200, RMSE=226, RegLoss=0]

BK

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.49it/s,
SmoothL1Loss=0.00746, MAE=8.47, RMSE=10.6, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```

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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.605, MAE=15.4, RMSE=19.5, RegLoss=0]

BLK

Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.17it/s,
SmoothL1Loss=0.00142, MAE=0.643, RMSE=0.813, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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```

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INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.13, MAE=40.3, RMSE=49.4, RegLoss=0]

BLL

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.41it/s,
SmoothL1Loss=0.0026, MAE=1.47, RMSE=1.82, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```



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INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.911, MAE=58.6, RMSE=66.9, RegLoss=0]

BMV

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.56it/s,
SmoothL1Loss=0.00196, MAE=2.11, RMSE=2.65, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.

```

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.842, MAE=15.6, RMSE=18.7, RegLoss=0]

BRK.B

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.45it/s,
SmoothL1Loss=0.00061, MAE=0.34, RMSE=0.426, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.46, MAE=70.8, RMSE=81.7, RegLoss=0]

```

BSX

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.23it/s,
SmoothL1Loss=0.00137, MAE=1.53, RMSE=1.9, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.22, MAE=67.2, RMSE=83.7, RegLoss=0]
```

BWA

```
Epoch[213/213]: 100%|          | 213/213 [00:21<00:00, 10.13it/s,
SmoothL1Loss=0.00355, MAE=2.72, RMSE=3.37, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.17, MAE=36.3, RMSE=44.9, RegLoss=0]

BXP

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.22it/s,
SmoothL1Loss=0.00249, MAE=1.29, RMSE=1.58, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.817, MAE=10.6, RMSE=12.7, RegLoss=0]

```

C

```

Epoch[213/213]: 100%|                          | 213/213 [00:19<00:00, 10.70it/s,
SmoothL1Loss=0.00342, MAE=0.559, RMSE=0.69, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.804, MAE=23.2, RMSE=28.5, RegLoss=0]

```

CA

```

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.52it/s,
SmoothL1Loss=0.00271, MAE=1.07, RMSE=1.37, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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of the data.
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frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.763, MAE=30.3, RMSE=36.6, RegLoss=0]

CAG

Epoch[213/213]: 100%|                             | 213/213 [00:19<00:00, 10.73it/s,
SmoothL1Loss=0.0034, MAE=1.69, RMSE=2.09, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```

```

INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.02, MAE=72.7, RMSE=86.5, RegLoss=0]

CAH

Epoch[213/213]: 100%|      | 213/213 [00:19<00:00, 10.77it/s,
SmoothL1Loss=0.00119, MAE=1.95, RMSE=2.38, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```



```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=2.16, MAE=95.5, RMSE=102, RegLoss=0]

CAT

Epoch[213/213]: 100%|      | 213/213 [00:19<00:00, 10.79it/s,
SmoothL1Loss=0.00162, MAE=1.64, RMSE=2.03, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.08, MAE=22.8, RMSE=27.3, RegLoss=0]

```

CB

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.53it/s,
SmoothL1Loss=0.00368, MAE=1.02, RMSE=1.27, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.852, MAE=28.7, RMSE=36, RegLoss=0]
```

CBG

```
Epoch[213/213]: 100%|          | 213/213 [00:19<00:00, 10.78it/s,
SmoothL1Loss=0.0032, MAE=1.47, RMSE=1.79, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.979, MAE=35.9, RMSE=42.9, RegLoss=0]

CBOE

Epoch[213/213]: 100%|                             | 213/213 [00:19<00:00, 10.72it/s,
SmoothL1Loss=0.00277, MAE=1.51, RMSE=1.88, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.867, MAE=35, RMSE=42.2, RegLoss=0]

CBS

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.33it/s,
SmoothL1Loss=0.00257, MAE=1.52, RMSE=1.92, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.16, MAE=30.1, RMSE=35.8, RegLoss=0]

```

CCI

```

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.40it/s,
SmoothL1Loss=0.00323, MAE=1.21, RMSE=1.5, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.583, MAE=11.7, RMSE=14.2, RegLoss=0]

CCL

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.60it/s,
SmoothL1Loss=0.00101, MAE=0.427, RMSE=0.529, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
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```

INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.598, MAE=55.3, RMSE=68.7, RegLoss=0]

CDNS

Epoch[213/213]: 100%|                           | 213/213 [00:21<00:00,  9.83it/s,
SmoothL1Loss=0.00301, MAE=3.42, RMSE=4.24, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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```

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.915, MAE=33, RMSE=40.4, RegLoss=0]

CELG

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.28it/s,
SmoothL1Loss=0.00323, MAE=1.55, RMSE=1.95, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
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frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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of the data.
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.2, MAE=68.2, RMSE=81.3, RegLoss=0]

```



CERN

```
Epoch[213/213]: 100%|          | 213/213 [00:19<00:00, 10.67it/s,
SmoothL1Loss=0.00156, MAE=1.77, RMSE=2.26, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.48, MAE=36.7, RMSE=42.4, RegLoss=0]
```

CF

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.41it/s,
SmoothL1Loss=0.000875, MAE=0.619, RMSE=0.777, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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of the data.
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.1, MAE=41.7, RMSE=50.4, RegLoss=0]

CHD

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.46it/s,
SmoothL1Loss=0.000774, MAE=0.813, RMSE=1.04, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.77, MAE=28.7, RMSE=35, RegLoss=0]

CHK

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.54it/s,
SmoothL1Loss=0.00234, MAE=1.35, RMSE=1.62, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.5, MAE=299, RMSE=360, RegLoss=0]

CHRW

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.60it/s,
SmoothL1Loss=0.000667, MAE=4.32, RMSE=5.48, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.614, MAE=73.4, RMSE=84.8, RegLoss=0]

CHTR

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.64it/s,
SmoothL1Loss=0.00144, MAE=3, RMSE=3.73, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```

INFO:NP.config:Setting normalization to global as only one dataframe provided for training.

INFO - (NP.utils.set\_auto\_seasonalities) - Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

INFO - (NP.config.set\_auto\_batch\_epoch) - Auto-set batch\_size to 16

INFO:NP.config:Auto-set batch\_size to 16

INFO - (NP.config.set\_auto\_batch\_epoch) - Auto-set epochs to 213

INFO:NP.config:Auto-set epochs to 213

Epoch[1/213]: 0%| | 0/213 [00:00<?, ?it/s,  
SmoothL1Loss=0.815, MAE=36.9, RMSE=50.5, RegLoss=0]

CI

Epoch[213/213]: 100%| | 213/213 [00:20<00:00, 10.58it/s,  
SmoothL1Loss=0.00127, MAE=1.22, RMSE=1.51, RegLoss=0]

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 96.429% of the data.

INFO:NP.df\_utils:Major frequency B corresponds to 96.429% of the data.

INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

INFO:NP.df\_utils:Defined frequency is equal to major frequency - B

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 99.602% of the data.

INFO:NP.df\_utils:Major frequency B corresponds to 99.602% of the data.

INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

INFO:NP.df\_utils:Defined frequency is equal to major frequency - B

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 99.602% of the data.

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INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

INFO:NP.df\_utils:Defined frequency is equal to major frequency - B

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 96.429% of the data.

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INFO - (NP.df\_utils.\_infer\_frequency) - Dataframe freq automatically defined as B

INFO:NP.df\_utils:Dataframe freq automatically defined as B

INFO - (NP.config.init\_data\_params) - Setting normalization to global as only one dataframe provided for training.

INFO:NP.config:Setting normalization to global as only one dataframe provided for training.

INFO - (NP.utils.set\_auto\_seasonalities) - Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.371, MAE=10.1, RMSE=12.6, RegLoss=0]

CINF

Epoch[213/213]: 100%|          | 213/213 [00:19<00:00, 10.77it/s,
SmoothL1Loss=0.00372, MAE=0.941, RMSE=1.18, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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of the data.
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.429, MAE=38.6, RMSE=47.5, RegLoss=0]

```

CL

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.24it/s,
SmoothL1Loss=0.00113, MAE=1.84, RMSE=2.22, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.12, MAE=33.7, RMSE=40.6, RegLoss=0]
```

CLX

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.42it/s,
SmoothL1Loss=0.00369, MAE=1.46, RMSE=1.82, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```



```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
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INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.546, MAE=9.17, RMSE=11.2, RegLoss=0]

CMA

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.60it/s,
SmoothL1Loss=0.00339, MAE=0.623, RMSE=0.789, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.498, MAE=38.2, RMSE=45.5, RegLoss=0]

CMCSA

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.51it/s,
SmoothL1Loss=0.00138, MAE=1.77, RMSE=2.21, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.618, MAE=374, RMSE=454, RegLoss=0]

CME

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.38it/s,
SmoothL1Loss=0.00198, MAE=18.3, RMSE=22.5, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.598, MAE=68.2, RMSE=84.2, RegLoss=0]

CMG

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.46it/s,
SmoothL1Loss=0.00119, MAE=2.68, RMSE=3.29, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```

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INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.585, MAE=17.4, RMSE=20.9, RegLoss=0]

CMI

Epoch[213/213]: 100%|      | 213/213 [00:19<00:00, 10.67it/s,
SmoothL1Loss=0.0011, MAE=0.65, RMSE=0.811, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.

```

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.73, MAE=51, RMSE=62.2, RegLoss=0]

CMS

Epoch[213/213]: 100%|                           | 213/213 [00:19<00:00, 10.74it/s,
SmoothL1Loss=0.00138, MAE=1.89, RMSE=2.31, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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frequency - B
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of the data.
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.989, MAE=12.3, RMSE=15.1, RegLoss=0]

```

CNC

```
Epoch[213/213]: 100%|          | 213/213 [00:19<00:00, 10.76it/s,
SmoothL1Loss=0.00185, MAE=0.42, RMSE=0.517, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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of the data.
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.911, MAE=39.5, RMSE=48.5, RegLoss=0]
```

CNP

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.51it/s,
SmoothL1Loss=0.00339, MAE=1.88, RMSE=2.4, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[2/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.13, MAE=36.4, RMSE=41.7, RegLoss=0]

COF

Epoch[213/213]: 100%|                             | 213/213 [00:19<00:00, 10.76it/s,
SmoothL1Loss=0.00149, MAE=1, RMSE=1.24, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```



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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[2/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.07, MAE=36, RMSE=42.4, RegLoss=0]

COG

Epoch[213/213]: 100%|                           | 213/213 [00:19<00:00, 10.88it/s,
SmoothL1Loss=0.00359, MAE=1.6, RMSE=2, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.92, MAE=92.6, RMSE=106, RegLoss=0]

COL

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.34it/s,
SmoothL1Loss=0.00149, MAE=2.88, RMSE=3.64, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.693, MAE=54.9, RMSE=66.3, RegLoss=0]

C00

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.50it/s,
SmoothL1Loss=0.00144, MAE=2.09, RMSE=2.62, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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of the data.
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frequency - B
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of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```

INFO:NP.config:Setting normalization to global as only one dataframe provided for training.

INFO - (NP.utils.set\_auto\_seasonalities) - Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

INFO - (NP.config.set\_auto\_batch\_epoch) - Auto-set batch\_size to 16

INFO:NP.config:Auto-set batch\_size to 16

INFO - (NP.config.set\_auto\_batch\_epoch) - Auto-set epochs to 213

INFO:NP.config:Auto-set epochs to 213

Epoch[1/213]: 0%| | 0/213 [00:00<?, ?it/s,  
SmoothL1Loss=0.385, MAE=41.3, RMSE=50.2, RegLoss=0]

COP

Epoch[213/213]: 100%| | 213/213 [00:19<00:00, 10.83it/s,  
SmoothL1Loss=0.00233, MAE=2.98, RMSE=3.67, RegLoss=0]

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 96.429% of the data.

INFO:NP.df\_utils:Major frequency B corresponds to 96.429% of the data.

INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

INFO:NP.df\_utils:Defined frequency is equal to major frequency - B

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 99.602% of the data.

INFO:NP.df\_utils:Major frequency B corresponds to 99.602% of the data.

INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

INFO:NP.df\_utils:Defined frequency is equal to major frequency - B

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 99.602% of the data.

INFO:NP.df\_utils:Major frequency B corresponds to 99.602% of the data.

INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

INFO:NP.df\_utils:Defined frequency is equal to major frequency - B

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 96.429% of the data.

INFO:NP.df\_utils:Major frequency B corresponds to 96.429% of the data.

INFO - (NP.df\_utils.\_infer\_frequency) - Dataframe freq automatically defined as B

INFO:NP.df\_utils:Dataframe freq automatically defined as B

INFO - (NP.config.init\_data\_params) - Setting normalization to global as only one dataframe provided for training.

INFO:NP.config:Setting normalization to global as only one dataframe provided for training.

INFO - (NP.utils.set\_auto\_seasonalities) - Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 1/213 [00:00<00:27, 7.68it/s,
SmoothL1Loss=2.13, MAE=42.8, RMSE=46.9, RegLoss=0]

COST

Epoch[213/213]: 100%|      | 213/213 [00:19<00:00, 10.80it/s,
SmoothL1Loss=0.002, MAE=0.812, RMSE=1.02, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.27, MAE=41, RMSE=48.3, RegLoss=0]

```

COTY

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.36it/s,
SmoothL1Loss=0.00154, MAE=1.08, RMSE=1.32, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
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for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.749, MAE=38.2, RMSE=44.5, RegLoss=0]
```

CPB

```
Epoch[213/213]: 100%|          | 213/213 [00:19<00:00, 10.74it/s,
SmoothL1Loss=0.00331, MAE=2.02, RMSE=2.56, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
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INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.78, MAE=21.9, RMSE=24, RegLoss=0]

CRM

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.59it/s,
SmoothL1Loss=0.00391, MAE=0.672, RMSE=0.84, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.9, MAE=19.3, RMSE=23.5, RegLoss=0]

CSC0

Epoch[213/213]: 100%|                             | 213/213 [00:19<00:00, 10.71it/s,
SmoothL1Loss=0.00186, MAE=0.71, RMSE=0.868, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```



```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.562, MAE=56.7, RMSE=69.6, RegLoss=0]

CSX

Epoch[213/213]: 100%|                             | 213/213 [00:19<00:00, 10.77it/s,
SmoothL1Loss=0.00086, MAE=1.87, RMSE=2.41, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.966, MAE=25.4, RMSE=30.9, RegLoss=0]

CTAS

Epoch[213/213]: 100%|                             | 213/213 [00:19<00:00, 10.79it/s,
SmoothL1Loss=0.00215, MAE=0.966, RMSE=1.19, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
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```

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INFO - (NP.utils.set\_auto\_seasonalities) - Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

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INFO - (NP.config.set\_auto\_batch\_epoch) - Auto-set batch\_size to 16

INFO:NP.config:Auto-set batch\_size to 16

INFO - (NP.config.set\_auto\_batch\_epoch) - Auto-set epochs to 213

INFO:NP.config:Auto-set epochs to 213

Epoch[1/213]: 0%| | 0/213 [00:00<?, ?it/s,  
SmoothL1Loss=0.998, MAE=31.4, RMSE=37.9, RegLoss=0]

CTL

Epoch[213/213]: 100%| | 213/213 [00:19<00:00, 10.79it/s,  
SmoothL1Loss=0.00367, MAE=1.53, RMSE=1.86, RegLoss=0]

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 96.429% of the data.

INFO:NP.df\_utils:Major frequency B corresponds to 96.429% of the data.

INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

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```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.755, MAE=40.8, RMSE=49.6, RegLoss=0]

CTSH

Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.38it/s,
SmoothL1Loss=0.00257, MAE=1.92, RMSE=2.45, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.771, MAE=47.8, RMSE=57.5, RegLoss=0]

```

CTXS

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.23it/s,
SmoothL1Loss=0.00157, MAE=1.78, RMSE=2.22, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 1/213 [00:00<00:24,  8.54it/s,
SmoothL1Loss=0.817, MAE=71.6, RMSE=88.4, RegLoss=0]
```

CVS

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.51it/s,
SmoothL1Loss=0.00153, MAE=2.44, RMSE=3.14, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.574, MAE=66.6, RMSE=82.3, RegLoss=0]

CVX

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.55it/s,
SmoothL1Loss=0.00377, MAE=4.73, RMSE=5.86, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 1/213 [00:00<00:22, 9.27it/s,
SmoothL1Loss=1.55, MAE=28, RMSE=32.1, RegLoss=0]

CXO

Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.40it/s,
SmoothL1Loss=0.00661, MAE=1.25, RMSE=1.56, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.984, MAE=32, RMSE=38.7, RegLoss=0]

```

D

```

Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.43it/s,
SmoothL1Loss=0.00277, MAE=1.33, RMSE=1.64, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.

```



```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.89, MAE=57.5, RMSE=68.5, RegLoss=0]

DAL

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.39it/s,
SmoothL1Loss=0.00502, MAE=1.93, RMSE=2.41, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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of the data.
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```

```

INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.58, MAE=22.2, RMSE=27.3, RegLoss=0]

DE

Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.35it/s,
SmoothL1Loss=0.00349, MAE=1.52, RMSE=1.88, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.

```

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.952, MAE=53.3, RMSE=61.6, RegLoss=0]

DFS

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.36it/s,
SmoothL1Loss=0.00218, MAE=1.92, RMSE=2.47, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.743, MAE=40.3, RMSE=48.8, RegLoss=0]

```

DG

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.63it/s,
SmoothL1Loss=0.00108, MAE=1.26, RMSE=1.59, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.45, MAE=24.5, RMSE=27.9, RegLoss=0]
```

DGX

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.60it/s,
SmoothL1Loss=0.00354, MAE=0.858, RMSE=1.06, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.637, MAE=47.2, RMSE=57.1, RegLoss=0]

DHI

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.63it/s,
SmoothL1Loss=0.00224, MAE=2.38, RMSE=2.95, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.546, MAE=55.2, RMSE=68.3, RegLoss=0]

DIS

Epoch[213/213]: 100%|                           | 213/213 [00:19<00:00, 10.78it/s,
SmoothL1Loss=0.00158, MAE=1.84, RMSE=2.95, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.56, MAE=111, RMSE=135, RegLoss=0]

DISCA

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.63it/s,
SmoothL1Loss=0.00191, MAE=1.88, RMSE=3.03, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
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INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.732, MAE=39.5, RMSE=48.7, RegLoss=0]

DISCK

Epoch[213/213]: 100%|                             | 213/213 [00:21<00:00, 10.11it/s,
SmoothL1Loss=0.00248, MAE=1.9, RMSE=2.39, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```



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INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 1/213 [00:00<00:23,  9.13it/s,
SmoothL1Loss=0.388, MAE=39.8, RMSE=48.3, RegLoss=0]

DISH

Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.37it/s,
SmoothL1Loss=0.000913, MAE=1.81, RMSE=2.21, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.

```

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.9, MAE=59.9, RMSE=69.2, RegLoss=0]

DLR

Epoch[213/213]: 100%|      | 213/213 [00:19<00:00, 10.80it/s,
SmoothL1Loss=0.00145, MAE=1.87, RMSE=2.36, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.01, MAE=53.2, RMSE=63.9, RegLoss=0]

```

DLTR

```
Epoch[213/213]: 100%|          | 213/213 [00:19<00:00, 10.86it/s,
SmoothL1Loss=0.00221, MAE=1.96, RMSE=2.41, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.05, MAE=71.2, RMSE=85.4, RegLoss=0]
```

DOV

```
Epoch[213/213]: 100%|          | 213/213 [00:19<00:00, 10.94it/s,
SmoothL1Loss=0.000681, MAE=1.44, RMSE=1.75, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
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INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.19, MAE=21, RMSE=25.4, RegLoss=0]

DPS

Epoch[213/213]: 100%|                           | 213/213 [00:19<00:00, 10.74it/s,
SmoothL1Loss=0.00118, MAE=0.497, RMSE=0.618, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.648, MAE=30.7, RMSE=37.7, RegLoss=0]

DRE

Epoch[213/213]: 100%|                             | 213/213 [00:19<00:00, 10.77it/s,
SmoothL1Loss=0.00215, MAE=1.5, RMSE=1.88, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```

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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.925, MAE=43.5, RMSE=50.7, RegLoss=0]

DRI

Epoch[213/213]: 100%|                             | 213/213 [00:21<00:00, 10.13it/s,
SmoothL1Loss=0.00176, MAE=1.53, RMSE=1.86, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.05, MAE=28.6, RMSE=34.9, RegLoss=0]

DTE

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.46it/s,
SmoothL1Loss=0.00368, MAE=1.34, RMSE=1.63, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```

```

INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.797, MAE=32.3, RMSE=39.6, RegLoss=0]

DUK

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.16it/s,
SmoothL1Loss=0.00232, MAE=1.43, RMSE=1.79, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.

```



```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.67, MAE=61, RMSE=74.4, RegLoss=0]

DVA

Epoch[213/213]: 100%|                           | 213/213 [00:19<00:00, 10.72it/s,
SmoothL1Loss=0.00144, MAE=2.42, RMSE=3, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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frequency - B
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B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.531, MAE=55.4, RMSE=67.5, RegLoss=0]

```

DVN

```
Epoch[213/213]: 100%|          | 213/213 [00:19<00:00, 10.84it/s,
SmoothL1Loss=0.000706, MAE=1.76, RMSE=2.23, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.75, MAE=83.8, RMSE=99.2, RegLoss=0]
```

EA

```
Epoch[213/213]: 100%|          | 213/213 [00:19<00:00, 10.94it/s,
SmoothL1Loss=0.00336, MAE=1.92, RMSE=2.85, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

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INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.36, MAE=41.7, RMSE=50.1, RegLoss=0]

EBAY

Epoch[213/213]: 100%|                             | 213/213 [00:19<00:00, 10.80it/s,
SmoothL1Loss=0.00631, MAE=2.06, RMSE=2.55, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.6, MAE=52.7, RMSE=61.7, RegLoss=0]

ECL

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.53it/s,
SmoothL1Loss=0.00165, MAE=1.19, RMSE=1.45, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 1/213 [00:00<00:21, 9.73it/s,
SmoothL1Loss=1.28, MAE=116, RMSE=135, RegLoss=0]

ED

Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.19it/s,
SmoothL1Loss=0.000666, MAE=1.89, RMSE=2.38, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[2/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.751, MAE=35, RMSE=41.5, RegLoss=0]

EFX

Epoch[213/213]: 100%|                             | 213/213 [00:19<00:00, 10.65it/s,
SmoothL1Loss=0.00118, MAE=1.17, RMSE=1.43, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```

```

INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.897, MAE=37.3, RMSE=46.5, RegLoss=0]

EIX

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.35it/s,
SmoothL1Loss=0.00186, MAE=1.34, RMSE=1.7, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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frequency - B
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B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.

```

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.741, MAE=33.5, RMSE=41.2, RegLoss=0]

EL

Epoch[213/213]: 100%|      | 213/213 [00:21<00:00, 9.88it/s,
SmoothL1Loss=0.0033, MAE=1.87, RMSE=2.32, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 1/213 [00:00<00:23, 9.12it/s,
SmoothL1Loss=0.723, MAE=29, RMSE=34, RegLoss=0]

```



EMN

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.20it/s,
SmoothL1Loss=0.00183, MAE=1.24, RMSE=1.51, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.343, MAE=34.1, RMSE=43, RegLoss=0]
```

EMR

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.44it/s,
SmoothL1Loss=0.00286, MAE=3.01, RMSE=3.67, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.93, MAE=275, RMSE=331, RegLoss=0]

EOG

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.32it/s,
SmoothL1Loss=0.000756, MAE=6.27, RMSE=7.73, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.722, MAE=31.6, RMSE=38.6, RegLoss=0]

EQIX

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.40it/s,
SmoothL1Loss=0.00172, MAE=1.33, RMSE=1.61, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.877, MAE=74.5, RMSE=90.4, RegLoss=0]

EQR

Epoch[213/213]: 100%|      | 213/213 [00:21<00:00, 9.99it/s,
SmoothL1Loss=0.00139, MAE=2.36, RMSE=2.98, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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frequency - B
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INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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```

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INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.05, MAE=35.4, RMSE=43.3, RegLoss=0]

EQT

Epoch[213/213]: 100%|                             | 213/213 [00:21<00:00, 9.73it/s,
SmoothL1Loss=0.0042, MAE=1.76, RMSE=2.17, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```

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INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 1/213 [00:00<00:21,  9.64it/s,
SmoothL1Loss=0.74, MAE=100, RMSE=124, RegLoss=0]

ESRX

Epoch[213/213]: 100%|        | 213/213 [00:20<00:00, 10.55it/s,
SmoothL1Loss=0.00226, MAE=4.56, RMSE=5.77, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.

```

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.08, MAE=18, RMSE=21.2, RegLoss=0]

ESS

Epoch[213/213]: 100%|                           | 213/213 [00:21<00:00, 9.99it/s,
SmoothL1Loss=0.00397, MAE=0.828, RMSE=1.04, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 1/213 [00:00<00:27, 7.71it/s,
SmoothL1Loss=0.35, MAE=20.6, RMSE=25, RegLoss=0]

```

ETFC

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.15it/s,
SmoothL1Loss=0.00265, MAE=1.68, RMSE=2.05, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.727, MAE=27.7, RMSE=33.9, RegLoss=0]
```

ETN

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.50it/s,
SmoothL1Loss=0.00303, MAE=1.52, RMSE=1.87, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```



```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.665, MAE=89.3, RMSE=110, RegLoss=0]

ETR

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.27it/s,
SmoothL1Loss=0.00102, MAE=2.97, RMSE=3.72, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.22, MAE=19.3, RMSE=21.6, RegLoss=0]

EW

Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.22it/s,
SmoothL1Loss=0.00429, MAE=0.832, RMSE=1.04, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 1/213 [00:00<00:21, 9.80it/s,
SmoothL1Loss=0.764, MAE=15.7, RMSE=18.6, RegLoss=0]

```

EXC

```

Epoch[213/213]: 100%|      | 213/213 [00:21<00:00, 9.88it/s,
SmoothL1Loss=0.00345, MAE=0.89, RMSE=1.09, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.1, MAE=98.7, RMSE=111, RegLoss=0]

EXPD

Epoch[213/213]: 100%|                             | 213/213 [00:21<00:00, 9.89it/s,
SmoothL1Loss=0.00206, MAE=3.2, RMSE=3.99, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
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```

```

INFO:NP.config:Setting normalization to global as only one dataframe provided
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.4, MAE=91.8, RMSE=116, RegLoss=0]

EXPE

Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.28it/s,
SmoothL1Loss=0.000824, MAE=1.66, RMSE=2.01, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.434, MAE=4.93, RMSE=5.94, RegLoss=0]

EXR

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.51it/s,
SmoothL1Loss=0.00433, MAE=0.434, RMSE=0.551, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.13, MAE=22.3, RMSE=25.8, RegLoss=0]

```

F

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.55it/s,
SmoothL1Loss=0.00404, MAE=1.01, RMSE=1.25, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.452, MAE=61.1, RMSE=76.6, RegLoss=0]
```

FAST

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.48it/s,
SmoothL1Loss=0.000917, MAE=2.56, RMSE=3.13, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.89, MAE=57.4, RMSE=66.6, RegLoss=0]

FB

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.20it/s,
SmoothL1Loss=0.0023, MAE=1.36, RMSE=1.63, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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```



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INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 1/213 [00:00<00:22, 9.40it/s,
SmoothL1Loss=0.845, MAE=41.4, RMSE=51.1, RegLoss=0]

FBHS

Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.20it/s,
SmoothL1Loss=0.000902, MAE=1.12, RMSE=1.37, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.41, MAE=111, RMSE=127, RegLoss=0]

FCX

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.64it/s,
SmoothL1Loss=0.00383, MAE=4.29, RMSE=5.16, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.788, MAE=10.5, RMSE=13.1, RegLoss=0]

FDX

Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.47it/s,
SmoothL1Loss=0.0065, MAE=0.805, RMSE=0.985, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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```

```

INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
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INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.03, MAE=74.5, RMSE=89.7, RegLoss=0]

FE

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.61it/s,
SmoothL1Loss=0.0036, MAE=3.42, RMSE=4.26, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.

```

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.912, MAE=38.8, RMSE=48.7, RegLoss=0]

FFIV

Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.54it/s,
SmoothL1Loss=0.00128, MAE=1.13, RMSE=1.44, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.585, MAE=51.3, RMSE=63.2, RegLoss=0]

```

FIS

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.63it/s,
SmoothL1Loss=0.000702, MAE=1.56, RMSE=1.93, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
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frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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frequency - B
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.12, MAE=14.7, RMSE=17.7, RegLoss=0]
```

FISV

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.61it/s,
SmoothL1Loss=0.0024, MAE=0.517, RMSE=0.643, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
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INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.62, MAE=74.4, RMSE=84.9, RegLoss=0]

FITB

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.46it/s,
SmoothL1Loss=0.00131, MAE=1.46, RMSE=1.78, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.985, MAE=13.8, RMSE=16, RegLoss=0]

FL

Epoch[213/213]: 100%|          | 213/213 [00:21<00:00, 10.08it/s,
SmoothL1Loss=0.00458, MAE=0.727, RMSE=0.913, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```



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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.06, MAE=55.4, RMSE=68.2, RegLoss=0]

FLIR

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.50it/s,
SmoothL1Loss=0.00126, MAE=1.48, RMSE=1.82, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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frequency - B
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of the data.
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frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[2/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.606, MAE=42.4, RMSE=51.2, RegLoss=0]

FLR

Epoch[213/213]: 100%|                             | 213/213 [00:21<00:00, 10.07it/s,
SmoothL1Loss=0.00116, MAE=1.61, RMSE=2, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```

```

INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.37, MAE=79.5, RMSE=95.4, RegLoss=0]

FLS

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.44it/s,
SmoothL1Loss=0.000871, MAE=1.46, RMSE=1.8, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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of the data.
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frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.

```

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.05, MAE=16, RMSE=18.6, RegLoss=0]

FMC

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.34it/s,
SmoothL1Loss=0.00421, MAE=0.757, RMSE=0.969, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.49, MAE=24, RMSE=29.2, RegLoss=0]

```

FOX

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.33it/s,
SmoothL1Loss=0.00375, MAE=0.816, RMSE=1.06, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.46, MAE=112, RMSE=134, RegLoss=0]
```

FOXA

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.43it/s,
SmoothL1Loss=0.00129, MAE=2.44, RMSE=2.96, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.659, MAE=39.8, RMSE=48.2, RegLoss=0]

FRT

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.30it/s,
SmoothL1Loss=0.000978, MAE=1.25, RMSE=1.62, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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one dataframe provided for training.
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.44, MAE=116, RMSE=138, RegLoss=0]

FTI

Epoch[213/213]: 100%|                          | 213/213 [00:20<00:00, 10.45it/s,
SmoothL1Loss=0.00141, MAE=2.54, RMSE=3.18, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.666, MAE=8.77, RMSE=10.7, RegLoss=0]

GD

Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.44it/s,
SmoothL1Loss=0.00413, MAE=0.59, RMSE=0.737, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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```



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INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.822, MAE=13.7, RMSE=16.8, RegLoss=0]

GE

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.32it/s,
SmoothL1Loss=0.00342, MAE=0.727, RMSE=0.895, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```

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INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.3, MAE=87.6, RMSE=102, RegLoss=0]

GGP

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.54it/s,
SmoothL1Loss=0.00297, MAE=3.08, RMSE=3.77, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.

```

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.45, MAE=45.8, RMSE=52.7, RegLoss=0]

GILD

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.58it/s,
SmoothL1Loss=0.00175, MAE=1.13, RMSE=1.4, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.862, MAE=10.6, RMSE=12.9, RegLoss=0]

```

GIS

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.50it/s,
SmoothL1Loss=0.00354, MAE=0.559, RMSE=0.69, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.616, MAE=11, RMSE=13.3, RegLoss=0]
```

GLW

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.33it/s,
SmoothL1Loss=0.00743, MAE=1.06, RMSE=1.3, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.43, MAE=588, RMSE=664, RegLoss=0]

GM

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.24it/s,
SmoothL1Loss=0.00192, MAE=15.3, RMSE=18.7, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 1/213 [00:00<00:25, 8.25it/s,
SmoothL1Loss=0.679, MAE=27.5, RMSE=33.9, RegLoss=0]

GOOGL

Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.18it/s,
SmoothL1Loss=0.0042, MAE=1.78, RMSE=2.29, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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one dataframe provided for training.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.21, MAE=73.3, RMSE=89.3, RegLoss=0]

GPC

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.45it/s,
SmoothL1Loss=0.00127, MAE=1.81, RMSE=2.21, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.666, MAE=27.9, RMSE=33, RegLoss=0]

GPN

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.35it/s,
SmoothL1Loss=0.00181, MAE=1.24, RMSE=1.54, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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frequency - B
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of the data.
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```



```

INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.765, MAE=30.3, RMSE=36.7, RegLoss=0]

GPS

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.30it/s,
SmoothL1Loss=0.0024, MAE=1.36, RMSE=1.74, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.

```

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.481, MAE=63, RMSE=77.2, RegLoss=0]

GRMN

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.44it/s,
SmoothL1Loss=0.00274, MAE=4.3, RMSE=5.29, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 1/213 [00:00<00:23,  8.95it/s,
SmoothL1Loss=2.5, MAE=39.3, RMSE=42.4, RegLoss=0]

```

GS

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.38it/s,
SmoothL1Loss=0.0043, MAE=0.984, RMSE=1.2, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=2.05, MAE=187, RMSE=210, RegLoss=0]
```

GT

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.40it/s,
SmoothL1Loss=0.0031, MAE=4.48, RMSE=5.72, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.15, MAE=64, RMSE=75.4, RegLoss=0]

GWW

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.59it/s,
SmoothL1Loss=0.00115, MAE=1.49, RMSE=1.89, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.14, MAE=59.7, RMSE=72.7, RegLoss=0]

HAL

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.43it/s,
SmoothL1Loss=0.00104, MAE=1.36, RMSE=1.7, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.36, MAE=2.74, RMSE=3.34, RegLoss=0]

```

HAS

```

Epoch[213/213]: 100%|      | 213/213 [00:19<00:00, 10.73it/s,
SmoothL1Loss=0.00497, MAE=0.307, RMSE=0.371, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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frequency - B
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of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.697, MAE=19.7, RMSE=23.7, RegLoss=0]

HBAN

Epoch[213/213]: 100%|             | 213/213 [00:20<00:00, 10.52it/s,
SmoothL1Loss=0.00118, MAE=0.64, RMSE=0.836, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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B
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```

```

INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.02, MAE=62.3, RMSE=74.5, RegLoss=0]

HBI

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.58it/s,
SmoothL1Loss=0.0016, MAE=1.89, RMSE=2.38, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.

```



```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.821, MAE=31.1, RMSE=38.4, RegLoss=0]

HCA

Epoch[213/213]: 100%|      | 213/213 [00:19<00:00, 10.71it/s,
SmoothL1Loss=0.0033, MAE=1.63, RMSE=2.01, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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of the data.
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.558, MAE=17.7, RMSE=21.8, RegLoss=0]

```

HCN

```
Epoch[213/213]: 100%|          | 213/213 [00:19<00:00, 10.67it/s,
SmoothL1Loss=0.00237, MAE=1, RMSE=1.25, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.754, MAE=70.5, RMSE=87.5, RegLoss=0]
```

HCP

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.57it/s,
SmoothL1Loss=0.0012, MAE=2.38, RMSE=2.9, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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frequency - B
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.784, MAE=77.6, RMSE=93.4, RegLoss=0]

HD

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.54it/s,
SmoothL1Loss=0.00166, MAE=2.95, RMSE=3.66, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.578, MAE=14.9, RMSE=18.7, RegLoss=0]

HES

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.64it/s,
SmoothL1Loss=0.00257, MAE=0.865, RMSE=1.09, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.635, MAE=88.9, RMSE=106, RegLoss=0]

```

HIG

```

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.45it/s,
SmoothL1Loss=0.00104, MAE=3.01, RMSE=3.77, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.84, MAE=41.6, RMSE=51.3, RegLoss=0]

```

HII

```

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.46it/s,
SmoothL1Loss=0.00181, MAE=1.61, RMSE=1.97, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```

INFO:NP.config:Setting normalization to global as only one dataframe provided for training.

INFO - (NP.utils.set\_auto\_seasonalities) - Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

INFO - (NP.config.set\_auto\_batch\_epoch) - Auto-set batch\_size to 16

INFO:NP.config:Auto-set batch\_size to 16

INFO - (NP.config.set\_auto\_batch\_epoch) - Auto-set epochs to 213

INFO:NP.config:Auto-set epochs to 213

Epoch[1/213]: 0%| | 0/213 [00:00<?, ?it/s,  
SmoothL1Loss=0.874, MAE=25.9, RMSE=31.7, RegLoss=0]

HOG

Epoch[213/213]: 100%| | 213/213 [00:20<00:00, 10.45it/s,  
SmoothL1Loss=0.00123, MAE=0.774, RMSE=0.972, RegLoss=0]

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 96.429% of the data.

INFO:NP.df\_utils:Major frequency B corresponds to 96.429% of the data.

INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

INFO:NP.df\_utils:Defined frequency is equal to major frequency - B

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 99.602% of the data.

INFO:NP.df\_utils:Major frequency B corresponds to 99.602% of the data.

INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

INFO:NP.df\_utils:Defined frequency is equal to major frequency - B

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 99.602% of the data.

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INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

INFO:NP.df\_utils:Defined frequency is equal to major frequency - B

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 96.429% of the data.

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INFO - (NP.df\_utils.\_infer\_frequency) - Dataframe freq automatically defined as B

INFO:NP.df\_utils:Dataframe freq automatically defined as B

INFO - (NP.config.init\_data\_params) - Setting normalization to global as only one dataframe provided for training.

INFO:NP.config:Setting normalization to global as only one dataframe provided for training.

INFO - (NP.utils.set\_auto\_seasonalities) - Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.825, MAE=38.9, RMSE=48, RegLoss=0]

HOLX

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.35it/s,
SmoothL1Loss=0.00227, MAE=1.65, RMSE=2.08, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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one dataframe provided for training.
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NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.1, MAE=106, RMSE=131, RegLoss=0]

```



HON

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.47it/s,
SmoothL1Loss=0.00128, MAE=2.84, RMSE=3.44, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.947, MAE=22.4, RMSE=27.7, RegLoss=0]
```

HP

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.51it/s,
SmoothL1Loss=0.00206, MAE=0.831, RMSE=1.03, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
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INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.489, MAE=17.9, RMSE=21.4, RegLoss=0]

HRB

Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.44it/s,
SmoothL1Loss=0.00087, MAE=0.667, RMSE=0.83, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.345, MAE=25.2, RMSE=30.2, RegLoss=0]

HRL

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.64it/s,
SmoothL1Loss=0.00211, MAE=1.85, RMSE=2.27, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.03, MAE=47.3, RMSE=55.9, RegLoss=0]

HRS

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.39it/s,
SmoothL1Loss=0.00139, MAE=1.35, RMSE=1.67, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```

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INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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one dataframe provided for training.
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.713, MAE=12.1, RMSE=14.5, RegLoss=0]

HSIC

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.39it/s,
SmoothL1Loss=0.002, MAE=0.529, RMSE=0.669, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

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INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.88, MAE=34.5, RMSE=40.5, RegLoss=0]

HST

Epoch[213/213]: 100%|                           | 213/213 [00:19<00:00, 10.75it/s,
SmoothL1Loss=0.0072, MAE=2.47, RMSE=3.1, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.

```

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.756, MAE=124, RMSE=151, RegLoss=0]

HSY

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.56it/s,
SmoothL1Loss=0.00137, MAE=4.26, RMSE=5.48, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.858, MAE=95.2, RMSE=116, RegLoss=0]

```

HUM

```
Epoch[213/213]: 100%|          | 213/213 [00:19<00:00, 10.67it/s,
SmoothL1Loss=0.00137, MAE=3.17, RMSE=3.84, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 1/213 [00:00<00:24,  8.50it/s,
SmoothL1Loss=0.728, MAE=69.6, RMSE=83.2, RegLoss=0]
```

IBM

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.57it/s,
SmoothL1Loss=0.00105, MAE=2.17, RMSE=2.75, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```



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INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.904, MAE=68.3, RMSE=85.3, RegLoss=0]

IDXX

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.54it/s,
SmoothL1Loss=0.00141, MAE=2.13, RMSE=2.67, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.342, MAE=73.8, RMSE=91.5, RegLoss=0]

IFF

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.62it/s,
SmoothL1Loss=0.00492, MAE=7.98, RMSE=10.3, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.34, MAE=130, RMSE=151, RegLoss=0]

ILMN

Epoch[213/213]: 100%|                             | 213/213 [00:19<00:00, 10.74it/s,
SmoothL1Loss=0.0024, MAE=3.96, RMSE=4.91, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
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INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.39, MAE=24.8, RMSE=29.4, RegLoss=0]

INCY

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.25it/s,
SmoothL1Loss=0.00413, MAE=0.961, RMSE=1.2, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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of the data.
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```

```

INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.704, MAE=48.7, RMSE=60.3, RegLoss=0]

INTC

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.21it/s,
SmoothL1Loss=0.00154, MAE=1.88, RMSE=2.38, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.

```

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|          | 1/213 [00:00<00:23,  9.15it/s,
SmoothL1Loss=0.704, MAE=24.5, RMSE=30.5, RegLoss=0]

INTU

Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.37it/s,
SmoothL1Loss=0.00234, MAE=1.22, RMSE=1.49, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
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INFO:NP.config:Setting normalization to global as only one dataframe provided
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.02, MAE=11.3, RMSE=13.6, RegLoss=0]

```

IP

```
Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.26it/s,
SmoothL1Loss=0.00265, MAE=0.445, RMSE=0.557, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.518, MAE=29, RMSE=35.6, RegLoss=0]
```

IPG

```
Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.47it/s,
SmoothL1Loss=0.00181, MAE=1.5, RMSE=1.89, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.514, MAE=20.3, RMSE=24.2, RegLoss=0]

IQV

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.28it/s,
SmoothL1Loss=0.00352, MAE=1.5, RMSE=1.83, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```



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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.986, MAE=21.6, RMSE=26.4, RegLoss=0]

IR

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.15it/s,
SmoothL1Loss=0.00392, MAE=1.08, RMSE=1.34, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.78, MAE=136, RMSE=158, RegLoss=0]

IRM

Epoch[213/213]: 100%|                           | 213/213 [00:19<00:00, 10.75it/s,
SmoothL1Loss=0.00129, MAE=4.29, RMSE=5.56, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.624, MAE=40.2, RMSE=48.3, RegLoss=0]

ISRG

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.28it/s,
SmoothL1Loss=0.0013, MAE=1.55, RMSE=1.94, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```

INFO:NP.config:Setting normalization to global as only one dataframe provided for training.

INFO - (NP.utils.set\_auto\_seasonalities) - Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

INFO - (NP.config.set\_auto\_batch\_epoch) - Auto-set batch\_size to 16

INFO:NP.config:Auto-set batch\_size to 16

INFO - (NP.config.set\_auto\_batch\_epoch) - Auto-set epochs to 213

INFO:NP.config:Auto-set epochs to 213

Epoch[1/213]: 0%| | 0/213 [00:00<?, ?it/s,  
SmoothL1Loss=1.81, MAE=98.9, RMSE=121, RegLoss=0]

IT

Epoch[213/213]: 100%| | 213/213 [00:20<00:00, 10.20it/s,  
SmoothL1Loss=0.00144, MAE=1.82, RMSE=2.3, RegLoss=0]

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 96.429% of the data.

INFO:NP.df\_utils:Major frequency B corresponds to 96.429% of the data.

INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

INFO:NP.df\_utils:Defined frequency is equal to major frequency - B

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 99.602% of the data.

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INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

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INFO - (NP.df\_utils.\_infer\_frequency) - Dataframe freq automatically defined as B

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INFO - (NP.config.init\_data\_params) - Setting normalization to global as only one dataframe provided for training.

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INFO - (NP.utils.set\_auto\_seasonalities) - Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.962, MAE=24.8, RMSE=28.6, RegLoss=0]

ITW

Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.30it/s,
SmoothL1Loss=0.002, MAE=0.878, RMSE=1.1, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
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INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.854, MAE=33.4, RMSE=39.8, RegLoss=0]

```

IVZ

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.56it/s,
SmoothL1Loss=0.00296, MAE=1.58, RMSE=1.97, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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frequency - B
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.824, MAE=19.8, RMSE=24.3, RegLoss=0]

JBHT
```

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.54it/s,
SmoothL1Loss=0.00242, MAE=0.867, RMSE=1.1, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.527, MAE=25.6, RMSE=31.1, RegLoss=0]

JCI

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.16it/s,
SmoothL1Loss=0.00168, MAE=1.27, RMSE=1.57, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

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```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=2.63, MAE=104, RMSE=110, RegLoss=0]

JEC

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.57it/s,
SmoothL1Loss=0.0018, MAE=1.56, RMSE=1.96, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```



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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.351, MAE=7.8, RMSE=9.49, RegLoss=0]

JNJ

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.56it/s,
SmoothL1Loss=0.00547, MAE=0.9, RMSE=1.12, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.94, MAE=23.3, RMSE=27.8, RegLoss=0]

JNPR

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.18it/s,
SmoothL1Loss=0.005, MAE=1.36, RMSE=1.68, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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of the data.
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```

```

INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.24, MAE=72.6, RMSE=86.8, RegLoss=0]

JPM

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.29it/s,
SmoothL1Loss=0.00111, MAE=1.58, RMSE=2.01, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.

```

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 1/213 [00:00<00:23, 9.20it/s,
SmoothL1Loss=0.64, MAE=26, RMSE=32.5, RegLoss=0]

JWN

Epoch[213/213]: 100%|      | 213/213 [00:21<00:00, 9.99it/s,
SmoothL1Loss=0.00193, MAE=1.23, RMSE=1.52, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
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for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s]

```

K

```
Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.39it/s,
SmoothL1Loss=0.00349, MAE=0.365, RMSE=0.448, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=2.22, MAE=28.1, RMSE=30.6, RegLoss=0]
```

KEY

```
Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.61it/s,
SmoothL1Loss=0.0021, MAE=0.535, RMSE=0.658, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.18, MAE=53.3, RMSE=65.6, RegLoss=0]

KIM

Epoch[213/213]: 100%|                             | 213/213 [00:21<00:00, 9.93it/s,
SmoothL1Loss=0.00256, MAE=1.79, RMSE=2.29, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

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```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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frequency - B
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of the data.
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.22, MAE=51.3, RMSE=63.4, RegLoss=0]

KLAC

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.18it/s,
SmoothL1Loss=0.00327, MAE=1.97, RMSE=2.46, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
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NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.09, MAE=46.7, RMSE=53.2, RegLoss=0]

KMB

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.17it/s,
SmoothL1Loss=0.000968, MAE=1.02, RMSE=1.3, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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```



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INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.644, MAE=30.6, RMSE=37.1, RegLoss=0]

KMI

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.20it/s,
SmoothL1Loss=0.00418, MAE=2.28, RMSE=2.63, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```

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INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.39, MAE=15.5, RMSE=18.2, RegLoss=0]

KMX

Epoch[213/213]: 100%|      | 213/213 [00:21<00:00, 10.00it/s,
SmoothL1Loss=0.00481, MAE=0.666, RMSE=0.814, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.

```

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.04, MAE=86, RMSE=109, RegLoss=0]

KO

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.55it/s,
SmoothL1Loss=0.00119, MAE=2.22, RMSE=2.82, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.81, MAE=49.1, RMSE=56.3, RegLoss=0]

```

KORS

```
Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.61it/s,
SmoothL1Loss=0.00087, MAE=0.736, RMSE=0.888, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.838, MAE=50, RMSE=60.1, RegLoss=0]
```

KR

```
Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.63it/s,
SmoothL1Loss=0.00134, MAE=1.65, RMSE=2.03, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

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INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.14, MAE=88.3, RMSE=105, RegLoss=0]

KSS

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.36it/s,
SmoothL1Loss=0.00228, MAE=2.94, RMSE=3.72, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
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INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.889, MAE=14.3, RMSE=16.9, RegLoss=0]

KSU

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.39it/s,
SmoothL1Loss=0.0025, MAE=0.597, RMSE=0.747, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.33, MAE=80.7, RMSE=96, RegLoss=0]

L

Epoch[213/213]: 100%|                             | 213/213 [00:19<00:00, 10.82it/s,
SmoothL1Loss=0.00166, MAE=2.02, RMSE=2.56, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.05, MAE=33.8, RMSE=41, RegLoss=0]

LB

Epoch[213/213]: 100%|                             | 213/213 [00:19<00:00, 10.91it/s,
SmoothL1Loss=0.00157, MAE=1.02, RMSE=1.26, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```



```

INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 1/213 [00:00<00:23,  9.20it/s,
SmoothL1Loss=0.785, MAE=18.8, RMSE=22.7, RegLoss=0]

LEG

Epoch[213/213]: 100%|      | 213/213 [00:19<00:00, 10.81it/s,
SmoothL1Loss=0.00573, MAE=1.36, RMSE=1.65, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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```

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=2.18, MAE=133, RMSE=145, RegLoss=0]

LEN

Epoch[213/213]: 100%|                           | 213/213 [00:19<00:00, 10.87it/s,
SmoothL1Loss=0.00167, MAE=2.21, RMSE=2.83, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[2/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.43, MAE=21.3, RMSE=24, RegLoss=0]

```

LH

```
Epoch[213/213]: 100%|          | 213/213 [00:19<00:00, 10.91it/s,
SmoothL1Loss=0.00398, MAE=0.769, RMSE=0.98, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.26, MAE=85.8, RMSE=100, RegLoss=0]
```

LKQ

```
Epoch[213/213]: 100%|          | 213/213 [00:19<00:00, 10.84it/s,
SmoothL1Loss=0.00259, MAE=2.6, RMSE=3.48, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.656, MAE=36.5, RMSE=47.1, RegLoss=0]

LLL

Epoch[213/213]: 100%|                             | 213/213 [00:19<00:00, 10.80it/s,
SmoothL1Loss=0.00165, MAE=1.59, RMSE=1.97, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.507, MAE=100, RMSE=120, RegLoss=0]

LLY

Epoch[213/213]: 100%|                             | 213/213 [00:19<00:00, 10.98it/s,
SmoothL1Loss=0.000833, MAE=3.59, RMSE=4.4, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```

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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.926, MAE=40.6, RMSE=50.5, RegLoss=0]

LMT

Epoch[213/213]: 100%|                             | 213/213 [00:19<00:00, 10.86it/s,
SmoothL1Loss=0.00253, MAE=1.71, RMSE=2.11, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=2.17, MAE=56.6, RMSE=63.7, RegLoss=0]

LNC

Epoch[213/213]: 100%|                             | 213/213 [00:19<00:00, 10.95it/s,
SmoothL1Loss=0.00113, MAE=0.637, RMSE=0.836, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
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```

```

INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.59, MAE=71.9, RMSE=87.1, RegLoss=0]

LNT

Epoch[213/213]: 100%|                           | 213/213 [00:19<00:00, 10.93it/s,
SmoothL1Loss=0.00125, MAE=1.42, RMSE=1.74, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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```



```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.605, MAE=50.8, RMSE=61.3, RegLoss=0]

LOW

Epoch[213/213]: 100%|      | 213/213 [00:19<00:00, 10.93it/s,
SmoothL1Loss=0.00144, MAE=2.08, RMSE=2.64, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.398, MAE=10.2, RMSE=12.2, RegLoss=0]

```

LRCX

```
Epoch[213/213]: 100%|      | 213/213 [00:19<00:00, 10.98it/s,
SmoothL1Loss=0.00141, MAE=0.554, RMSE=0.684, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.564, MAE=27, RMSE=32.7, RegLoss=0]
```

LUK

```
Epoch[213/213]: 100%|      | 213/213 [00:19<00:00, 10.92it/s,
SmoothL1Loss=0.0019, MAE=1.34, RMSE=1.7, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.845, MAE=48.2, RMSE=59.1, RegLoss=0]

LUV

Epoch[213/213]: 100%|                             | 213/213 [00:19<00:00, 10.92it/s,
SmoothL1Loss=0.00615, MAE=3.38, RMSE=4.16, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.805, MAE=46.9, RMSE=57.3, RegLoss=0]

LYB

Epoch[213/213]: 100%|                           | 213/213 [00:19<00:00, 10.78it/s,
SmoothL1Loss=0.00114, MAE=1.45, RMSE=1.81, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```

```

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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.749, MAE=40.1, RMSE=49, RegLoss=0]

```

M

```

Epoch[213/213]: 100%|                           | 213/213 [00:19<00:00, 10.74it/s,
SmoothL1Loss=0.00231, MAE=1.84, RMSE=2.3, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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frequency - B
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INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.36, MAE=76.1, RMSE=87.5, RegLoss=0]

MA

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.22it/s,
SmoothL1Loss=0.00141, MAE=1.76, RMSE=2.17, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```

```

INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.789, MAE=39, RMSE=47.7, RegLoss=0]

MAA

Epoch[213/213]: 100%|                           | 213/213 [00:21<00:00, 9.99it/s,
SmoothL1Loss=0.00282, MAE=1.95, RMSE=2.4, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.

```

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|          | 1/213 [00:00<00:22,  9.40it/s,
SmoothL1Loss=0.744, MAE=40, RMSE=49.3, RegLoss=0]

MAC

Epoch[213/213]: 100%|          | 213/213 [00:21<00:00, 10.02it/s,
SmoothL1Loss=0.00237, MAE=1.82, RMSE=2.33, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|          | 1/213 [00:00<00:23,  9.20it/s,
SmoothL1Loss=0.405, MAE=11.5, RMSE=14, RegLoss=0]

```



MAR

```
Epoch[213/213]: 100%|          | 213/213 [00:21<00:00, 9.87it/s,
SmoothL1Loss=0.00282, MAE=0.9, RMSE=1.1, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.992, MAE=27.9, RMSE=33.4, RegLoss=0]
```

MAS

```
Epoch[213/213]: 100%|          | 213/213 [00:21<00:00, 10.14it/s,
SmoothL1Loss=0.0018, MAE=0.894, RMSE=1.15, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|          | 1/213 [00:00<00:21,  9.94it/s,
SmoothL1Loss=1.14, MAE=59.2, RMSE=70.6, RegLoss=0]

MAT

Epoch[213/213]: 100%|          | 213/213 [00:21<00:00,  9.97it/s,
SmoothL1Loss=0.00154, MAE=1.59, RMSE=2.03, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.2, MAE=40.7, RMSE=47.3, RegLoss=0]

MCD

Epoch[213/213]: 100%|                             | 213/213 [00:21<00:00, 10.10it/s,
SmoothL1Loss=0.00249, MAE=1.34, RMSE=1.72, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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```

```

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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.99, MAE=152, RMSE=181, RegLoss=0]

MCHP

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.22it/s,
SmoothL1Loss=0.00145, MAE=4.57, RMSE=5.68, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 1/213 [00:00<00:23,  9.19it/s,
SmoothL1Loss=1.72, MAE=81.4, RMSE=94.3, RegLoss=0]

MCK

Epoch[213/213]: 100%|        | 213/213 [00:20<00:00, 10.31it/s,
SmoothL1Loss=0.00224, MAE=1.96, RMSE=2.46, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
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```

INFO:NP.config:Setting normalization to global as only one dataframe provided for training.

INFO - (NP.utils.set\_auto\_seasonalities) - Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

INFO - (NP.config.set\_auto\_batch\_epoch) - Auto-set batch\_size to 16

INFO:NP.config:Auto-set batch\_size to 16

INFO - (NP.config.set\_auto\_batch\_epoch) - Auto-set epochs to 213

INFO:NP.config:Auto-set epochs to 213

Epoch[1/213]: 0%| | 0/213 [00:00<?, ?it/s,  
SmoothL1Loss=1.12, MAE=21.1, RMSE=24.9, RegLoss=0]

MCO

Epoch[213/213]: 100%| | 213/213 [00:21<00:00, 9.99it/s,  
SmoothL1Loss=0.0032, MAE=0.852, RMSE=1.06, RegLoss=0]

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 96.429% of the data.

INFO:NP.df\_utils:Major frequency B corresponds to 96.429% of the data.

INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

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INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 99.602% of the data.

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INFO - (NP.config.init\_data\_params) - Setting normalization to global as only one dataframe provided for training.

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```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.21, MAE=54.8, RMSE=66.6, RegLoss=0]

MDLZ

Epoch[213/213]: 100%|                           | 213/213 [00:21<00:00, 10.09it/s,
SmoothL1Loss=0.00101, MAE=1.18, RMSE=1.48, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.828, MAE=26.2, RMSE=32.1, RegLoss=0]

```

MDT

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.20it/s,
SmoothL1Loss=0.00354, MAE=1.42, RMSE=1.75, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 1/213 [00:00<00:22,  9.45it/s,
SmoothL1Loss=2.49, MAE=33.7, RMSE=36.2, RegLoss=0]
```

MET

```
Epoch[213/213]: 100%|          | 213/213 [00:21<00:00,  9.86it/s,
SmoothL1Loss=0.00346, MAE=0.718, RMSE=0.92, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```



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INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO:NP.df_utils:Dataframe freq automatically defined as B
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one dataframe provided for training.
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|          | 1/213 [00:00<00:21,  9.92it/s,
SmoothL1Loss=0.983, MAE=117, RMSE=135, RegLoss=0]

MGM

Epoch[213/213]: 100%|          | 213/213 [00:21<00:00, 10.12it/s,
SmoothL1Loss=0.00236, MAE=4.36, RMSE=5.48, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```

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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 1/213 [00:00<00:24, 8.78it/s,
SmoothL1Loss=0.759, MAE=44.8, RMSE=56.5, RegLoss=0]

MHK

Epoch[213/213]: 100%|          | 213/213 [00:21<00:00, 10.07it/s,
SmoothL1Loss=0.00113, MAE=1.49, RMSE=1.8, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.05, MAE=154, RMSE=189, RegLoss=0]

MKC

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.30it/s,
SmoothL1Loss=0.00145, MAE=4.35, RMSE=5.47, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.528, MAE=21.5, RMSE=26.1, RegLoss=0]

MLM

Epoch[213/213]: 100%|   | 213/213 [00:21<00:00, 10.02it/s,
SmoothL1Loss=0.000932, MAE=0.778, RMSE=0.988, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
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```

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INFO - (NP.utils.set\_auto\_seasonalities) - Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

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INFO - (NP.config.set\_auto\_batch\_epoch) - Auto-set batch\_size to 16

INFO:NP.config:Auto-set batch\_size to 16

INFO - (NP.config.set\_auto\_batch\_epoch) - Auto-set epochs to 213

INFO:NP.config:Auto-set epochs to 213

Epoch[1/213]: 0%| | 0/213 [00:00<?, ?it/s,  
SmoothL1Loss=0.557, MAE=52.4, RMSE=62.8, RegLoss=0]

MMC

Epoch[213/213]: 100%| | 213/213 [00:21<00:00, 9.98it/s,  
SmoothL1Loss=0.00239, MAE=3.01, RMSE=3.74, RegLoss=0]

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 96.429% of the data.

INFO:NP.df\_utils:Major frequency B corresponds to 96.429% of the data.

INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

INFO:NP.df\_utils:Defined frequency is equal to major frequency - B

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 99.602% of the data.

INFO:NP.df\_utils:Major frequency B corresponds to 99.602% of the data.

INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

INFO:NP.df\_utils:Defined frequency is equal to major frequency - B

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 99.602% of the data.

INFO:NP.df\_utils:Major frequency B corresponds to 99.602% of the data.

INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

INFO:NP.df\_utils:Defined frequency is equal to major frequency - B

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 96.429% of the data.

INFO:NP.df\_utils:Major frequency B corresponds to 96.429% of the data.

INFO - (NP.df\_utils.\_infer\_frequency) - Dataframe freq automatically defined as B

INFO:NP.df\_utils:Dataframe freq automatically defined as B

INFO - (NP.config.init\_data\_params) - Setting normalization to global as only one dataframe provided for training.

INFO:NP.config:Setting normalization to global as only one dataframe provided for training.

INFO - (NP.utils.set\_auto\_seasonalities) - Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.858, MAE=40.1, RMSE=49.1, RegLoss=0]

MMM

Epoch[213/213]: 100%|                             | 213/213 [00:21<00:00, 9.81it/s,
SmoothL1Loss=0.00136, MAE=1.22, RMSE=1.61, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.3, MAE=57, RMSE=70.4, RegLoss=0]

```

MNST

```
Epoch[213/213]: 100%|      | 213/213 [00:21<00:00, 9.79it/s,
SmoothL1Loss=0.000864, MAE=1.12, RMSE=1.35, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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frequency - B
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 1/213 [00:00<00:26, 7.89it/s,
SmoothL1Loss=0.618, MAE=39.7, RMSE=47.2, RegLoss=0]
```

MO

```
Epoch[213/213]: 100%|      | 213/213 [00:21<00:00, 9.76it/s,
SmoothL1Loss=0.00213, MAE=1.94, RMSE=2.44, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.31, MAE=49.1, RMSE=55.5, RegLoss=0]

MON

Epoch[213/213]: 100%|                             | 213/213 [00:21<00:00, 9.84it/s,
SmoothL1Loss=0.00156, MAE=1.22, RMSE=1.53, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```



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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.467, MAE=20.1, RMSE=25.2, RegLoss=0]

MOS

Epoch[213/213]: 100%|                           | 213/213 [00:21<00:00, 9.94it/s,
SmoothL1Loss=0.00517, MAE=1.88, RMSE=2.39, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.724, MAE=16.2, RMSE=19.7, RegLoss=0]

```

MPC

```

Epoch[213/213]: 100%|      | 213/213 [00:21<00:00, 10.09it/s,
SmoothL1Loss=0.00498, MAE=1.14, RMSE=1.4, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.61, MAE=68.3, RMSE=79.1, RegLoss=0]

MRK

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.59it/s,
SmoothL1Loss=0.000939, MAE=1.13, RMSE=1.41, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```

```

INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.885, MAE=23.8, RMSE=29.1, RegLoss=0]

MRO

Epoch[213/213]: 100%|      | 213/213 [00:21<00:00, 10.05it/s,
SmoothL1Loss=0.00181, MAE=0.871, RMSE=1.08, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.

```

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|          | 1/213 [00:00<00:24,  8.72it/s,
SmoothL1Loss=0.892, MAE=33.3, RMSE=38.4, RegLoss=0]

MS

Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.27it/s,
SmoothL1Loss=0.00162, MAE=1.11, RMSE=1.39, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.06, MAE=32.3, RMSE=37.7, RegLoss=0]

```

MSFT

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.16it/s,
SmoothL1Loss=0.00462, MAE=1.63, RMSE=2.02, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.474, MAE=27, RMSE=32.8, RegLoss=0]
```

MSI

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.25it/s,
SmoothL1Loss=0.00466, MAE=2.37, RMSE=3, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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one dataframe provided for training.
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.406, MAE=149, RMSE=186, RegLoss=0]

MTB

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.20it/s,
SmoothL1Loss=0.000829, MAE=6.31, RMSE=7.73, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.36, MAE=43.8, RMSE=51, RegLoss=0]

MTD

Epoch[213/213]: 100%|                             | 213/213 [00:21<00:00, 10.11it/s,
SmoothL1Loss=0.0015, MAE=1.02, RMSE=1.29, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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```



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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|          | 1/213 [00:00<00:22,  9.54it/s,
SmoothL1Loss=0.858, MAE=47.5, RMSE=57.1, RegLoss=0]

```

MU

```

Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.14it/s,
SmoothL1Loss=0.00248, MAE=2.05, RMSE=2.56, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.75, MAE=54.9, RMSE=67.1, RegLoss=0]

MYL

Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.53it/s,
SmoothL1Loss=0.000878, MAE=1.59, RMSE=1.95, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```

```

INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|
| 0/213 [00:00<?, ?it/s]

NBL

Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.34it/s,
SmoothL1Loss=0.00239, MAE=1.54, RMSE=2.03, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
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for training.
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NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.

```

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[2/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.79, MAE=42.7, RMSE=51.1, RegLoss=0]

NCLH

Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.54it/s,
SmoothL1Loss=0.000717, MAE=1.03, RMSE=1.31, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.873, MAE=54.7, RMSE=64.5, RegLoss=0]

```

NDAQ

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.19it/s,
SmoothL1Loss=0.00141, MAE=1.75, RMSE=2.2, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.994, MAE=35.6, RMSE=42.4, RegLoss=0]
```

NEE

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.35it/s,
SmoothL1Loss=0.00244, MAE=1.36, RMSE=1.72, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=2.13, MAE=205, RMSE=229, RegLoss=0]

NEM

Epoch[213/213]: 100%|                           | 213/213 [00:21<00:00, 9.91it/s,
SmoothL1Loss=0.00327, MAE=5.19, RMSE=6.26, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.74, MAE=49.8, RMSE=58.1, RegLoss=0]

NFLX

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.24it/s,
SmoothL1Loss=0.00564, MAE=1.87, RMSE=2.36, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.445, MAE=23.3, RMSE=29.1, RegLoss=0]

NFX

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.33it/s,
SmoothL1Loss=0.00505, MAE=1.83, RMSE=2.71, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.

```



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INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|          | 1/213 [00:00<00:23,  8.95it/s,
SmoothL1Loss=0.46, MAE=24.5, RMSE=30.4, RegLoss=0]

NI

Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.18it/s,
SmoothL1Loss=0.00133, MAE=1.16, RMSE=1.46, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```

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INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.723, MAE=14, RMSE=17.6, RegLoss=0]

NKE

Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.22it/s,
SmoothL1Loss=0.00448, MAE=0.924, RMSE=1.16, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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frequency - B
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.

```

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|          | 1/213 [00:00<00:23,  9.07it/s,
SmoothL1Loss=1.08, MAE=181, RMSE=215, RegLoss=0]

NLSN

Epoch[213/213]: 100%|        | 213/213 [00:20<00:00, 10.45it/s,
SmoothL1Loss=0.000609, MAE=3.24, RMSE=4.08, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.662, MAE=60.2, RMSE=72.5, RegLoss=0]

```

NOC

```
Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.32it/s,
SmoothL1Loss=0.000716, MAE=1.71, RMSE=2.09, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.553, MAE=23.9, RMSE=29, RegLoss=0]
```

NOV

```
Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.54it/s,
SmoothL1Loss=0.00074, MAE=0.741, RMSE=0.943, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

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INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.76, MAE=52.4, RMSE=62.1, RegLoss=0]

NRG

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.63it/s,
SmoothL1Loss=0.00238, MAE=2.32, RMSE=3, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.657, MAE=22.9, RMSE=27.3, RegLoss=0]

NSC

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.55it/s,
SmoothL1Loss=0.00219, MAE=1.11, RMSE=1.4, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.744, MAE=28, RMSE=33, RegLoss=0]

NTAP

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.30it/s,
SmoothL1Loss=0.00482, MAE=1.94, RMSE=2.33, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.39, MAE=41.9, RMSE=48.4, RegLoss=0]

NTRS

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.57it/s,
SmoothL1Loss=0.00296, MAE=1.37, RMSE=1.71, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
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```



```

INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1, MAE=80.3, RMSE=97.3, RegLoss=0]

NUE

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.18it/s,
SmoothL1Loss=0.00081, MAE=1.51, RMSE=2.11, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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```

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.05, MAE=35.6, RMSE=42.9, RegLoss=0]

NVDA

Epoch[213/213]: 100%|      | 213/213 [00:21<00:00, 10.14it/s,
SmoothL1Loss=0.00146, MAE=1.04, RMSE=1.26, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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frequency - B
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B
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.79, MAE=14.8, RMSE=17.4, RegLoss=0]

```

NWL

```
Epoch[213/213]: 100%|      | 213/213 [00:21<00:00, 9.97it/s,
SmoothL1Loss=0.00311, MAE=0.411, RMSE=0.51, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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frequency - B
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.786, MAE=9.02, RMSE=10.8, RegLoss=0]
```

NWS

```
Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.23it/s,
SmoothL1Loss=0.00276, MAE=0.441, RMSE=0.547, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
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frequency - B
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[2/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.654, MAE=51, RMSE=63, RegLoss=0]

NWSA

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.20it/s,
SmoothL1Loss=0.000975, MAE=1.6, RMSE=2.08, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.756, MAE=24.3, RMSE=28.9, RegLoss=0]

OKE

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.41it/s,
SmoothL1Loss=0.00378, MAE=1.4, RMSE=1.75, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.939, MAE=13.8, RMSE=16.4, RegLoss=0]

OMC

Epoch[213/213]: 100%|          | 213/213 [00:21<00:00, 10.10it/s,
SmoothL1Loss=0.00559, MAE=0.856, RMSE=1.04, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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of the data.
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frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.587, MAE=151, RMSE=183, RegLoss=0]

ORCL

Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.17it/s,
SmoothL1Loss=0.000735, MAE=4.35, RMSE=5.74, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```

```

INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.32, MAE=73.1, RMSE=88.3, RegLoss=0]

ORLY

Epoch[213/213]: 100%|      | 213/213 [00:19<00:00, 10.71it/s,
SmoothL1Loss=0.00191, MAE=2.02, RMSE=2.51, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.

```



```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|          | 1/213 [00:00<00:24,  8.72it/s,
SmoothL1Loss=0.43, MAE=16.3, RMSE=20.9, RegLoss=0]

OXY

Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.46it/s,
SmoothL1Loss=0.00261, MAE=1.21, RMSE=1.47, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.626, MAE=3.3, RMSE=3.96, RegLoss=0]

```

PAYX

```
Epoch[213/213]: 100%|      | 213/213 [00:19<00:00, 10.68it/s,
SmoothL1Loss=0.00757, MAE=0.306, RMSE=0.386, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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one dataframe provided for training.
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.14, MAE=36, RMSE=44.6, RegLoss=0]
```

PBCT

```
Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.33it/s,
SmoothL1Loss=0.00255, MAE=1.28, RMSE=1.61, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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one dataframe provided for training.
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INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.78, MAE=54.1, RMSE=62, RegLoss=0]

PCAR

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.55it/s,
SmoothL1Loss=0.0015, MAE=1.02, RMSE=1.29, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.527, MAE=460, RMSE=571, RegLoss=0]

PCG

Epoch[213/213]: 100%|                             | 213/213 [00:19<00:00, 10.76it/s,
SmoothL1Loss=0.00381, MAE=34.2, RMSE=43.2, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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one dataframe provided for training.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.22, MAE=19.5, RMSE=23.6, RegLoss=0]

PCLN

Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.15it/s,
SmoothL1Loss=0.00598, MAE=1, RMSE=1.26, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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frequency - B
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```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|          | 1/213 [00:00<00:29,  7.27it/s,
SmoothL1Loss=0.756, MAE=17.2, RMSE=20.8, RegLoss=0]

PDCO

Epoch[213/213]: 100%|          | 213/213 [00:21<00:00, 10.00it/s,
SmoothL1Loss=0.00251, MAE=0.826, RMSE=1.02, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```

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INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.704, MAE=34, RMSE=42.3, RegLoss=0]

PEG

Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.38it/s,
SmoothL1Loss=0.0015, MAE=1.33, RMSE=1.66, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.

```

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|
| 0/213 [00:00<?, ?it/s]

PEP

Epoch[213/213]: 100%|      | 213/213 [00:21<00:00, 9.84it/s,
SmoothL1Loss=0.0048, MAE=0.591, RMSE=0.737, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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of the data.
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.576, MAE=22, RMSE=26.9, RegLoss=0]

```



PFE

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.50it/s,
SmoothL1Loss=0.0023, MAE=1.24, RMSE=1.52, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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of the data.
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.32, MAE=38.3, RMSE=44.2, RegLoss=0]
```

PFG

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.63it/s,
SmoothL1Loss=0.00209, MAE=1.11, RMSE=1.37, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.623, MAE=11.7, RMSE=15.2, RegLoss=0]

PG

Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.29it/s,
SmoothL1Loss=0.00193, MAE=0.564, RMSE=0.705, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.07, MAE=68.5, RMSE=82.1, RegLoss=0]

PGR

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.19it/s,
SmoothL1Loss=0.00252, MAE=2.47, RMSE=3.14, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```

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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 1/213 [00:00<00:22, 9.37it/s,
SmoothL1Loss=0.927, MAE=9.14, RMSE=10.9, RegLoss=0]

```

PH

```

Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.51it/s,
SmoothL1Loss=0.00477, MAE=0.53, RMSE=0.649, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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```

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INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
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INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|          | 1/213 [00:00<00:24,  8.72it/s,
SmoothL1Loss=0.569, MAE=36.4, RMSE=45.9, RegLoss=0]

PHM

Epoch[213/213]: 100%|          | 213/213 [00:19<00:00, 10.71it/s,
SmoothL1Loss=0.00234, MAE=2.09, RMSE=2.59, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```

```

INFO:NP.config:Setting normalization to global as only one dataframe provided
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
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INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
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INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.21, MAE=25.3, RMSE=28.8, RegLoss=0]

PKG

Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.24it/s,
SmoothL1Loss=0.00381, MAE=1.03, RMSE=1.29, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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```

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.08, MAE=26.4, RMSE=32.5, RegLoss=0]

PKI

Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.28it/s,
SmoothL1Loss=0.00244, MAE=0.934, RMSE=1.21, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.899, MAE=33.7, RMSE=40.2, RegLoss=0]

```

PLD

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.16it/s,
SmoothL1Loss=0.00292, MAE=1.58, RMSE=1.91, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.758, MAE=26.7, RMSE=35.2, RegLoss=0]
```

PM

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.19it/s,
SmoothL1Loss=0.00511, MAE=1.93, RMSE=2.31, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```



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INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.26, MAE=60, RMSE=71.2, RegLoss=0]

PNC

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.32it/s,
SmoothL1Loss=0.00188, MAE=1.71, RMSE=2.12, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.585, MAE=26.2, RMSE=31.7, RegLoss=0]

PNR

Epoch[213/213]: 100%|                           | 213/213 [00:21<00:00, 10.00it/s,
SmoothL1Loss=0.00155, MAE=1.17, RMSE=1.45, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```

```

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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|          | 1/213 [00:00<00:22,  9.23it/s,
SmoothL1Loss=1.23, MAE=52.3, RMSE=63.7, RegLoss=0]

PNW

Epoch[213/213]: 100%|          | 213/213 [00:21<00:00, 10.02it/s,
SmoothL1Loss=0.00566, MAE=2.63, RMSE=3.28, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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```

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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.679, MAE=9.24, RMSE=11.4, RegLoss=0]

PPG

Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.35it/s,
SmoothL1Loss=0.00437, MAE=0.62, RMSE=0.789, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.903, MAE=151, RMSE=180, RegLoss=0]

PPL

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.41it/s,
SmoothL1Loss=0.00181, MAE=5.19, RMSE=6.7, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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```

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.611, MAE=36, RMSE=41.7, RegLoss=0]

PRGO

Epoch[213/213]: 100%|      | 213/213 [00:21<00:00, 10.14it/s,
SmoothL1Loss=0.00357, MAE=2.42, RMSE=2.91, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.887, MAE=145, RMSE=167, RegLoss=0]

```

PRU

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.24it/s,
SmoothL1Loss=0.00121, MAE=4.3, RMSE=5.32, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=2.64, MAE=90, RMSE=93.8, RegLoss=0]
```

PSA

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.19it/s,
SmoothL1Loss=0.00487, MAE=2.2, RMSE=2.76, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.765, MAE=71.5, RMSE=89.2, RegLoss=0]

PSX

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.24it/s,
SmoothL1Loss=0.00226, MAE=3.31, RMSE=4.02, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```



```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.823, MAE=23.6, RMSE=28.8, RegLoss=0]

PVH

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.15it/s,
SmoothL1Loss=0.00162, MAE=0.8, RMSE=1.05, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.643, MAE=37.6, RMSE=47.6, RegLoss=0]

PWR

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.33it/s,
SmoothL1Loss=0.00319, MAE=2.32, RMSE=2.86, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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frequency - B
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```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 1/213 [00:00<00:24,  8.81it/s,
SmoothL1Loss=1.17, MAE=180, RMSE=222, RegLoss=0]

PX

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.15it/s,
SmoothL1Loss=0.0021, MAE=5.8, RMSE=7.19, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```

```

INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 1/213 [00:00<00:23, 9.15it/s,
SmoothL1Loss=1.15, MAE=58.9, RMSE=69, RegLoss=0]

PXD

Epoch[213/213]: 100%|      | 213/213 [00:21<00:00, 10.12it/s,
SmoothL1Loss=0.00118, MAE=1.38, RMSE=1.74, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.

```

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.11, MAE=74.2, RMSE=91.3, RegLoss=0]

QCOM

Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.16it/s,
SmoothL1Loss=0.00235, MAE=2.61, RMSE=3.23, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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of the data.
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 1/213 [00:00<00:23, 9.10it/s,
SmoothL1Loss=1.24, MAE=118, RMSE=134, RegLoss=0]

```

RCL

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.20it/s,
SmoothL1Loss=0.00103, MAE=2.42, RMSE=3.1, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.866, MAE=44.3, RMSE=55.5, RegLoss=0]
```

RE

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.31it/s,
SmoothL1Loss=0.000921, MAE=1.17, RMSE=1.46, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.666, MAE=307, RMSE=380, RegLoss=0]

REG

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.29it/s,
SmoothL1Loss=0.00197, MAE=14.3, RMSE=17.8, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 1/213 [00:00<00:28, 7.41it/s,
SmoothL1Loss=1.12, MAE=6.52, RMSE=7.7, RegLoss=0]

REGN

Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.23it/s,
SmoothL1Loss=0.00413, MAE=0.301, RMSE=0.371, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```



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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.597, MAE=25.3, RMSE=31, RegLoss=0]

RF

Epoch[213/213]: 100%|      | 213/213 [00:21<00:00, 10.05it/s,
SmoothL1Loss=0.00215, MAE=1.32, RMSE=1.64, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|          | 1/213 [00:00<00:23,  9.18it/s,
SmoothL1Loss=1.31, MAE=56.1, RMSE=70.3, RegLoss=0]

RHI

Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.16it/s,
SmoothL1Loss=0.0039, MAE=2.31, RMSE=2.81, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```

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INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 1/213 [00:00<00:22, 9.25it/s,
SmoothL1Loss=1.11, MAE=32.3, RMSE=39, RegLoss=0]

RHT

Epoch[213/213]: 100%|      | 213/213 [00:21<00:00, 10.13it/s,
SmoothL1Loss=0.00422, MAE=1.52, RMSE=1.9, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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```

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.12, MAE=143, RMSE=170, RegLoss=0]

RJF

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.28it/s,
SmoothL1Loss=0.00142, MAE=3.85, RMSE=4.8, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.912, MAE=37.1, RMSE=44.3, RegLoss=0]

```

RL

```
Epoch[213/213]: 100%|          | 213/213 [00:21<00:00, 9.82it/s,
SmoothL1Loss=0.00286, MAE=1.71, RMSE=2.07, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|              | 1/213 [00:00<00:27, 7.62it/s,
SmoothL1Loss=0.521, MAE=35.1, RMSE=42, RegLoss=0]
```

RMD

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.41it/s,
SmoothL1Loss=0.00338, MAE=2.45, RMSE=3.05, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|          | 1/213 [00:00<00:21,  9.91it/s,
SmoothL1Loss=0.59, MAE=56.8, RMSE=67.9, RegLoss=0]

ROK

Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.15it/s,
SmoothL1Loss=0.00268, MAE=3.3, RMSE=4.15, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.13, MAE=52.1, RMSE=63.8, RegLoss=0]

ROP

Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.18it/s,
SmoothL1Loss=0.000818, MAE=0.989, RMSE=1.32, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```

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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 1/213 [00:00<00:26, 7.86it/s,
SmoothL1Loss=0.911, MAE=91, RMSE=111, RegLoss=0]

ROST

Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.19it/s,
SmoothL1Loss=0.000717, MAE=2.03, RMSE=2.54, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.729, MAE=24.1, RMSE=29.9, RegLoss=0]

RRC

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.24it/s,
SmoothL1Loss=0.000666, MAE=0.631, RMSE=0.761, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```

INFO:NP.config:Setting normalization to global as only one dataframe provided for training.

INFO - (NP.utils.set\_auto\_seasonalities) - Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

INFO - (NP.config.set\_auto\_batch\_epoch) - Auto-set batch\_size to 16

INFO:NP.config:Auto-set batch\_size to 16

INFO - (NP.config.set\_auto\_batch\_epoch) - Auto-set epochs to 213

INFO:NP.config:Auto-set epochs to 213

Epoch[1/213]: 0%| | 0/213 [00:00<?, ?it/s,  
SmoothL1Loss=0.721, MAE=61.9, RMSE=73.6, RegLoss=0]

RSG

Epoch[213/213]: 100%| | 213/213 [00:20<00:00, 10.26it/s,  
SmoothL1Loss=0.000948, MAE=1.86, RMSE=2.32, RegLoss=0]

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 96.429% of the data.

INFO:NP.df\_utils:Major frequency B corresponds to 96.429% of the data.

INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

INFO:NP.df\_utils:Defined frequency is equal to major frequency - B

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 99.602% of the data.

INFO:NP.df\_utils:Major frequency B corresponds to 99.602% of the data.

INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

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INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 99.602% of the data.

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INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 96.429% of the data.

INFO:NP.df\_utils:Major frequency B corresponds to 96.429% of the data.

INFO - (NP.df\_utils.\_infer\_frequency) - Dataframe freq automatically defined as B

INFO:NP.df\_utils:Dataframe freq automatically defined as B

INFO - (NP.config.init\_data\_params) - Setting normalization to global as only one dataframe provided for training.

INFO:NP.config:Setting normalization to global as only one dataframe provided for training.

INFO - (NP.utils.set\_auto\_seasonalities) - Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|
| 0/213 [00:00<?, ?it/s]

RTN

Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.33it/s,
SmoothL1Loss=0.00418, MAE=2.64, RMSE=3.24, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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frequency - B
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                      | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.28, MAE=45.8, RMSE=55.5, RegLoss=0]

```

SBAC

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.57it/s,
SmoothL1Loss=0.00112, MAE=0.943, RMSE=1.22, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.964, MAE=39, RMSE=46.6, RegLoss=0]
```

SBUX

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.53it/s,
SmoothL1Loss=0.00123, MAE=1.06, RMSE=1.35, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
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INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[2/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.612, MAE=13.2, RMSE=16, RegLoss=0]

SCG

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.62it/s,
SmoothL1Loss=0.00474, MAE=1.03, RMSE=1.25, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.836, MAE=27.9, RMSE=32.8, RegLoss=0]

SCHW

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.44it/s,
SmoothL1Loss=0.00206, MAE=1.07, RMSE=1.39, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.9, MAE=161, RMSE=191, RegLoss=0]

SEE

Epoch[213/213]: 100%|                             | 213/213 [00:19<00:00, 10.69it/s,
SmoothL1Loss=0.00185, MAE=5.62, RMSE=7.16, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.936, MAE=94.9, RMSE=112, RegLoss=0]

SHW

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.52it/s,
SmoothL1Loss=0.00283, MAE=4.16, RMSE=5.11, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```



```

INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.904, MAE=76.2, RMSE=91.6, RegLoss=0]

SIG

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.51it/s,
SmoothL1Loss=0.00201, MAE=2.77, RMSE=3.56, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.

```

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.36, MAE=86.7, RMSE=102, RegLoss=0]

SJM

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.61it/s,
SmoothL1Loss=0.00151, MAE=2.12, RMSE=2.58, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
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INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.06, MAE=70.4, RMSE=86.8, RegLoss=0]

```

SLB

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.61it/s,
SmoothL1Loss=0.00325, MAE=3.05, RMSE=3.74, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.29, MAE=126, RMSE=155, RegLoss=0]
```

SLG

```
Epoch[213/213]: 100%|          | 213/213 [00:19<00:00, 10.66it/s,
SmoothL1Loss=0.00113, MAE=2.69, RMSE=3.38, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.732, MAE=37.7, RMSE=46.6, RegLoss=0]

SNA

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.32it/s,
SmoothL1Loss=0.00195, MAE=1.66, RMSE=2.04, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.2, MAE=38.3, RMSE=44.8, RegLoss=0]

SNI

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.30it/s,
SmoothL1Loss=0.00124, MAE=0.914, RMSE=1.14, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```

```

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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.29, MAE=21, RMSE=23.8, RegLoss=0]

SNPS

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.40it/s,
SmoothL1Loss=0.00273, MAE=0.694, RMSE=0.873, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|          | 1/213 [00:00<00:22,  9.26it/s,
SmoothL1Loss=0.976, MAE=91.3, RMSE=109, RegLoss=0]

SO

Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.26it/s,
SmoothL1Loss=0.00338, MAE=4.27, RMSE=5.28, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```

```

INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.918, MAE=69, RMSE=81.6, RegLoss=0]

SPG

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.43it/s,
SmoothL1Loss=0.00131, MAE=2.03, RMSE=2.58, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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frequency - B
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.

```



```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[2/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=3.08, MAE=249, RMSE=263, RegLoss=0]

SPGI

Epoch[213/213]: 100%|                           | 213/213 [00:21<00:00, 10.12it/s,
SmoothL1Loss=0.00171, MAE=3.06, RMSE=3.97, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.747, MAE=29.4, RMSE=35.4, RegLoss=0]

```

SRCL

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.26it/s,
SmoothL1Loss=0.0045, MAE=1.84, RMSE=2.35, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s]
```

SRE

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.37it/s,
SmoothL1Loss=0.00408, MAE=1.1, RMSE=1.32, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.07, MAE=43, RMSE=51, RegLoss=0]

STI

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.16it/s,
SmoothL1Loss=0.00311, MAE=1.8, RMSE=2.22, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 1/213 [00:00<00:21,  9.83it/s,
SmoothL1Loss=1.05, MAE=67.4, RMSE=79.2, RegLoss=0]

STT

Epoch[213/213]: 100%|        | 213/213 [00:20<00:00, 10.39it/s,
SmoothL1Loss=0.00138, MAE=1.89, RMSE=2.33, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.12, MAE=152, RMSE=180, RegLoss=0]

```

STX

```

Epoch[213/213]: 100%|                           | 213/213 [00:19<00:00, 10.84it/s,
SmoothL1Loss=0.000494, MAE=2.47, RMSE=3.01, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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frequency - B
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```

```

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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.14, MAE=73.5, RMSE=88.2, RegLoss=0]

STZ

Epoch[213/213]: 100%|                             | 213/213 [00:19<00:00, 10.91it/s,
SmoothL1Loss=0.00149, MAE=2.01, RMSE=2.5, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
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```

```

INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.677, MAE=81, RMSE=97.9, RegLoss=0]

SWK

Epoch[213/213]: 100%|      | 213/213 [00:19<00:00, 11.00it/s,
SmoothL1Loss=0.000886, MAE=2.54, RMSE=3.09, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.

```

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.498, MAE=38, RMSE=45.8, RegLoss=0]

SWKS

Epoch[213/213]: 100%|      | 213/213 [00:19<00:00, 10.90it/s,
SmoothL1Loss=0.00122, MAE=1.68, RMSE=2.07, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.815, MAE=11.4, RMSE=12.9, RegLoss=0]

```



SYK

```
Epoch[213/213]: 100%|      | 213/213 [00:19<00:00, 10.80it/s,
SmoothL1Loss=0.00279, MAE=0.537, RMSE=0.659, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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frequency - B
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=2.06, MAE=47.4, RMSE=52.4, RegLoss=0]
```

SYMC

```
Epoch[213/213]: 100%|      | 213/213 [00:19<00:00, 10.88it/s,
SmoothL1Loss=0.00147, MAE=0.78, RMSE=0.985, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.79, MAE=12.8, RMSE=15.4, RegLoss=0]

SYN

Epoch[213/213]: 100%|          | 213/213 [00:19<00:00, 11.00it/s,
SmoothL1Loss=0.00384, MAE=0.743, RMSE=0.918, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=2.04, MAE=132, RMSE=148, RegLoss=0]

T

Epoch[213/213]: 100%|                           | 213/213 [00:19<00:00, 10.86it/s,
SmoothL1Loss=0.00107, MAE=1.87, RMSE=2.36, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.63, MAE=126, RMSE=155, RegLoss=0]

```

TAP

```

Epoch[213/213]: 100%|                           | 213/213 [00:19<00:00, 10.88it/s,
SmoothL1Loss=0.000886, MAE=3.9, RMSE=4.99, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.567, MAE=18.6, RMSE=22.6, RegLoss=0]

TDG

Epoch[213/213]: 100%|                             | 213/213 [00:19<00:00, 10.84it/s,
SmoothL1Loss=0.00537, MAE=1.6, RMSE=1.96, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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```

```

INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 1/213 [00:00<00:24,  8.57it/s,
SmoothL1Loss=0.847, MAE=35.1, RMSE=42.3, RegLoss=0]

TEL

Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.55it/s,
SmoothL1Loss=0.00228, MAE=1.51, RMSE=1.84, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.

```

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.79, MAE=54.8, RMSE=66.3, RegLoss=0]

TGT

Epoch[213/213]: 100%|      | 213/213 [00:19<00:00, 10.82it/s,
SmoothL1Loss=0.00195, MAE=2.31, RMSE=2.79, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 1/213 [00:00<00:23, 9.20it/s,
SmoothL1Loss=1.22, MAE=43.5, RMSE=52.4, RegLoss=0]

```

TIF

```
Epoch[213/213]: 100%|          | 213/213 [00:19<00:00, 10.96it/s,
SmoothL1Loss=0.0018, MAE=1.22, RMSE=1.55, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=2.2, MAE=45, RMSE=51, RegLoss=0]
```

TJX

```
Epoch[213/213]: 100%|          | 213/213 [00:19<00:00, 10.92it/s,
SmoothL1Loss=0.0022, MAE=0.869, RMSE=1.09, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```



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INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.533, MAE=41.9, RMSE=51.1, RegLoss=0]

TMK

Epoch[213/213]: 100%|      | 213/213 [00:19<00:00, 10.94it/s,
SmoothL1Loss=0.00255, MAE=2.6, RMSE=3.21, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=2.16, MAE=57.6, RMSE=64, RegLoss=0]

TMO

Epoch[213/213]: 100%|                             | 213/213 [00:19<00:00, 10.83it/s,
SmoothL1Loss=0.00228, MAE=1.17, RMSE=1.45, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

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INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.696, MAE=62.7, RMSE=77, RegLoss=0]

TPR

Epoch[213/213]: 100%|                             | 213/213 [00:19<00:00, 10.65it/s,
SmoothL1Loss=0.00294, MAE=3.41, RMSE=4.29, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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frequency - B
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of the data.
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frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.

```

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INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=2.03, MAE=51.6, RMSE=57.9, RegLoss=0]

TRIP

Epoch[213/213]: 100%|                           | 213/213 [00:21<00:00, 10.07it/s,
SmoothL1Loss=0.00414, MAE=1.48, RMSE=1.83, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```

```

INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.49, MAE=73, RMSE=87.5, RegLoss=0]

TROW

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.45it/s,
SmoothL1Loss=0.00273, MAE=2.22, RMSE=2.76, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.

```

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|          | 1/213 [00:00<00:24,  8.65it/s,
SmoothL1Loss=0.921, MAE=49.3, RMSE=59.4, RegLoss=0]

TRV

Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.33it/s,
SmoothL1Loss=0.00275, MAE=2.12, RMSE=2.65, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.952, MAE=56.8, RMSE=65.1, RegLoss=0]

```

TSCO

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.64it/s,
SmoothL1Loss=0.000939, MAE=1.37, RMSE=1.72, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.656, MAE=26.6, RMSE=33.1, RegLoss=0]
```

TSN

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.56it/s,
SmoothL1Loss=0.00195, MAE=1.21, RMSE=1.53, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.65, MAE=61.4, RMSE=69.2, RegLoss=0]

TSS

Epoch[213/213]: 100%|                             | 213/213 [00:19<00:00, 10.76it/s,
SmoothL1Loss=0.00352, MAE=1.9, RMSE=2.38, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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```



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INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.846, MAE=37.8, RMSE=46.2, RegLoss=0]

TWX

Epoch[213/213]: 100%|                           | 213/213 [00:19<00:00, 10.92it/s,
SmoothL1Loss=0.00156, MAE=1.26, RMSE=1.63, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 1/213 [00:00<00:25, 8.27it/s,
SmoothL1Loss=0.78, MAE=17.8, RMSE=21.8, RegLoss=0]

TXN

Epoch[213/213]: 100%|      | 213/213 [00:19<00:00, 10.94it/s,
SmoothL1Loss=0.00406, MAE=1.05, RMSE=1.32, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.627, MAE=29.4, RMSE=36.1, RegLoss=0]

TXT

Epoch[213/213]: 100%|                             | 213/213 [00:19<00:00, 10.89it/s,
SmoothL1Loss=0.0016, MAE=1.29, RMSE=1.59, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
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INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.797, MAE=38.4, RMSE=45.5, RegLoss=0]

UAA

Epoch[213/213]: 100%|                           | 213/213 [00:19<00:00, 11.06it/s,
SmoothL1Loss=0.00383, MAE=2.14, RMSE=2.69, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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daily_seasonality=True to override this.

```

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.774, MAE=16.6, RMSE=20.1, RegLoss=0]

UAL

Epoch[213/213]: 100%|                             | 213/213 [00:19<00:00, 10.95it/s,
SmoothL1Loss=0.0019, MAE=0.691, RMSE=0.842, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.63, MAE=140, RMSE=161, RegLoss=0]

```

UDR

```
Epoch[213/213]: 100%|          | 213/213 [00:19<00:00, 10.93it/s,
SmoothL1Loss=0.00199, MAE=3.41, RMSE=4.15, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.476, MAE=152, RMSE=183, RegLoss=0]
```

UHS

```
Epoch[213/213]: 100%|          | 213/213 [00:19<00:00, 10.96it/s,
SmoothL1Loss=0.00061, MAE=4.88, RMSE=6.08, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

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INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.72, MAE=85.1, RMSE=102, RegLoss=0]

ULTA

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.62it/s,
SmoothL1Loss=0.000564, MAE=1.95, RMSE=2.46, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.802, MAE=16.4, RMSE=19.6, RegLoss=0]

UNH

Epoch[213/213]: 100%|                           | 213/213 [00:19<00:00, 10.69it/s,
SmoothL1Loss=0.00469, MAE=1.05, RMSE=1.28, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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```



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INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|          | 1/213 [00:00<00:23,  8.86it/s,
SmoothL1Loss=1.23, MAE=86.1, RMSE=103, RegLoss=0]

UNM

Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.43it/s,
SmoothL1Loss=0.00194, MAE=2.42, RMSE=3.13, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.17, MAE=38.2, RMSE=46, RegLoss=0]

UNP

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.32it/s,
SmoothL1Loss=0.00448, MAE=1.8, RMSE=2.19, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
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frequency - B
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of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
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frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```

INFO:NP.config:Setting normalization to global as only one dataframe provided for training.

INFO - (NP.utils.set\_auto\_seasonalities) - Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

INFO - (NP.config.set\_auto\_batch\_epoch) - Auto-set batch\_size to 16

INFO:NP.config:Auto-set batch\_size to 16

INFO - (NP.config.set\_auto\_batch\_epoch) - Auto-set epochs to 213

INFO:NP.config:Auto-set epochs to 213

Epoch[1/213]: 0%| | 0/213 [00:00<?, ?it/s,  
SmoothL1Loss=0.917, MAE=95.3, RMSE=113, RegLoss=0]

UPS

Epoch[213/213]: 100%| | 213/213 [00:20<00:00, 10.47it/s,  
SmoothL1Loss=0.00251, MAE=4.02, RMSE=4.91, RegLoss=0]

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 96.429% of the data.

INFO:NP.df\_utils:Major frequency B corresponds to 96.429% of the data.

INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

INFO:NP.df\_utils:Defined frequency is equal to major frequency - B

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 99.602% of the data.

INFO:NP.df\_utils:Major frequency B corresponds to 99.602% of the data.

INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

INFO:NP.df\_utils:Defined frequency is equal to major frequency - B

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 99.602% of the data.

INFO:NP.df\_utils:Major frequency B corresponds to 99.602% of the data.

INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

INFO:NP.df\_utils:Defined frequency is equal to major frequency - B

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 96.429% of the data.

INFO:NP.df\_utils:Major frequency B corresponds to 96.429% of the data.

INFO - (NP.df\_utils.\_infer\_frequency) - Dataframe freq automatically defined as B

INFO:NP.df\_utils:Dataframe freq automatically defined as B

INFO - (NP.config.init\_data\_params) - Setting normalization to global as only one dataframe provided for training.

INFO:NP.config:Setting normalization to global as only one dataframe provided for training.

INFO - (NP.utils.set\_auto\_seasonalities) - Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=2.34, MAE=24, RMSE=26.3, RegLoss=0]

URI

Epoch[213/213]: 100%|                           | 213/213 [00:19<00:00, 10.75it/s,
SmoothL1Loss=0.00692, MAE=0.81, RMSE=0.985, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=2.5, MAE=103, RMSE=113, RegLoss=0]

```

USB

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Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.57it/s,
SmoothL1Loss=0.00389, MAE=2.5, RMSE=3, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.79, MAE=39.5, RMSE=47.5, RegLoss=0]
```

UTX

```
Epoch[213/213]: 100%|          | 213/213 [00:19<00:00, 10.69it/s,
SmoothL1Loss=0.00146, MAE=1.38, RMSE=1.73, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.54, MAE=22.7, RMSE=27.8, RegLoss=0]

V
Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.59it/s,
SmoothL1Loss=0.003, MAE=1.52, RMSE=1.86, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.85, MAE=28.3, RMSE=34.1, RegLoss=0]

VAR

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.46it/s,
SmoothL1Loss=0.00292, MAE=1.35, RMSE=1.68, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
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INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|          | 1/213 [00:00<00:25,  8.33it/s,
SmoothL1Loss=1.19, MAE=90.1, RMSE=107, RegLoss=0]

```

VFC

```

Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.46it/s,
SmoothL1Loss=0.00117, MAE=2.08, RMSE=2.61, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.

```



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INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.91, MAE=62.2, RMSE=72.9, RegLoss=0]

VIAB

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.64it/s,
SmoothL1Loss=0.00448, MAE=1.94, RMSE=2.44, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
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```

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INFO - (NP.utils.set\_auto\_seasonalities) - Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

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INFO - (NP.config.set\_auto\_batch\_epoch) - Auto-set batch\_size to 16

INFO:NP.config:Auto-set batch\_size to 16

INFO - (NP.config.set\_auto\_batch\_epoch) - Auto-set epochs to 213

INFO:NP.config:Auto-set epochs to 213

Epoch[1/213]: 0%| | 0/213 [00:00<?, ?it/s,  
SmoothL1Loss=0.577, MAE=67.7, RMSE=83.2, RegLoss=0]

VLO

Epoch[213/213]: 100%| | 213/213 [00:19<00:00, 10.82it/s,  
SmoothL1Loss=0.000848, MAE=2.34, RMSE=2.83, RegLoss=0]

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 96.429% of the data.

INFO:NP.df\_utils:Major frequency B corresponds to 96.429% of the data.

INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

INFO:NP.df\_utils:Defined frequency is equal to major frequency - B

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 99.602% of the data.

INFO:NP.df\_utils:Major frequency B corresponds to 99.602% of the data.

INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

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INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

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INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 96.429% of the data.

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INFO - (NP.df\_utils.\_infer\_frequency) - Dataframe freq automatically defined as B

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```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.69, MAE=70.8, RMSE=84.8, RegLoss=0]

VMC

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.63it/s,
SmoothL1Loss=0.00375, MAE=2.17, RMSE=2.77, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.789, MAE=32, RMSE=38.8, RegLoss=0]

```

VNO

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.52it/s,
SmoothL1Loss=0.00257, MAE=1.46, RMSE=1.87, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.93, MAE=100, RMSE=117, RegLoss=0]
```

VRSK

```
Epoch[213/213]: 100%|          | 213/213 [00:19<00:00, 10.68it/s,
SmoothL1Loss=0.00134, MAE=1.68, RMSE=2.12, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.746, MAE=79.6, RMSE=102, RegLoss=0]

VRSN

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.56it/s,
SmoothL1Loss=0.0034, MAE=4.55, RMSE=5.65, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.51, MAE=23.9, RMSE=28.9, RegLoss=0]

VRTX

Epoch[213/213]: 100%|                           | 213/213 [00:19<00:00, 10.69it/s,
SmoothL1Loss=0.00294, MAE=1.6, RMSE=2, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.685, MAE=11.6, RMSE=16.1, RegLoss=0]

```

VTR

```

Epoch[213/213]: 100%|                           | 213/213 [00:19<00:00, 10.69it/s,
SmoothL1Loss=0.00622, MAE=0.975, RMSE=1.21, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.557, MAE=59.4, RMSE=71.1, RegLoss=0]

VZ

Epoch[213/213]: 100%|                             | 213/213 [00:19<00:00, 10.66it/s,
SmoothL1Loss=0.00157, MAE=2.85, RMSE=3.42, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```



INFO:NP.config:Setting normalization to global as only one dataframe provided for training.

INFO - (NP.utils.set\_auto\_seasonalities) - Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

INFO - (NP.config.set\_auto\_batch\_epoch) - Auto-set batch\_size to 16

INFO:NP.config:Auto-set batch\_size to 16

INFO - (NP.config.set\_auto\_batch\_epoch) - Auto-set epochs to 213

INFO:NP.config:Auto-set epochs to 213

Epoch[1/213]: 0%| | 0/213 [00:00<?, ?it/s,  
SmoothL1Loss=1.12, MAE=54.3, RMSE=65.3, RegLoss=0]

WAT

Epoch[213/213]: 100%| | 213/213 [00:19<00:00, 10.68it/s,  
SmoothL1Loss=0.00211, MAE=1.72, RMSE=2.22, RegLoss=0]

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 96.429% of the data.

INFO:NP.df\_utils:Major frequency B corresponds to 96.429% of the data.

INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

INFO:NP.df\_utils:Defined frequency is equal to major frequency - B

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 99.602% of the data.

INFO:NP.df\_utils:Major frequency B corresponds to 99.602% of the data.

INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

INFO:NP.df\_utils:Defined frequency is equal to major frequency - B

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 99.602% of the data.

INFO:NP.df\_utils:Major frequency B corresponds to 99.602% of the data.

INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

INFO:NP.df\_utils:Defined frequency is equal to major frequency - B

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 96.429% of the data.

INFO:NP.df\_utils:Major frequency B corresponds to 96.429% of the data.

INFO - (NP.df\_utils.\_infer\_frequency) - Dataframe freq automatically defined as B

INFO:NP.df\_utils:Dataframe freq automatically defined as B

INFO - (NP.config.init\_data\_params) - Setting normalization to global as only one dataframe provided for training.

INFO:NP.config:Setting normalization to global as only one dataframe provided for training.

INFO - (NP.utils.set\_auto\_seasonalities) - Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.966, MAE=98.8, RMSE=118, RegLoss=0]

WBA

Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.46it/s,
SmoothL1Loss=0.00157, MAE=3.17, RMSE=3.91, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.858, MAE=28.4, RMSE=34.9, RegLoss=0]

```

WDC

```
Epoch[213/213]: 100%|          | 213/213 [00:19<00:00, 10.77it/s,
SmoothL1Loss=0.00157, MAE=1.01, RMSE=1.24, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.54, MAE=26.7, RMSE=30.5, RegLoss=0]
```

WEC

```
Epoch[213/213]: 100%|          | 213/213 [00:19<00:00, 10.69it/s,
SmoothL1Loss=0.00479, MAE=1.04, RMSE=1.28, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.888, MAE=96.1, RMSE=116, RegLoss=0]

WFC

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.60it/s,
SmoothL1Loss=0.00494, MAE=5.83, RMSE=7.16, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.

```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
for training.
INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.906, MAE=36.7, RMSE=42.9, RegLoss=0]

WHR

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.59it/s,
SmoothL1Loss=0.000982, MAE=1.02, RMSE=1.2, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|          | 1/213 [00:00<00:24,  8.53it/s,
SmoothL1Loss=0.88, MAE=60.6, RMSE=75.9, RegLoss=0]

```

WM

```

Epoch[213/213]: 100%|          | 213/213 [00:19<00:00, 10.68it/s,
SmoothL1Loss=0.00102, MAE=1.66, RMSE=2.08, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[2/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.478, MAE=25.5, RMSE=31, RegLoss=0]

WMB

Epoch[213/213]: 100%|                           | 213/213 [00:19<00:00, 10.76it/s,
SmoothL1Loss=0.00124, MAE=1.09, RMSE=1.42, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.

```

INFO:NP.config:Setting normalization to global as only one dataframe provided for training.

INFO - (NP.utils.set\_auto\_seasonalities) - Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

INFO - (NP.config.set\_auto\_batch\_epoch) - Auto-set batch\_size to 16

INFO:NP.config:Auto-set batch\_size to 16

INFO - (NP.config.set\_auto\_batch\_epoch) - Auto-set epochs to 213

INFO:NP.config:Auto-set epochs to 213

Epoch[1/213]: 0%| | 0/213 [00:00<?, ?it/s,  
SmoothL1Loss=0.629, MAE=6.76, RMSE=8.18, RegLoss=0]

WMT

Epoch[213/213]: 100%| | 213/213 [00:19<00:00, 10.69it/s,  
SmoothL1Loss=0.0039, MAE=0.464, RMSE=0.57, RegLoss=0]

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 96.429% of the data.

INFO:NP.df\_utils:Major frequency B corresponds to 96.429% of the data.

INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

INFO:NP.df\_utils:Defined frequency is equal to major frequency - B

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 99.602% of the data.

INFO:NP.df\_utils:Major frequency B corresponds to 99.602% of the data.

INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

INFO:NP.df\_utils:Defined frequency is equal to major frequency - B

INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 99.602% of the data.

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INFO - (NP.df\_utils.\_infer\_frequency) - Defined frequency is equal to major frequency - B

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INFO - (NP.df\_utils.\_infer\_frequency) - Major frequency B corresponds to 96.429% of the data.

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INFO - (NP.df\_utils.\_infer\_frequency) - Dataframe freq automatically defined as B

INFO:NP.df\_utils:Dataframe freq automatically defined as B

INFO - (NP.config.init\_data\_params) - Setting normalization to global as only one dataframe provided for training.

INFO:NP.config:Setting normalization to global as only one dataframe provided for training.

INFO - (NP.utils.set\_auto\_seasonalities) - Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.

INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with daily\_seasonality=True to override this.



```

INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.517, MAE=12, RMSE=15.1, RegLoss=0]

WU

Epoch[213/213]: 100%|      | 213/213 [00:20<00:00, 10.62it/s,
SmoothL1Loss=0.00421, MAE=0.975, RMSE=1.2, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
INFO:NP.config:Setting normalization to global as only one dataframe provided
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.716, MAE=32.4, RMSE=39.5, RegLoss=0]

```

WY

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.46it/s,
SmoothL1Loss=0.00359, MAE=1.91, RMSE=2.39, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
one dataframe provided for training.
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
NeuralProphet with daily_seasonality=True to override this.
INFO:NP.utils:Disabling daily seasonality. Run NeuralProphet with
daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.948, MAE=231, RMSE=281, RegLoss=0]
```

WYN

```
Epoch[213/213]: 100%|          | 213/213 [00:19<00:00, 10.78it/s,
SmoothL1Loss=0.000765, MAE=5.13, RMSE=6.45, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO - (NP.config.init_data_params) - Setting normalization to global as only
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=2.58, MAE=200, RMSE=223, RegLoss=0]

WYNN

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.24it/s,
SmoothL1Loss=0.00389, MAE=4.71, RMSE=5.7, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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```

```

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INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.958, MAE=21.5, RMSE=26, RegLoss=0]

XEC

Epoch[213/213]: 100%|          | 213/213 [00:19<00:00, 10.87it/s,
SmoothL1Loss=0.00119, MAE=0.588, RMSE=0.742, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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```

```

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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.28, MAE=17.8, RMSE=21.7, RegLoss=0]

```

XEL

```

Epoch[213/213]: 100%|          | 213/213 [00:19<00:00, 10.67it/s,
SmoothL1Loss=0.00238, MAE=0.554, RMSE=0.702, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
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```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
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daily_seasonality=True to override this.
INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[2/213]: 0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.14, MAE=28, RMSE=33.2, RegLoss=0]

XL

Epoch[213/213]: 100%|                           | 213/213 [00:20<00:00, 10.62it/s,
SmoothL1Loss=0.00558, MAE=1.54, RMSE=1.86, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
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INFO - (NP.df_utils._infer_frequency) - Dataframe freq automatically defined as
B
INFO:NP.df_utils:Dataframe freq automatically defined as B
INFO - (NP.config.init_data_params) - Setting normalization to global as only
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```

```

INFO:NP.config:Setting normalization to global as only one dataframe provided
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INFO - (NP.utils.set_auto_seasonalities) - Disabling daily seasonality. Run
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INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[2/213]:  0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.92, MAE=45, RMSE=53.9, RegLoss=0]

XLNX

Epoch[213/213]: 100%|                           | 213/213 [00:19<00:00, 10.81it/s,
SmoothL1Loss=0.00203, MAE=1.63, RMSE=2.09, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```

```

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INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.24, MAE=30.8, RMSE=36.4, RegLoss=0]

XOM

Epoch[213/213]: 100%|      | 213/213 [00:19<00:00, 10.76it/s,
SmoothL1Loss=0.00218, MAE=0.934, RMSE=1.18, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO:NP.config:Auto-set batch_size to 16
INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.721, MAE=22.8, RMSE=27.7, RegLoss=0]

```



XRAY

```
Epoch[213/213]: 100%|          | 213/213 [00:19<00:00, 10.72it/s,
SmoothL1Loss=0.00267, MAE=1.16, RMSE=1.45, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:  0%|          | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.94, MAE=49.6, RMSE=56.2, RegLoss=0]
```

XRX

```
Epoch[213/213]: 100%|          | 213/213 [00:20<00:00, 10.58it/s,
SmoothL1Loss=0.00131, MAE=0.81, RMSE=1.02, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
```

```

INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.14, MAE=48.6, RMSE=60.4, RegLoss=0]

XYL

Epoch[213/213]: 100%|                             | 213/213 [00:19<00:00, 10.91it/s,
SmoothL1Loss=0.00497, MAE=2.29, RMSE=3.01, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```

```

INFO:NP.df_utils:Major frequency B corresponds to 99.602% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set batch_size to 16
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INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]: 0%|          | 1/213 [00:00<00:23, 9.21it/s,
SmoothL1Loss=0.805, MAE=45.3, RMSE=57.3, RegLoss=0]

YUM

Epoch[213/213]: 100%|      | 213/213 [00:19<00:00, 10.66it/s,
SmoothL1Loss=0.00447, MAE=2.72, RMSE=3.46, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
frequency - B
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INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 99.602%
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```

```

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INFO:NP.config:Auto-set epochs to 213
Epoch[2/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=1.13, MAE=20, RMSE=22.7, RegLoss=0]

ZBH

Epoch[213/213]: 100%|                             | 213/213 [00:19<00:00, 10.69it/s,
SmoothL1Loss=0.00421, MAE=0.935, RMSE=1.14, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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```

```

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INFO - (NP.config.set_auto_batch_epoch) - Auto-set epochs to 213
INFO:NP.config:Auto-set epochs to 213
Epoch[1/213]:   0%|                               | 0/213 [00:00<?, ?it/s,
SmoothL1Loss=0.824, MAE=28.3, RMSE=34.5, RegLoss=0]

ZION

Epoch[213/213]: 100%|                             | 213/213 [00:20<00:00, 10.63it/s,
SmoothL1Loss=0.00162, MAE=1.02, RMSE=1.28, RegLoss=0]
INFO - (NP.df_utils._infer_frequency) - Major frequency B corresponds to 96.429%
of the data.
INFO:NP.df_utils:Major frequency B corresponds to 96.429% of the data.
INFO - (NP.df_utils._infer_frequency) - Defined frequency is equal to major
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frequency - B
INFO:NP.df_utils:Defined frequency is equal to major frequency - B

```

ZTS

[116]: 120229

[122]: stockprediction

```
[122]:
```

	ds	y	yhat1	residual1	trend	season_yearly	\
0	2017-01-02	None	50.833527	None	49.783340	0.569729	
1	2017-01-03	None	50.758354	None	49.787933	0.482468	
2	2017-01-04	None	50.774284	None	49.792530	0.394396	
3	2017-01-05	None	50.726913	None	49.797127	0.305784	
4	2017-01-06	None	50.623840	None	49.801727	0.216894	
..	...	...	...	...	...	...	
246	2017-12-12	None	53.602566	None	51.364529	1.750089	
247	2017-12-13	None	53.695198	None	51.369125	1.738710	
248	2017-12-14	None	53.719841	None	51.373722	1.722116	
249	2017-12-15	None	53.683880	None	51.378319	1.700341	
250	2017-12-18	None	53.477234	None	51.392109	1.604667	

	season_weekly
0	0.480460
1	0.487949
2	0.587359
3	0.624000
4	0.605223
..	...
246	0.487949
247	0.587359
248	0.624000
249	0.605223
250	0.480460

[251 rows x 7 columns]

```
[123]: from sklearn.metrics import mean_squared_error
```

```
[124]: Closee = X_Test_Fbp['close'].tolist()
```

```
[125]: X_Test_Fbp = X_Test_Fbp.copy()
X_Test_Fbp['Fbprediction'] = predi
```

```
[128]: Closee_Pred = X_Test_Fbp['Fbprediction'].tolist()
```

```
[135]: MSE_FB = mean_squared_error(Closee,Closee_Pred)
MSE_FB
```

```
[135]: 961.2985015474549
```

## LSTM ON STOCK MARKET

```
[129]: X_Train_Lstm = data3[data3['date'] < '2017-01-03']
X_Test_Lstm = data3[data3['date'] > '2016-12-30']
```

```

[130]: X_Train_Lstm = X_Train_Lstm.copy()
X_Test_Lstm = X_Test_Lstm.copy()

[131]: X_Train_Lstm['dateOr'] = X_Train_Lstm['date'].apply(lambda x: x.toordinal())
X_Test_Lstm['dateOr'] = X_Test_Lstm['date'].apply(lambda x: x.toordinal())

[443]: def flatten(i):
        return [item for sublist in i for item in sublist]
stocks = X_Train_Lstm.groupby('symbol')
predi = []
for sym in stocks.groups:
    stock = X_Train_Lstm[X_Train_Lstm['symbol'] == sym]
    Xtrain = stock['dateOr'].values
    Xtrain = Xtrain.reshape(-1, 1)
    Trainscaler = MinMaxScaler(feature_range=(0,1))
    scaled_data = Trainscaler.fit_transform(Xtrain)
    scaled_data = scaled_data.reshape(scaled_data.shape[0], scaled_data.
↪shape[1], 1)
    stock_test = X_Test_Lstm[X_Test_Lstm['symbol'] == sym]
    Xtest = stock_test['dateOr'].values
    Xtest = Xtest.reshape(-1, 1)
    testscaler = MinMaxScaler(feature_range=(0,1))
    scaled_datatest = testscaler.fit_transform(Xtest)
    scaled_datatest = scaled_datatest.reshape(scaled_datatest.
↪shape[0], scaled_datatest.shape[1], 1)
    Ytrain = stock['close'].values
    Ytrain = Ytrain.reshape(-1, 1)
    Yscaler = MinMaxScaler(feature_range=(0,1))
    Yscaled_data = Yscaler.fit_transform(Ytrain)
    Yscaled_data = Yscaled_data.reshape(Yscaled_data.shape[0], Yscaled_data.
↪shape[1], 1)
    model = Sequential()
    model.add(LSTM(128, return_sequences=True, input_shape= (1, 1)))
    model.add(LSTM(64, return_sequences=True))
    model.add(LSTM(32, return_sequences=False))
    #model.add(Dense(25))
    model.add(Dense(1))
    model.compile(optimizer='adam', loss='mean_squared_error')
    model.fit(scaled_data, Yscaled_data, batch_size=1, epochs=10)
    predictions = model.predict(scaled_datatest)
    predictions = Yscaler.inverse_transform(predictions)
    predictions = predictions.tolist()
    predictions = flatten(predictions)
    predi.extend(predictions)
    print(sym)
len(predi)

```

```

Epoch 1/10
756/756 [=====] - ETA: 0s - loss: 0.062 - 6s 2ms/step -
loss: 0.0618
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0353
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0281
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0249
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0175
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0126
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0124
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0122
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0120
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0120
A
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0496
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0384
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0386
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0382
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0379
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0376
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0374
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0367
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0359
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0346
AAL
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0336

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Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0256  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0208  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0179  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0175  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0165  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0161  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0157  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0160  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0156  
AAP  
Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0631  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0494  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0326  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0215  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0199  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0190A: 0s -  
loss: 0.01  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0180  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0165  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0143  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0137  
AAPL  
Epoch 1/10  
756/756 [=====] - 5s 2ms/step - loss: 0.0527  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0418  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0393  
Epoch 4/10

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756/756 [=====] - 2s 2ms/step - loss: 0.0337
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0305
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0305
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0302
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0302
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0302
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0293
ABBV
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0799
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0695
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0478
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0204
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0151
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0118
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0081
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0078
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0076
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0070
ABC
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0641
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0553
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0557
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0545
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0517
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0387
Epoch 7/10

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756/756 [=====] - 2s 2ms/step - loss: 0.0285
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0259
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0248
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0242
ABT
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0236
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0078
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0077
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0075
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0076
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0074
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0074
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0071
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0070
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0066
ACN
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0184
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0062
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0056
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0058
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0053
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0053
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0055
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0055
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0057
Epoch 10/10

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756/756 [=====] - 2s 2ms/step - loss: 0.0055
ADBE
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0332
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0234
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0226
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0230
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0230
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0228
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0226
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0228
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0225
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0226
ADI
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0598
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0426
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0419
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0425
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0419
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0418
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0419
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0410
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0416
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0417
ADM
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0220
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0144

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Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0141  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0140  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0141  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0140  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0138  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0141  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0137  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0139  
ADP  
Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0750  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0418  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0383  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0371  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0349  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0350  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0303  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0217  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0181  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0172  
ADS  
Epoch 1/10  
756/756 [=====] - 5s 2ms/step - loss: 0.0298  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0245  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0239  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0226  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0231

Epoch 6/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0211  
 Epoch 7/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0181  
 Epoch 8/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0157  
 Epoch 9/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0157  
 Epoch 10/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0140  
 ADSK  
 Epoch 1/10  
 756/756 [=====] - 5s 2ms/step - loss: 0.0281  
 Epoch 2/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0179  
 Epoch 3/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0177  
 Epoch 4/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0175  
 Epoch 5/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0174  
 Epoch 6/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0182  
 Epoch 7/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0178  
 Epoch 8/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0173  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0177  
 Epoch 10/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0169  
 AEE  
 Epoch 1/10  
 756/756 [=====] - 5s 2ms/step - loss: 0.0278  
 Epoch 2/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0186  
 Epoch 3/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0181  
 Epoch 4/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0177  
 Epoch 5/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0176  
 Epoch 6/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0174  
 Epoch 7/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0177  
 Epoch 8/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0175

Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0175  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0173  
AEP  
Epoch 1/10  
756/756 [=====] - 5s 3ms/step - loss: 0.0550  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0279  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0271  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0271  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0269  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0262  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0258  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0253  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0239  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0187  
AES  
Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0320  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0132  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0108  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0107  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0109  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0107  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0105  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0106  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0105  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0102  
AET  
Epoch 1/10

```

756/756 [=====] - 5s 2ms/step - loss: 0.0466
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0363
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0345
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0325
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0306
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0277
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0266
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0251
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0239
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0234
AFL
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0663
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0555
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0535
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0284
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0132
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0112
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0103
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0094
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0097
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0096
AGN
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0450
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0323
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0329
Epoch 4/10

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756/756 [=====] - 2s 2ms/step - loss: 0.0322
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0311
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0303
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0299
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0304
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0297
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0296
AIG
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0251
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0103
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0093
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0086
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0087
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0085
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0080
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0083
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0083
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0081
AIV
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0302
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0193
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0186
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0193
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0186
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0173
Epoch 7/10

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```

756/756 [=====] - 2s 2ms/step - loss: 0.0166
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0143
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0135
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0128
AIZ
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0539
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0368
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0367
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0366
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0361
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0366
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0355
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0352
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0349
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0350
AJG
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0618
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0478
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0477
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0477
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0478
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0476
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0465
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0465
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0451
Epoch 10/10

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```

756/756 [=====] - 2s 3ms/step - loss: 0.0443
AKAM
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0608
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0472
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0450
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0383
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0162
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0130
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0130
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0131
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0112
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0104
ALB
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0220
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0091
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0075
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0062
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0063
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0061
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0061
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0064
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0057
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0054
ALGN
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0347
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0215

```

Epoch 3/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0172  
 Epoch 4/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0161  
 Epoch 5/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0160  
 Epoch 6/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0155  
 Epoch 7/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0148  
 Epoch 8/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0148  
 Epoch 9/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0140  
 Epoch 10/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0133  
 ALK  
 Epoch 1/10  
 756/756 [=====] - 6s 3ms/step - loss: 0.0464  
 Epoch 2/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0316  
 Epoch 3/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0303  
 Epoch 4/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0277  
 Epoch 5/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0239  
 Epoch 6/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0230  
 Epoch 7/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0228  
 Epoch 8/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0225  
 Epoch 9/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0217  
 Epoch 10/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0203  
 ALL  
 Epoch 1/10  
 756/756 [=====] - 6s 3ms/step - loss: 0.0270  
 Epoch 2/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0131  
 Epoch 3/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0124  
 Epoch 4/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0119  
 Epoch 5/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0119

Epoch 6/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0121  
 Epoch 7/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0122  
 Epoch 8/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0120  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0116  
 Epoch 10/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0118  
 ALLE  
 Epoch 1/10  
 756/756 [=====] - 5s 2ms/step - loss: 0.0598  
 Epoch 2/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0371  
 Epoch 3/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0305  
 Epoch 4/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0264  
 Epoch 5/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0255  
 Epoch 6/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0233  
 Epoch 7/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0192  
 Epoch 8/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0157  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0158  
 Epoch 10/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0156  
 ALXN  
 Epoch 1/10  
 756/756 [=====] - 5s 2ms/step - loss: 0.0459  
 Epoch 2/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0401  
 Epoch 3/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0394  
 Epoch 4/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0380  
 Epoch 5/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0339  
 Epoch 6/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0205  
 Epoch 7/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0171  
 Epoch 8/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0139

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Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0082
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0052
AMAT
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0299
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0254
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0132
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0043
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0051
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0038
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0042
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0045
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0043
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0035
AMD
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0558
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0368
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0351
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0333A: 0s
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0322
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0326
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0315
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0311
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0304
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0287
AME
Epoch 1/10

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756/756 [=====] - 5s 3ms/step - loss: 0.0652
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0306
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0290
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0280
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0279
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0272
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0252
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0190
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0164
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0154
AMG
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0563
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0395
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0291
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0239
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0241
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0237
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0231
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0231
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0230
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0224
AMGN
Epoch 1/10
756/756 [=====] - 5s 3ms/step - loss: 0.0648
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0386
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0382
Epoch 4/10

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756/756 [=====] - 2s 3ms/step - loss: 0.0367
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0362
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0357
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0356
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0352
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0346
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0325
AMP
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0329
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0241
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0231
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0233
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0243
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0237
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0232
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0233
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0238
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0236
AMT
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0289
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0113
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0114
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0104
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0103
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0104
Epoch 7/10

```



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756/756 [=====] - 2s 3ms/step - loss: 0.0078
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0060
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0060
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0060
AMZN
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0443
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0319
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0221
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0175
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0137
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0120
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0110
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0105
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0107
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0104
ANDV
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0381
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0257
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0249
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0236
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0236
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0233
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0226
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0229
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0224
Epoch 10/10

```

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756/756 [=====] - 2s 2ms/step - loss: 0.0220
ANSS
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0492
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0338
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0166
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0109
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0095
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0089
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0074
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0064
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0054
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0051
ANTM
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0324
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0181
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0182
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0178
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0179
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0178
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0174
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0178
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0172
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0177
AON
Epoch 1/10
756/756 [=====] - 5s 3ms/step - loss: 0.0207
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0075

```

Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0072  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0071  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0076  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0072  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0072  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0068  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0071  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0072  
AOS  
Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0515  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0293  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0268  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0266  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0240  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0177  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0100  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0100  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0100  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0097  
APA  
Epoch 1/10  
756/756 [=====] - 5s 3ms/step - loss: 0.0533  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0247  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0244  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0241  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0240

Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0234  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0236  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0227  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0219  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0150  
APC  
Epoch 1/10  
756/756 [=====] - 5s 2ms/step - loss: 0.0474  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0326  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0303  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0246  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0213  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0206  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0207  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0203  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0201  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0204  
APD  
Epoch 1/10  
756/756 [=====] - 5s 3ms/step - loss: 0.0289  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0195  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0185  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0187  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0186  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0185  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0191  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0187

Epoch 9/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0181  
 Epoch 10/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0183  
 APH  
 Epoch 1/10  
 756/756 [=====] - 6s 3ms/step - loss: 0.0309  
 Epoch 2/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0213  
 Epoch 3/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0201  
 Epoch 4/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0198  
 Epoch 5/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0203  
 Epoch 6/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0202  
 Epoch 7/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0198  
 Epoch 8/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0201  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0185  
 Epoch 10/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0176  
 ARE  
 Epoch 1/10  
 756/756 [=====] - 6s 3ms/step - loss: 0.0605  
 Epoch 2/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0310  
 Epoch 3/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0318  
 Epoch 4/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0308  
 Epoch 5/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0304  
 Epoch 6/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0303  
 Epoch 7/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0304  
 Epoch 8/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0300  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0297  
 Epoch 10/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0295  
 ARNC  
 Epoch 1/10

```

756/756 [=====] - 5s 3ms/step - loss: 0.0264
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0126
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0127
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0117
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0121
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0118
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0117
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0113
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0110
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0099
ATVI
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0382
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0175
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0086
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0075
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0077
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0078
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0077
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0076
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0076
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0076
AVB
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0226
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0072
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0062
Epoch 4/10

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756/756 [=====] - 2s 2ms/step - loss: 0.0063
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0064
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0063
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0061
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0064
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0061
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0062
AVG0
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0262
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0116
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0115
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0123
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0108
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0113
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0107
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0111
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0107
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0084
AVY
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0183
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0110
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0106
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0100
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0102
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0109
Epoch 7/10

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756/756 [=====] - 2s 3ms/step - loss: 0.0106
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0102
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0104
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0099
AWK
Epoch 1/10
756/756 [=====] - 5s 3ms/step - loss: 0.0574
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0175
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0172
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0171
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0173
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0173
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0166
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0163
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0161
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0147
AXP
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0242
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0104
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0103
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0103
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0106
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0101
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0095
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0095
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0082
Epoch 10/10

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756/756 [=====] - 2s 3ms/step - loss: 0.0076
AYI
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0351
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0114
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0093
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0089
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0074
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0057
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0049
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0048
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0048
Epoch 10/10
756/756 [=====] - ETA: 0s - loss: 0.004 - 2s 2ms/step -
loss: 0.0047
AZO
Epoch 1/10
756/756 [=====] - 5s 3ms/step - loss: 0.0494
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0388
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0388
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0381
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0392
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0384
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0380
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0383
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0381
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0374
BA
Epoch 1/10
756/756 [=====] - 5s 3ms/step - loss: 0.0303
Epoch 2/10

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756/756 [=====] - 2s 2ms/step - loss: 0.0237
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0232
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0233
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0230
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0233
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0231
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0231
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0231
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0228
BAC
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0888
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0451
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0451
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0447
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0433
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0409
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0358
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0173
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0120
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0103
BAX
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0307
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0251
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0242
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0246
Epoch 5/10

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756/756 [=====] - 2s 3ms/step - loss: 0.0243
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0244
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0242
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0240
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0241
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0239
BBT
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0341
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0289
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0280
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0285
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0283
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0284
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0279
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0276
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0269
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0269
BBY
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0258
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0098
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0096
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0098
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0090
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0095
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0099
Epoch 8/10

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756/756 [=====] - 2s 3ms/step - loss: 0.0090
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0094
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0092
BDX
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0640
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0214
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0209
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0204
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0200
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0197
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0183
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0150
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0077
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0071
BEN
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0358
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0231
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0224
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0168
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0159
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0156
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0156
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0154
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0157
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0152
BF.B

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Epoch 1/10  
756/756 [=====] - 5s 2ms/step - loss: 0.0400  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0311  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0303  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0302  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0296  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0296  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0292  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0282  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0259  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0168  
BIIB  
Epoch 1/10  
756/756 [=====] - 5s 2ms/step - loss: 0.0346  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0279  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0265  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0254  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0234  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0224  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0219  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0223  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0219  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0218  
BK  
Epoch 1/10  
756/756 [=====] - 5s 2ms/step - loss: 0.0491  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0396  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0397

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Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0397
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0376
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0374
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0372
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0364
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0362
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0358
BLK
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0282
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0142
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0132
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0117
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0107
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0107
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0103
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0102
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0104
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0095
BLL
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0539
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0468
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0412
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0366
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0325
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0294

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Epoch 7/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0282  
 Epoch 8/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0267  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0265  
 Epoch 10/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0267  
 BMV  
 Epoch 1/10  
 756/756 [=====] - 5s 2ms/step - loss: 0.0330  
 Epoch 2/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0226  
 Epoch 3/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0219  
 Epoch 4/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0215  
 Epoch 5/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0213  
 Epoch 6/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0194  
 Epoch 7/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0174  
 Epoch 8/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0165  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0163  
 Epoch 10/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0158  
 BRK.B  
 Epoch 1/10  
 756/756 [=====] - 6s 3ms/step - loss: 0.0263  
 Epoch 2/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0145  
 Epoch 3/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0146  
 Epoch 4/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0141  
 Epoch 5/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0141  
 Epoch 6/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0138  
 Epoch 7/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0137  
 Epoch 8/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0138  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0137

```

Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0134
BSX
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0610
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0220
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0222
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0215
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0216
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0213
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0206
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0199
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0190
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0141
BWA
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0497
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0390
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0379
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0370
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0358
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0319
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0293
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0283
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0284
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0283
BXP
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0523
Epoch 2/10

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756/756 [=====] - 2s 2ms/step - loss: 0.0351
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0349
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0346
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0344
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0334
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0339
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0335
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0339
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0339
C
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0574
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0493
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0491
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0491
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0491
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0480
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0462
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0396
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0382
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0383
CA
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0390
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0221
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0198
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0188
Epoch 5/10

```

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756/756 [=====] - 2s 2ms/step - loss: 0.0192
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0176
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0173
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0165
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0163
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0158
CAG
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0679
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0572
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0480
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0255
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0214
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0190
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0174
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0156
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0148
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0141
CAH
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0566
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0356
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0335
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0324
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0310
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0300
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0257
Epoch 8/10

```

```

756/756 [=====] - 2s 2ms/step - loss: 0.0121
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0093
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0093
CAT
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0242
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0140
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0144
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0136
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0137
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0136
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0136
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0132
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0130
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0134
CB
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0743
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0614
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0607
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0597
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0477
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0283
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0245
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0218
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0192
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0172
CBG

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Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0259
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0158
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0153
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0146
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0145
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0146
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0146
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0146
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0145
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0147
CB0E
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0569
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0358
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0346
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0340
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0334
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0318
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0306
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0305
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0287
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0264
CBS
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0222
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0142
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0134

```

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Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0140
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0136
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0134
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0132
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0132
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0132
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0130
CCI
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0405
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0259
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0231
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0217
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0198
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0187
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0169
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0141
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0114
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0112
CCL
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0171
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0053
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0052
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0050
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0054
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0052

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Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0051
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0053
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0052
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0050
CDNS
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0429
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0326
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0219
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0175
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0155
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0143
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0130
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0112
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0095
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0094
CELG
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0685
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0570
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0558
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0564
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0557
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0549
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0517
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0411
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0335

```

Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0278  
CERN

Epoch 1/10  
756/756 [=====] - 6s 2ms/step - loss: 0.0717

Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0328

Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0275

Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0254

Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0236

Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0182

Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0097

Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0075

Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0050

Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0039  
CF

Epoch 1/10  
756/756 [=====] - 5s 2ms/step - loss: 0.0277

Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0122

Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0107

Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0100

Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0101

Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0097

Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0102

Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0098

Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0098

Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0095  
CHD

Epoch 1/10  
756/756 [=====] - 5s 2ms/step - loss: 0.0424

Epoch 2/10

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756/756 [=====] - 2s 2ms/step - loss: 0.0122
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0116
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0112
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0103
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0078
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0035
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0030
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0031
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0032
CHK
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0493
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0344
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0317
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0277
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0242
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0225
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0220
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0219
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0215
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0207
CHRW
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0165
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0090
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0080
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0074
Epoch 5/10

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756/756 [=====] - 2s 2ms/step - loss: 0.0070
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0067
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0070
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0073A: 0s -
loss:
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0065
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0065
CHTR
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0350
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0171
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0125
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0100
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0085
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0070
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0052
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0045
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0042
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0040
CI
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0256
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0091
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0082
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0078
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0069
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0075
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0070

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Epoch 8/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0065  
 Epoch 9/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0065  
 Epoch 10/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0063  
 CINF  
 Epoch 1/10  
 756/756 [=====] - 5s 2ms/step - loss: 0.0454  
 Epoch 2/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0360  
 Epoch 3/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0354  
 Epoch 4/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0361  
 Epoch 5/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0358  
 Epoch 6/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0347  
 Epoch 7/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0347  
 Epoch 8/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0345  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0350  
 Epoch 10/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0347  
 CL  
 Epoch 1/10  
 756/756 [=====] - 6s 2ms/step - loss: 0.0302  
 Epoch 2/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0155  
 Epoch 3/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0123  
 Epoch 4/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0113  
 Epoch 5/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0104  
 Epoch 6/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0084  
 Epoch 7/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0075  
 Epoch 8/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0062  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0063  
 Epoch 10/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0064

CLX

Epoch 1/10

756/756 [=====] - 5s 2ms/step - loss: 0.0301

Epoch 2/10

756/756 [=====] - 2s 2ms/step - loss: 0.0244

Epoch 3/10

756/756 [=====] - 2s 2ms/step - loss: 0.0238

Epoch 4/10

756/756 [=====] - 2s 2ms/step - loss: 0.0239

Epoch 5/10

756/756 [=====] - 2s 2ms/step - loss: 0.0236

Epoch 6/10

756/756 [=====] - 2s 2ms/step - loss: 0.0235

Epoch 7/10

756/756 [=====] - 2s 2ms/step - loss: 0.0234

Epoch 8/10

756/756 [=====] - 2s 2ms/step - loss: 0.0230

Epoch 9/10

756/756 [=====] - 2s 2ms/step - loss: 0.0226

Epoch 10/10

756/756 [=====] - 2s 2ms/step - loss: 0.0219

CMA

Epoch 1/10

756/756 [=====] - 5s 2ms/step - loss: 0.0261

Epoch 2/10

756/756 [=====] - 2s 2ms/step - loss: 0.0127

Epoch 3/10

756/756 [=====] - 2s 2ms/step - loss: 0.0123

Epoch 4/10

756/756 [=====] - 2s 2ms/step - loss: 0.0125

Epoch 5/10

756/756 [=====] - 2s 2ms/step - loss: 0.0125

Epoch 6/10

756/756 [=====] - 2s 2ms/step - loss: 0.0123

Epoch 7/10

756/756 [=====] - 2s 2ms/step - loss: 0.0126

Epoch 8/10

756/756 [=====] - 2s 2ms/step - loss: 0.0124

Epoch 9/10

756/756 [=====] - 2s 2ms/step - loss: 0.0123

Epoch 10/10

756/756 [=====] - 2s 2ms/step - loss: 0.0121

CMCSA

Epoch 1/10

756/756 [=====] - 5s 2ms/step - loss: 0.0204

Epoch 2/10

756/756 [=====] - 2s 2ms/step - loss: 0.0115

Epoch 3/10

```

756/756 [=====] - 2s 2ms/step - loss: 0.0112
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0111
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0111
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0112
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0110
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0108
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0111
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0112
CME
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0753
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0444
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0362
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0352
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0319
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0238
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0161
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0148
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0148
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0142
CMG
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0626
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0356
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0359
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0354
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0350
Epoch 6/10

```

```

756/756 [=====] - 2s 2ms/step - loss: 0.0342
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0336
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0334
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0321
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0271
CMI
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0236
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0112
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0104
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0105
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0106
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0105
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0103
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0105
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0104
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0107
CMS
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0460
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0244
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0161
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0154
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0144
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0143
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0138
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0135
Epoch 9/10

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756/756 [=====] - 2s 2ms/step - loss: 0.0120
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0099
CNC
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0834
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0600
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0573
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0550
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0478
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0283
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0136
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0087
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0085
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0080
CNP
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0552
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0376
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0379
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0366
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0366
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0369
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0363
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0364
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0362
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0362
COF
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0402

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Epoch 2/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0159  
 Epoch 3/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0156  
 Epoch 4/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0153  
 Epoch 5/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0152  
 Epoch 6/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0147  
 Epoch 7/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0150  
 Epoch 8/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0147  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0145  
 Epoch 10/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0143  
 C0G  
 Epoch 1/10  
 756/756 [=====] - 5s 2ms/step - loss: 0.0507  
 Epoch 2/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0431  
 Epoch 3/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0400  
 Epoch 4/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0359  
 Epoch 5/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0345  
 Epoch 6/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0332  
 Epoch 7/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0326  
 Epoch 8/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0323  
 Epoch 9/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0323  
 Epoch 10/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0315  
 C0L  
 Epoch 1/10  
 756/756 [=====] - 6s 3ms/step - loss: 0.0660  
 Epoch 2/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0546  
 Epoch 3/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0525  
 Epoch 4/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0509

```

Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0493
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0445
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0424
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0417
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0419
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0409
C00
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0461
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0192
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0181
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0186
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0183
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0180
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0176
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0170
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0150
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0093
C0P
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0373
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0179
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0128
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0127
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0129
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0129
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0126

```



Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0124  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0124  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0127  
COST  
Epoch 1/10  
756/756 [=====] - 5s 2ms/step - loss: 0.0494  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0345  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0251  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0196  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0140  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0110  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0106  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0106  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0104  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0103  
COTY  
Epoch 1/10  
756/756 [=====] - 5s 2ms/step - loss: 0.0323  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0196  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0193  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0191  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0191  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0186  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0186  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0175  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0166  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0130

CPB

Epoch 1/10

756/756 [=====] - 5s 2ms/step - loss: 0.0387

Epoch 2/10

756/756 [=====] - 2s 2ms/step - loss: 0.0255

Epoch 3/10

756/756 [=====] - 2s 2ms/step - loss: 0.0243

Epoch 4/10

756/756 [=====] - 2s 2ms/step - loss: 0.0230

Epoch 5/10

756/756 [=====] - 2s 2ms/step - loss: 0.0218

Epoch 6/10

756/756 [=====] - 2s 2ms/step - loss: 0.0218

Epoch 7/10

756/756 [=====] - 2s 2ms/step - loss: 0.0205

Epoch 8/10

756/756 [=====] - 2s 2ms/step - loss: 0.0186

Epoch 9/10

756/756 [=====] - 2s 2ms/step - loss: 0.0175

Epoch 10/10

756/756 [=====] - 2s 2ms/step - loss: 0.0174

CRM

Epoch 1/10

756/756 [=====] - 5s 2ms/step - loss: 0.0417

Epoch 2/10

756/756 [=====] - 2s 2ms/step - loss: 0.0265

Epoch 3/10

756/756 [=====] - 2s 3ms/step - loss: 0.0271

Epoch 4/10

756/756 [=====] - 2s 2ms/step - loss: 0.0258

Epoch 5/10

756/756 [=====] - 2s 2ms/step - loss: 0.0249

Epoch 6/10

756/756 [=====] - 2s 2ms/step - loss: 0.0241

Epoch 7/10

756/756 [=====] - 2s 2ms/step - loss: 0.0245

Epoch 8/10

756/756 [=====] - 2s 2ms/step - loss: 0.0236

Epoch 9/10

756/756 [=====] - 2s 2ms/step - loss: 0.0245

Epoch 10/10

756/756 [=====] - 2s 2ms/step - loss: 0.0232

CSC0

Epoch 1/10

756/756 [=====] - 6s 3ms/step - loss: 0.0707

Epoch 2/10

756/756 [=====] - 2s 2ms/step - loss: 0.0563

Epoch 3/10

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756/756 [=====] - 2s 2ms/step - loss: 0.0564
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0558
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0558
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0547
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0552
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0553
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0549
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0548
CSX
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0204
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0074
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0074
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0073
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0071
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0071
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0073
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0072
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0075
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0070
CTAS
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0630
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0419
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0402
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0400
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0399
Epoch 6/10

```

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756/756 [=====] - 2s 2ms/step - loss: 0.0389
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0396
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0394
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0393
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0392
CTL
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0571
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0438
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0381
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0298
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0225
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0169
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0133
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0114
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0107
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0104
CTSH
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0237
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0126
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0127
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0127
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0121
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0123
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0122
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0120
Epoch 9/10

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756/756 [=====] - 2s 2ms/step - loss: 0.0115
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0118
CTXS
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0574
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0459
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0317
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0164
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0138
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0120
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0114
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0107
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0095
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0093
CVS
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0542
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0304
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0283
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0270
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0261
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0251
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0213
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0105
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0079
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0078
CVX
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0619

```

Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0432  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0436  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0427  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0428  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0421  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0410  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0415  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0402  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0374  
CX0  
Epoch 1/10  
756/756 [=====] - 5s 2ms/step - loss: 0.0379  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0295  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0299  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0293  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0289  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0292  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0290  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0288  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0285  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0290  
D  
Epoch 1/10  
756/756 [=====] - 6s 2ms/step - loss: 0.0508  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0392  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0361  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0293

```

Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0236
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0234
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0230
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0231
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0236
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0229
DAL
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0481
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0389
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0392
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0385A: 0s - los
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0384
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0376
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0379
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0375
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0376
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0373
DE
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0392
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0294
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0289
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0288
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0286
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0288
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0288

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Epoch 8/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0287  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0288  
 Epoch 10/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0284  
 DFS  
 Epoch 1/10  
 756/756 [=====] - 6s 3ms/step - loss: 0.0357  
 Epoch 2/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0267  
 Epoch 3/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0237  
 Epoch 4/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0232  
 Epoch 5/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0233  
 Epoch 6/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0227  
 Epoch 7/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0231  
 Epoch 8/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0223  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0227  
 Epoch 10/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0224  
 DG  
 Epoch 1/10  
 756/756 [=====] - 5s 2ms/step - loss: 0.0242  
 Epoch 2/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0147  
 Epoch 3/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0144  
 Epoch 4/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0150  
 Epoch 5/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0146  
 Epoch 6/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0143  
 Epoch 7/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0148  
 Epoch 8/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0147  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0145  
 Epoch 10/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0141



DGX

Epoch 1/10

756/756 [=====] - 6s 2ms/step - loss: 0.0318

Epoch 2/10

756/756 [=====] - 2s 2ms/step - loss: 0.0223

Epoch 3/10

756/756 [=====] - 2s 2ms/step - loss: 0.0199

Epoch 4/10

756/756 [=====] - 2s 2ms/step - loss: 0.0191

Epoch 5/10

756/756 [=====] - 2s 2ms/step - loss: 0.0183

Epoch 6/10

756/756 [=====] - 2s 2ms/step - loss: 0.0173

Epoch 7/10

756/756 [=====] - 2s 2ms/step - loss: 0.0164

Epoch 8/10

756/756 [=====] - 2s 2ms/step - loss: 0.0145

Epoch 9/10

756/756 [=====] - 2s 2ms/step - loss: 0.0139

Epoch 10/10

756/756 [=====] - 2s 2ms/step - loss: 0.0136

DHI

Epoch 1/10

756/756 [=====] - 5s 2ms/step - loss: 0.0445

Epoch 2/10

756/756 [=====] - 2s 2ms/step - loss: 0.0313

Epoch 3/10

756/756 [=====] - 2s 2ms/step - loss: 0.0209

Epoch 4/10

756/756 [=====] - 2s 2ms/step - loss: 0.0151

Epoch 5/10

756/756 [=====] - 2s 2ms/step - loss: 0.0142

Epoch 6/10

756/756 [=====] - 2s 2ms/step - loss: 0.0132

Epoch 7/10

756/756 [=====] - 2s 2ms/step - loss: 0.0125

Epoch 8/10

756/756 [=====] - 2s 2ms/step - loss: 0.0125

Epoch 9/10

756/756 [=====] - 2s 2ms/step - loss: 0.0114

Epoch 10/10

756/756 [=====] - 2s 2ms/step - loss: 0.0108

DIS

Epoch 1/10

756/756 [=====] - 6s 2ms/step - loss: 0.0355

Epoch 2/10

756/756 [=====] - 2s 2ms/step - loss: 0.0150

Epoch 3/10

```

756/756 [=====] - 2s 2ms/step - loss: 0.0139
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0127
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0133
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0125
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0125
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0121
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0121
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0112
DISCA
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0363
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0156
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0149
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0143
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0140
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0148
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0139
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0133
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0128
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0117
DISCK
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0510
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0337
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0333
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0321
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0314
Epoch 6/10

```

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756/756 [=====] - 2s 2ms/step - loss: 0.0313
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0312
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0306
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0298
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0209
DISH
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0194
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0112
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0119
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0111
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0110
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0111
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0110
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0111
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0113
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0112
DLR
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0346
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0220
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0208
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0194
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0191
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0196
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0196
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0196
Epoch 9/10

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756/756 [=====] - 2s 2ms/step - loss: 0.0195
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0193
DLTR
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0387
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0217
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0186
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0173
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0159
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0136
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0103
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0092
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0091
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0092
DOV
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0319
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0088
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0056
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0056
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0052
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0053
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0050
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0052
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0050
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0050
DPS
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0263

```

Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0138  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0137  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0138  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0137  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0135  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0133  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0134  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0139  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0128  
DRE  
Epoch 1/10  
756/756 [=====] - 5s 2ms/step - loss: 0.0356  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0257  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0239  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0227  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0218  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0219  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0219  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0214  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0214  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0214  
DRI  
Epoch 1/10  
756/756 [=====] - 5s 2ms/step - loss: 0.0286  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0165  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0162  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0158

Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0160  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0155  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0154  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0155  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0155  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0154  
DTE  
Epoch 1/10  
756/756 [=====] - 5s 2ms/step - loss: 0.0482  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0403  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0400  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0399  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0392  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0395  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0388  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0387  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0379  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0366  
DUK  
Epoch 1/10  
756/756 [=====] - 5s 2ms/step - loss: 0.0607  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0422  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0411  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0412  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0395  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0371  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0293

Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0214  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0207  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0198  
DVA  
Epoch 1/10  
756/756 [=====] - 6s 2ms/step - loss: 0.0550  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0266  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0258  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0259  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0253  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0249  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0243  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0241  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0207  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0134  
DVN  
Epoch 1/10  
756/756 [=====] - 5s 2ms/step - loss: 0.0313  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0089  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0070  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0068  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0068  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0067A: 0s -  
loss: 0.0  
Epoch 7/10  
756/756 [=====] - ETA: 0s - loss: 0.006 - 2s 2ms/step -  
loss: 0.0067  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0069  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0067

Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0067  
EA

Epoch 1/10  
756/756 [=====] - 6s 2ms/step - loss: 0.0691

Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0434

Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0413

Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0406

Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0411

Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0403

Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0363

Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0255

Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0180

Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0147  
EBAY

Epoch 1/10  
756/756 [=====] - 5s 2ms/step - loss: 0.0432

Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0323

Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0318

Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0322

Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0322

Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0319

Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0314

Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0315

Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0316

Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0322  
ECL

Epoch 1/10  
756/756 [=====] - 6s 2ms/step - loss: 0.0312

Epoch 2/10



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756/756 [=====] - 2s 2ms/step - loss: 0.0172
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0164
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0157
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0166
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0160
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0163
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0160
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0159
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0156
ED
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0235
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0079
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0080
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0072
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0075
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0073
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0072
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0071
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0069
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0070
EFX
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0268
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0161
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0160
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0159
Epoch 5/10

```

```

756/756 [=====] - 2s 2ms/step - loss: 0.0158
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0160
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0160
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0157
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0149
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0145
EIX
Epoch 1/10
756/756 [=====] - ETA: 0s - loss: 0.042 - 5s 2ms/step -
loss: 0.0426
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0280
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0248
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0223
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0224
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0206
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0192
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0185
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0176
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0170
EL
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0466
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0249
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0244
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0253
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0243
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0241
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0242A: 0s -

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```

loss: 0.024
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0235
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0235
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0231
EMN
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0501
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0243
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0227
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0220
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0211
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0198
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0163
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0117
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0111
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0110
EMR
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0498
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0349
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0344
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0341
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0338
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0331
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0332
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0330
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0328
Epoch 10/10

```

```

756/756 [=====] - 2s 2ms/step - loss: 0.0320
EOG
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0225
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0065
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0063
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0062
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0065
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0059
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0059
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0056
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0055
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0054
EQIX
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0689
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0546
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0486
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0165
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0118
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0113
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0102
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0109
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0106
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0103
EQR
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0457
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0204

```

Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0192  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0197  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0185  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0183  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0183  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0177  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0165  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0148  
EQT  
Epoch 1/10  
756/756 [=====] - 5s 2ms/step - loss: 0.0732  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0628  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0615  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0599  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0580  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0424  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0345  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0317  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0272  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0211  
ESRX  
Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0424  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0200  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0098  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0083  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0086

Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0081  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0080  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0084  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0084  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0082  
ESS  
Epoch 1/10  
756/756 [=====] - 6s 2ms/step - loss: 0.0374  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0305  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0294  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0304  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0290  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0285  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0283  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0288  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0281  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0280  
ETFC  
Epoch 1/10  
756/756 [=====] - 5s 2ms/step - loss: 0.0567  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0328  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0322  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0310  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0301  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0291  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0290  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0287

Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0284  
 Epoch 10/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0278  
 ETN  
 Epoch 1/10  
 756/756 [=====] - 6s 3ms/step - loss: 0.0532  
 Epoch 2/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0456  
 Epoch 3/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0457  
 Epoch 4/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0452  
 Epoch 5/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0453  
 Epoch 6/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0455  
 Epoch 7/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0456  
 Epoch 8/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0449  
 Epoch 9/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0449  
 Epoch 10/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0444  
 ETR  
 Epoch 1/10  
 756/756 [=====] - 5s 2ms/step - loss: 0.0237  
 Epoch 2/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0100  
 Epoch 3/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0100  
 Epoch 4/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0091  
 Epoch 5/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0092  
 Epoch 6/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0090  
 Epoch 7/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0087  
 Epoch 8/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0089  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0094  
 Epoch 10/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0089  
 EW  
 Epoch 1/10

```

756/756 [=====] - 6s 2ms/step - loss: 0.0579
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0459
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0455
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0458
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0452
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0454
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0455
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0453
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0449
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0451
EXC
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0223
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0135
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0133
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0137
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0138
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0132
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0134
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0134
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0135
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0134
EXPD
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0319
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0162
Epoch 3/10
756/756 [=====] - ETA: 0s - loss: 0.014 - 2s 2ms/step -
loss: 0.0140

```



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Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0138
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0134
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0135
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0132
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0125
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0121
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0119
EXPE
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0400
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0189
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0149
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0137
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0119
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0095
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0060
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0050
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0046
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0041
EXR
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0487
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0187
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0178
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0175
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0172
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0175

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Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0173
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0178
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0178
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0178
F
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0638
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0429
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0422
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0403
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0389
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0376
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0355
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0348
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0328
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0308
FAST
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0212
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0052
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0050
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0050
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0049
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0047
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0048
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0049
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0045

```

Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0051  
FB

Epoch 1/10  
756/756 [=====] - 6s 2ms/step - loss: 0.0278

Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0158

Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0166

Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0157

Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0155

Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0156

Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0149

Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0152

Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0141

Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0122

FBHS

Epoch 1/10  
756/756 [=====] - 5s 2ms/step - loss: 0.0459

Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0167

Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0165

Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0156

Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0138

Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0099

Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0062

Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0062

Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0063

Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0059

FCX

Epoch 1/10  
756/756 [=====] - 6s 2ms/step - loss: 0.0420

Epoch 2/10

```

756/756 [=====] - 2s 3ms/step - loss: 0.0363
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0366
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0353
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0359A: 0s -
loss: 0.0
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0343
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0319
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0304
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0300
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0296
FDX
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0399
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0334
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0336
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0331
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0327
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0331
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0329
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0324
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0322
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0317
FE
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0524
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0424
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0425
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0431

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Epoch 5/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0426  
 Epoch 6/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0422  
 Epoch 7/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0423  
 Epoch 8/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0421  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0427  
 Epoch 10/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0420  
 FFIV  
 Epoch 1/10  
 756/756 [=====] - 6s 2ms/step - loss: 0.0294  
 Epoch 2/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0178  
 Epoch 3/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0180  
 Epoch 4/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0182  
 Epoch 5/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0180  
 Epoch 6/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0184  
 Epoch 7/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0178  
 Epoch 8/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0182  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0174  
 Epoch 10/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0175  
 FIS  
 Epoch 1/10  
 756/756 [=====] - 5s 2ms/step - loss: 0.0235  
 Epoch 2/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0058  
 Epoch 3/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0040  
 Epoch 4/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0041  
 Epoch 5/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0041  
 Epoch 6/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0039  
 Epoch 7/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0036

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Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0034
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0032
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0032
FISV
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0323
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0246
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0241
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0237
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0234
Epoch 6/10
756/756 [=====] - ETA: 0s - loss: 0.022 - 2s 2ms/step -
loss: 0.0227
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0224
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0217
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0205
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0205
FITB
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0362
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0192
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0151
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0131
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0129
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0130
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0131
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0128
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0131
Epoch 10/10

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```

756/756 [=====] - 2s 2ms/step - loss: 0.0125
FL
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0504
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0372
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0361
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0348
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0336
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0316
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0298
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0263
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0239
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0209
FLIR
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0417
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0130
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0120
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0108
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0100
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0077
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0061
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0060
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0062
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0061
FLR
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0415
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0121

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```

Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0118
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0109
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0101
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0083
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0058
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0052
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0050
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0052
FLS
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0437
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0190
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0171
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0163
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0158
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0149
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0132
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0111
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0107
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0102
FMC
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0492
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0231A: 0
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0222
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0218
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0223

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Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0212  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0213  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0210  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0203  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0169  
FOX  
Epoch 1/10  
756/756 [=====] - 6s 2ms/step - loss: 0.0491  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0229  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0216  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0221  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0214  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0214  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0210  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0210  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0208  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0179  
FOXA  
Epoch 1/10  
756/756 [=====] - 5s 2ms/step - loss: 0.0260  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0149  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0123  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0108  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0112  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0108  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0110  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0111

Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0112  
 Epoch 10/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0108  
 FRT  
 Epoch 1/10  
 756/756 [=====] - 6s 2ms/step - loss: 0.0490  
 Epoch 2/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0201  
 Epoch 3/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0192  
 Epoch 4/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0191  
 Epoch 5/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0182  
 Epoch 6/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0166  
 Epoch 7/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0125  
 Epoch 8/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0083  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0082  
 Epoch 10/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0080  
 FTI  
 Epoch 1/10  
 756/756 [=====] - 5s 2ms/step - loss: 0.0248  
 Epoch 2/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0136  
 Epoch 3/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0124  
 Epoch 4/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0117  
 Epoch 5/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0112  
 Epoch 6/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0105  
 Epoch 7/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0102  
 Epoch 8/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0101  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0099  
 Epoch 10/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0099  
 GD  
 Epoch 1/10

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756/756 [=====] - 5s 2ms/step - loss: 0.0320
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0231
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0215
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0225
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0218
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0219
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0210
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0215
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0203
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0207
GE
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0456
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0308
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0250
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0197
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0190
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0186
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0185
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0188
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0188
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0189
GGP
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0681
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0565
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0538
Epoch 4/10

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756/756 [=====] - 2s 2ms/step - loss: 0.0493
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0242
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0136
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0132
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0129
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0126
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0125
GILD
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0209
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0140
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0136
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0137
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0142
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0136
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0135
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0130
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0135
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0134
GIS
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0665
Epoch 2/10
756/756 [=====] - ETA: 0s - loss: 0.057 - 2s 2ms/step -
loss: 0.0569
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0564
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0557
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0555
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0554

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Epoch 7/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0553  
 Epoch 8/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0553  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0543  
 Epoch 10/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0539  
 GLW  
 Epoch 1/10  
 756/756 [=====] - 6s 2ms/step - loss: 0.0424  
 Epoch 2/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0303  
 Epoch 3/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0296  
 Epoch 4/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0291  
 Epoch 5/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0290  
 Epoch 6/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0284  
 Epoch 7/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0288  
 Epoch 8/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0289  
 Epoch 9/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0284  
 Epoch 10/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0284  
 GM  
 Epoch 1/10  
 756/756 [=====] - 5s 2ms/step - loss: 0.0373  
 Epoch 2/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0209  
 Epoch 3/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0206  
 Epoch 4/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0210  
 Epoch 5/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0198  
 Epoch 6/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0193  
 Epoch 7/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0193  
 Epoch 8/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0174  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0130

Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0105  
GOOGL

Epoch 1/10  
756/756 [=====] - 5s 2ms/step - loss: 0.0433

Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0373

Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0372

Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0368

Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0367

Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0362

Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0367

Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0366

Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0363

Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0367

GPC

Epoch 1/10  
756/756 [=====] - 5s 2ms/step - loss: 0.0304

Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0104

Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0097

Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0096

Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0099

Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0092

Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0086

Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0080

Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0071

Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0066

GPN

Epoch 1/10  
756/756 [=====] - 5s 2ms/step - loss: 0.0551

Epoch 2/10

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756/756 [=====] - 2s 2ms/step - loss: 0.0193
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0184
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0189
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0180
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0172
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0173
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0153A: 0s - 1
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0098
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0087
GPS
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0681
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0481
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0465
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0459
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0452
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0434
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0414
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0266
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0109
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0105
GRMN
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0432
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0388
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0387
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0384
Epoch 5/10

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756/756 [=====] - 2s 2ms/step - loss: 0.0385
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0383
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0381
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0383
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0385
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0383
GS
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0383
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0256
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0256
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0246
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0245
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0238
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0240
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0236
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0239
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0239
GT
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0456
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0233
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0228
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0220
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0218
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0213
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0219
Epoch 8/10

```



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756/756 [=====] - 2s 2ms/step - loss: 0.0213
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0213
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0210
GWW
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0510
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0349
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0331
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0314
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0295
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0243
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0155
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0145
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0138
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0135
HAL
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0352
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0168
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0155
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0152
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0150
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0144
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0139
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0134
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0131
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0127
HAS

```

Epoch 1/10  
756/756 [=====] - 6s 2ms/step - loss: 0.0370  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0313  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0312  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0305  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0310  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0305  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0304  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0293  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0289  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0289  
HBAN  
Epoch 1/10  
756/756 [=====] - 5s 2ms/step - loss: 0.0613  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0484  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0391  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0090  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0075  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0071  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0069  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0068  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0063  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0066  
HBI  
Epoch 1/10  
756/756 [=====] - 5s 2ms/step - loss: 0.0444  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0286  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0186

Epoch 4/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0175  
 Epoch 5/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0173  
 Epoch 6/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0168  
 Epoch 7/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0163  
 Epoch 8/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0163  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0163  
 Epoch 10/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0158  
 HCA  
 Epoch 1/10  
 756/756 [=====] - 6s 2ms/step - loss: 0.0483  
 Epoch 2/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0388  
 Epoch 3/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0373  
 Epoch 4/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0369  
 Epoch 5/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0343  
 Epoch 6/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0274  
 Epoch 7/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0262  
 Epoch 8/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0265  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0262  
 Epoch 10/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0257  
 HCN  
 Epoch 1/10  
 756/756 [=====] - 5s 2ms/step - loss: 0.0457  
 Epoch 2/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0237  
 Epoch 3/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0234  
 Epoch 4/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0225  
 Epoch 5/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0217  
 Epoch 6/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0220

Epoch 7/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0217  
 Epoch 8/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0219  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0214  
 Epoch 10/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0214  
 HCP  
 Epoch 1/10  
 756/756 [=====] - 5s 2ms/step - loss: 0.0338  
 Epoch 2/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0096  
 Epoch 3/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0073  
 Epoch 4/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0070  
 Epoch 5/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0065  
 Epoch 6/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0063  
 Epoch 7/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0061  
 Epoch 8/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0062  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0061  
 Epoch 10/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0060  
 HD  
 Epoch 1/10  
 756/756 [=====] - 5s 2ms/step - loss: 0.0475  
 Epoch 2/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0207  
 Epoch 3/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0200  
 Epoch 4/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0199  
 Epoch 5/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0204  
 Epoch 6/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0194  
 Epoch 7/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0188  
 Epoch 8/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0193  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0177

Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0138  
HES

Epoch 1/10  
756/756 [=====] - 5s 2ms/step - loss: 0.0369

Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0231

Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0196

Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0178

Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0175

Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0172

Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0170

Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0166

Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0169

Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0168

HIG

Epoch 1/10  
756/756 [=====] - 6s 2ms/step - loss: 0.0227

Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0140

Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0130

Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0132

Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0124

Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0124

Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0123

Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0126

Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0129

Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0124

HII

Epoch 1/10  
756/756 [=====] - 5s 2ms/step - loss: 0.0497

Epoch 2/10

```

756/756 [=====] - 2s 2ms/step - loss: 0.0233
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0224
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0229
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0221
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0219
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0211
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0202
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0171
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0128
HOG
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0395
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0186
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0146
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0140
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0137
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0131
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0124
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0115
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0096
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0081
HOLX
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0245
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0138
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0139
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0132
Epoch 5/10

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756/756 [=====] - 2s 2ms/step - loss: 0.0134
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0136
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0126
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0128
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0131
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0132
HON
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0492
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0281
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0259
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0247
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0219
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0181
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0132
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0122
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0120
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0113
HP
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0752
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0467
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0404
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0325
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0283
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0238
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0229
Epoch 8/10

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756/756 [=====] - 2s 2ms/step - loss: 0.0220
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0214
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0204
HRB
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0320
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0184
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0171
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0169
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0161
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0153
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0119
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0073
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0066
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0059
HRL
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0223
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0140
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0141
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0120
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0110
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0106
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0108
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0103
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0102
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0108
HRS

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Epoch 1/10  
 756/756 [=====] - 5s 2ms/step - loss: 0.0296  
 Epoch 2/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0169  
 Epoch 3/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0151  
 Epoch 4/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0149  
 Epoch 5/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0148  
 Epoch 6/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0138  
 Epoch 7/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0132  
 Epoch 8/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0124  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0118  
 Epoch 10/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0110  
 HSIC  
 Epoch 1/10  
 756/756 [=====] - 6s 2ms/step - loss: 0.0585  
 Epoch 2/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0306  
 Epoch 3/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0302  
 Epoch 4/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0293  
 Epoch 5/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0296  
 Epoch 6/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0290  
 Epoch 7/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0293  
 Epoch 8/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0292  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0285  
 Epoch 10/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0279  
 HST  
 Epoch 1/10  
 756/756 [=====] - 5s 2ms/step - loss: 0.0533  
 Epoch 2/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0464  
 Epoch 3/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0459

Epoch 4/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0453  
 Epoch 5/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0449  
 Epoch 6/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0443  
 Epoch 7/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0440  
 Epoch 8/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0434  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0426  
 Epoch 10/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0409  
 HSY  
 Epoch 1/10  
 756/756 [=====] - 6s 2ms/step - loss: 0.0353  
 Epoch 2/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0166  
 Epoch 3/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0118  
 Epoch 4/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0113  
 Epoch 5/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0111  
 Epoch 6/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0113  
 Epoch 7/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0111  
 Epoch 8/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0109  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0108  
 Epoch 10/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0109  
 HUM  
 Epoch 1/10  
 756/756 [=====] - 5s 2ms/step - loss: 0.0499  
 Epoch 2/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0257  
 Epoch 3/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0234  
 Epoch 4/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0227  
 Epoch 5/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0220  
 Epoch 6/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0221

Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0206  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0196  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0167  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0134  
IBM  
Epoch 1/10  
756/756 [=====] - 5s 2ms/step - loss: 0.0262  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0161  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0145  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0126  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0110  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0109  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0098  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0105  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0098  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0103  
IDXX  
Epoch 1/10  
756/756 [=====] - 5s 2ms/step - loss: 0.0255  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0138  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0143  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0134  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0139  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0137  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0132  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0132  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0134

Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0137  
IFF

Epoch 1/10  
756/756 [=====] - 5s 2ms/step - loss: 0.0488

Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0361

Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0355

Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0338

Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0290

Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0220

Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0190

Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0172

Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0163

Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0157  
ILMN

Epoch 1/10  
756/756 [=====] - 6s 2ms/step - loss: 0.0491

Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0417

Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0377

Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0325

Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0287

Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0214

Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0162

Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0148

Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0130

Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0127  
INCY

Epoch 1/10  
756/756 [=====] - 6s 2ms/step - loss: 0.0571

Epoch 2/10

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756/756 [=====] - 2s 2ms/step - loss: 0.0441
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0444
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0433
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0417
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0379
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0310
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0305
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0292
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0265
INTC
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0268
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0144
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0136
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0137
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0138
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0134
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0137
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0132
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0132
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0135
INTU
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0630
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0429
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0430
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0425
Epoch 5/10

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756/756 [=====] - 2s 2ms/step - loss: 0.0428
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0422
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0419
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0425
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0426
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0419
IP
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0313
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0172
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0163
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0160
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0157
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0155
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0159
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0155
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0152
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0154
IPG
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0345
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0204
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0178
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0172
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0171
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0168
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0170
Epoch 8/10

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756/756 [=====] - 2s 2ms/step - loss: 0.0173
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0169
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0171
IQV
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0442
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0350
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0350
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0351
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0350
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0352
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0344
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0343
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0338
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0320
IR
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0722
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0631
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0631
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0630
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0622
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0614
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0612
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0586
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0528
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0517
IRM

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Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0230
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0118
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0119
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0118
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0118
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0114
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0120
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0113
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0113
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0114
ISRG
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0283
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0129
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0125
Epoch 4/10
756/756 [=====] - ETA: 0s - loss: 0.011 - 2s 2ms/step -
loss: 0.0112
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0114
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0116
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0118
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0113
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0111
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0112
IT
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0299
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0181
Epoch 3/10

```



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756/756 [=====] - 2s 2ms/step - loss: 0.0160
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0148
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0134
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0129
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0126
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0116
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0115
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0086
ITW
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0628
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0302
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0290
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0288
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0282
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0271
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0274
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0262
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0193
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0097
IVZ
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0298
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0253
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0248
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0248
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0241
Epoch 6/10

```

```

756/756 [=====] - 2s 2ms/step - loss: 0.0246
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0251
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0247
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0245
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0245
JBHT
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0650
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0461
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0445
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0457
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0435
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0432
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0422
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0423
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0417
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0413
JCI
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0677
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0483
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0328
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0139
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0099
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0098
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0092
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0095
Epoch 9/10

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756/756 [=====] - 2s 2ms/step - loss: 0.0091
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0093
JEC
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0332
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0235
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0234
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0223
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0216
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0210
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0212
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0211
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0202
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0204
JNJ
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0413
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0326
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0320
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0326
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0322
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0315
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0323
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0320
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0315
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0315
JNPR
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0237

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Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0189  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0195  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0184  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0183  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0184  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0182  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0180  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0179  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0182  
JPM  
Epoch 1/10  
756/756 [=====] - 6s 2ms/step - loss: 0.0793  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0453  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0440  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0420  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0412  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0394  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0367  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0158  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0095  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0086  
JWN  
Epoch 1/10  
756/756 [=====] - 5s 2ms/step - loss: 0.0219  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0144  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0140  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0138

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Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0140
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0142
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0136
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0137
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0128
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0119
K
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0371
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0310
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0302
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0303
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0302
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0301
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0299
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0300
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0299
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0300
KEY
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0279
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0197
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0184
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0185
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0182
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0181
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0181

```

Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0185  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0182  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0181  
KIM  
Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0536  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0425  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0425  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0425  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0412  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0404  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0379  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0356  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0346  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0324  
KLAC  
Epoch 1/10  
756/756 [=====] - 5s 2ms/step - loss: 0.0478  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0406  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0394  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0398  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0385  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0387  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0388  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0370  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0342  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0188

KMB

Epoch 1/10

756/756 [=====] - 5s 2ms/step - loss: 0.0762

Epoch 2/10

756/756 [=====] - 2s 2ms/step - loss: 0.0369

Epoch 3/10

756/756 [=====] - 2s 2ms/step - loss: 0.0375

Epoch 4/10

756/756 [=====] - 2s 2ms/step - loss: 0.0352

Epoch 5/10

756/756 [=====] - 2s 2ms/step - loss: 0.0361

Epoch 6/10

756/756 [=====] - 2s 2ms/step - loss: 0.0352

Epoch 7/10

756/756 [=====] - 2s 2ms/step - loss: 0.0345

Epoch 8/10

756/756 [=====] - 2s 2ms/step - loss: 0.0299

Epoch 9/10

756/756 [=====] - 2s 2ms/step - loss: 0.0103

Epoch 10/10

756/756 [=====] - 2s 2ms/step - loss: 0.0051

KMI

Epoch 1/10

756/756 [=====] - 6s 2ms/step - loss: 0.0680

Epoch 2/10

756/756 [=====] - 2s 2ms/step - loss: 0.0621

Epoch 3/10

756/756 [=====] - 2s 2ms/step - loss: 0.0595

Epoch 4/10

756/756 [=====] - 2s 2ms/step - loss: 0.0416A: 0

Epoch 5/10

756/756 [=====] - 2s 2ms/step - loss: 0.0359

Epoch 6/10

756/756 [=====] - 2s 2ms/step - loss: 0.0291

Epoch 7/10

756/756 [=====] - 2s 2ms/step - loss: 0.0201

Epoch 8/10

756/756 [=====] - 2s 2ms/step - loss: 0.0160

Epoch 9/10

756/756 [=====] - 2s 2ms/step - loss: 0.0143

Epoch 10/10

756/756 [=====] - 2s 2ms/step - loss: 0.0131

KMX

Epoch 1/10

756/756 [=====] - 5s 2ms/step - loss: 0.0393

Epoch 2/10

756/756 [=====] - 2s 2ms/step - loss: 0.0299

Epoch 3/10

```

756/756 [=====] - 2s 2ms/step - loss: 0.0300
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0295
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0289
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0287
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0289
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0287
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0287
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0285
K0
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0436
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0174
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0165
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0152
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0150
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0137
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0112
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0091
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0086
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0083
KORS
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0495
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0279
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0111
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0074
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0063
Epoch 6/10

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756/756 [=====] - 2s 2ms/step - loss: 0.0060
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0060
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0060
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0058
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0055
KR
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0482
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0357
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0351
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0348
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0346
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0344
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0346
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0328
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0319
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0294
KSS
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0489
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0288
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0283
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0281
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0279
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0273
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0276
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0272
Epoch 9/10

```

```

756/756 [=====] - 2s 2ms/step - loss: 0.0273
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0270
KSU
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0531
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0352
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0308
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0227
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0120
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0102
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0090
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0085
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0083
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0084
L
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0739
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0602
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0428
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0278
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0192
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0148
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0142
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0138
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0136
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0134
LB
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0367

```

Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0184  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0141  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0141  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0137  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0138  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0136  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0140  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0142  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0138  
LEG  
Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0508  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0428  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0368  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0280  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0258  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0245  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0210  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0182  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0173  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0164  
LEN  
Epoch 1/10  
756/756 [=====] - 5s 2ms/step - loss: 0.0320  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0193  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0182  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0169

Epoch 5/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0165  
 Epoch 6/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0167  
 Epoch 7/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0162  
 Epoch 8/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0167  
 Epoch 9/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0164  
 Epoch 10/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0161  
 LH  
 Epoch 1/10  
 756/756 [=====] - 6s 3ms/step - loss: 0.0388  
 Epoch 2/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0272  
 Epoch 3/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0266  
 Epoch 4/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0265  
 Epoch 5/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0255  
 Epoch 6/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0256  
 Epoch 7/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0250  
 Epoch 8/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0249  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0246  
 Epoch 10/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0237  
 LKQ  
 Epoch 1/10  
 756/756 [=====] - 6s 3ms/step - loss: 0.0367  
 Epoch 2/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0260  
 Epoch 3/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0247  
 Epoch 4/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0217  
 Epoch 5/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0188  
 Epoch 6/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0178  
 Epoch 7/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0170

Epoch 8/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0166  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0155  
 Epoch 10/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0141  
 LLL  
 Epoch 1/10  
 756/756 [=====] - 5s 2ms/step - loss: 0.0424  
 Epoch 2/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0225  
 Epoch 3/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0139  
 Epoch 4/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0120  
 Epoch 5/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0108  
 Epoch 6/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0106  
 Epoch 7/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0105  
 Epoch 8/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0099  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0097  
 Epoch 10/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0094  
 LLY  
 Epoch 1/10  
 756/756 [=====] - 6s 3ms/step - loss: 0.0184  
 Epoch 2/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0053  
 Epoch 3/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0051  
 Epoch 4/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0052  
 Epoch 5/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0051  
 Epoch 6/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0050  
 Epoch 7/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0050  
 Epoch 8/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0050  
 Epoch 9/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0051  
 Epoch 10/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0047

LMT

Epoch 1/10

756/756 [=====] - 6s 3ms/step - loss: 0.0460

Epoch 2/10

756/756 [=====] - 2s 3ms/step - loss: 0.0338

Epoch 3/10

756/756 [=====] - 2s 2ms/step - loss: 0.0327

Epoch 4/10

756/756 [=====] - 2s 2ms/step - loss: 0.0331

Epoch 5/10

756/756 [=====] - 2s 3ms/step - loss: 0.0322

Epoch 6/10

756/756 [=====] - 2s 2ms/step - loss: 0.0328

Epoch 7/10

756/756 [=====] - ETA: 0s - loss: 0.032 - 2s 3ms/step -  
loss: 0.0327

Epoch 8/10

756/756 [=====] - 2s 3ms/step - loss: 0.0330

Epoch 9/10

756/756 [=====] - 2s 3ms/step - loss: 0.0322

Epoch 10/10

756/756 [=====] - 2s 2ms/step - loss: 0.0324

LNC

Epoch 1/10

756/756 [=====] - 6s 3ms/step - loss: 0.0239

Epoch 2/10

756/756 [=====] - 2s 3ms/step - loss: 0.0109

Epoch 3/10

756/756 [=====] - 2s 3ms/step - loss: 0.0111

Epoch 4/10

756/756 [=====] - 2s 2ms/step - loss: 0.0116

Epoch 5/10

756/756 [=====] - 2s 2ms/step - loss: 0.0109

Epoch 6/10

756/756 [=====] - 2s 3ms/step - loss: 0.0110

Epoch 7/10

756/756 [=====] - 2s 2ms/step - loss: 0.0105

Epoch 8/10

756/756 [=====] - 2s 2ms/step - loss: 0.0106

Epoch 9/10

756/756 [=====] - 2s 2ms/step - loss: 0.0107

Epoch 10/10

756/756 [=====] - 2s 2ms/step - loss: 0.0104

LNT

Epoch 1/10

756/756 [=====] - 6s 2ms/step - loss: 0.0459

Epoch 2/10

756/756 [=====] - 2s 2ms/step - loss: 0.0219

Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0159  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0152  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0147  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0138  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0145  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0141  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0135  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0135  
LOW  
Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0274  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0183  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0169  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0168  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0173  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0170  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0167  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0171  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0157  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0109  
LRCX  
Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0534  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0223  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0219  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0212  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0213

Epoch 6/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0209  
 Epoch 7/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0211  
 Epoch 8/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0205  
 Epoch 9/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0201  
 Epoch 10/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0192  
 LUK  
 Epoch 1/10  
 756/756 [=====] - 6s 3ms/step - loss: 0.0428  
 Epoch 2/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0252  
 Epoch 3/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0171  
 Epoch 4/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0150  
 Epoch 5/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0148  
 Epoch 6/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0152  
 Epoch 7/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0148  
 Epoch 8/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0149  
 Epoch 9/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0147  
 Epoch 10/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0146  
 LUV  
 Epoch 1/10  
 756/756 [=====] - 6s 3ms/step - loss: 0.0566  
 Epoch 2/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0425  
 Epoch 3/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0419  
 Epoch 4/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0414  
 Epoch 5/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0417  
 Epoch 6/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0411  
 Epoch 7/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0411  
 Epoch 8/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0410



Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0413  
 Epoch 10/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0413  
 LYB  
 Epoch 1/10  
 756/756 [=====] - 6s 3ms/step - loss: 0.0636  
 Epoch 2/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0353  
 Epoch 3/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0329  
 Epoch 4/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0320  
 Epoch 5/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0312  
 Epoch 6/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0260  
 Epoch 7/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0148  
 Epoch 8/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0116  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0080  
 Epoch 10/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0074  
 M  
 Epoch 1/10  
 756/756 [=====] - 6s 3ms/step - loss: 0.0317  
 Epoch 2/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0175  
 Epoch 3/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0166  
 Epoch 4/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0161  
 Epoch 5/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0162  
 Epoch 6/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0162  
 Epoch 7/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0167  
 Epoch 8/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0158  
 Epoch 9/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0159  
 Epoch 10/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0160  
 MA  
 Epoch 1/10

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756/756 [=====] - 6s 3ms/step - loss: 0.0241
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0128
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0125
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0128
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0119
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0119
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0122
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0118
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0115
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0107
MAA
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0441
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0329
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0237
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0175
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0176
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0176
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0172
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0172
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0170
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0168
MAC
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0561
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0409
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0379
Epoch 4/10

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756/756 [=====] - 2s 3ms/step - loss: 0.0252
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0187
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0182
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0175
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0168
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0154
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0143
MAR
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0198
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0112
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0114
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0117
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0111
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0110
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0111
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0108
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0108
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0107
MAS
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0413
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0244
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0138
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0111
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0099
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0086
Epoch 7/10

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756/756 [=====] - 2s 3ms/step - loss: 0.0076
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0071
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0067
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0065
MAT
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0363
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0263
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0255
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0258
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0250
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0257
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0255
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0233
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0174
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0097
MCD
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0358
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0273
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0257
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0165
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0117
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0107
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0115
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0100
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0100
Epoch 10/10

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756/756 [=====] - 2s 3ms/step - loss: 0.0101
MCHP
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0600
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0400
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0384
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0370
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0303
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0208
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0151
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0131
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0114
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0110
MCK
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0501
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0363
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0312
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0231
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0216
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0215
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0212
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0213
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0215
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0209
MCO
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0377
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0229

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Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0216  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0207  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0212  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0210  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0204  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0201  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0199  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0188  
MDLZ  
Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0328  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0178  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0153  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0142  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0138  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0137  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0136  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0136  
Epoch 9/10  
756/756 [=====] - 3s 3ms/step - loss: 0.0137  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0143  
MDT  
Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0613  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0366  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0369  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0357  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0354

Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0354  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0350  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0349  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0352  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0352  
MET  
Epoch 1/10  
756/756 [=====] - 5s 2ms/step - loss: 0.0498  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0428  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0422  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0411  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0373  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0229  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0176  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0140  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0137  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0122  
MGM  
Epoch 1/10  
756/756 [=====] - 6s 2ms/step - loss: 0.0425  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0239  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0213  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0205  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0196  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0202  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0187  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0181

Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0151  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0121  
MHK  
Epoch 1/10  
756/756 [=====] - 5s 2ms/step - loss: 0.0242  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0104  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0103  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0103  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0095  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0099  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0098  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0097  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0084  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0078  
MKC  
Epoch 1/10  
756/756 [=====] - 6s 2ms/step - loss: 0.0231  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0138  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0136  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0128  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0127  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0131  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0127  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0128  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0123  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0123  
MLM  
Epoch 1/10



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756/756 [=====] - 6s 3ms/step - loss: 0.0236
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0142
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0148
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0142
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0148
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0135
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0142
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0132
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0135
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0133
MMC
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0371
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0260
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0256
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0251
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0246
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0256
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0247
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0246
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0252
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0240
MMM
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0492
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0200
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0138
Epoch 4/10

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756/756 [=====] - 2s 3ms/step - loss: 0.0126
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0123
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0120
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0116
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0108
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0104
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0087
MNST
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0245
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0060
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0047
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0051
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0049
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0047
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0049
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0049
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0048
Epoch 10/10
756/756 [=====] - ETA: 0s - loss: 0.005 - 2s 2ms/step -
loss: 0.0050
M0
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0619
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0393
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0388
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0396
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0387
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0384

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Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0382  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0375  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0366  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0303  
MON  
Epoch 1/10  
756/756 [=====] - 7s 3ms/step - loss: 0.0560  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0202  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0195  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0193  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0196  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0185  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0173  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0150  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0110  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0095  
MONS  
Epoch 1/10  
756/756 [=====] - 6s 2ms/step - loss: 0.0524  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0411  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0418  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0410  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0410  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0408  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0404  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0401  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0396

Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0396  
MPC

Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0574

Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0477

Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0478

Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0472

Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0472

Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0466

Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0471

Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0467

Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0473

Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0468

MRK

Epoch 1/10  
756/756 [=====] - 6s 2ms/step - loss: 0.0455

Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0181

Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0176

Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0182

Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0170

Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0162

Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0147

Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0082

Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0067

Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0067

MRO

Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0581

Epoch 2/10

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756/756 [=====] - 2s 3ms/step - loss: 0.0436
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0434
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0434
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0425
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0428
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0421
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0427
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0426
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0421
MS
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0204
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0109
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0114
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0107
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0108
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0108
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0108
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0107
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0104
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0111
MSFT
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0334
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0257
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0233
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0226
Epoch 5/10

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```

756/756 [=====] - 2s 3ms/step - loss: 0.0210
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0192
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0196
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0178
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0194
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0180
MSI
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0258
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0214
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0219
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0216
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0214
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0216
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0214
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0211
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0215
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0213
MTB
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0231
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0102
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0102
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0095
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0096
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0100
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0100
Epoch 8/10

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756/756 [=====] - 2s 2ms/step - loss: 0.0096
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0095
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0095
MTD
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0681
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0422
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0421
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0413
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0402
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0407
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0389
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0246
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0061
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0059
MU
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0530
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0392
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0355
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0284
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0215
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0176
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0158
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0141
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0124
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0101
MYL

```

Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0424  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0160  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0152  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0142  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0126  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0106  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0072  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0065  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0063  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0062  
NBL  
Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0739  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0661  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0522  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0359  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0276A:  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0149  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0094  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0097  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0099  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0098  
NCLH  
Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0196  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0054  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0051



Epoch 4/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0054  
 Epoch 5/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0053  
 Epoch 6/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0048  
 Epoch 7/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0052  
 Epoch 8/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0051  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0047  
 Epoch 10/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0048  
 NDAQ  
 Epoch 1/10  
 756/756 [=====] - 6s 3ms/step - loss: 0.0263  
 Epoch 2/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0154  
 Epoch 3/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0157  
 Epoch 4/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0153  
 Epoch 5/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0153  
 Epoch 6/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0153  
 Epoch 7/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0149  
 Epoch 8/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0148  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0145  
 Epoch 10/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0146  
 NEE  
 Epoch 1/10  
 756/756 [=====] - 6s 3ms/step - loss: 0.0459  
 Epoch 2/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0365  
 Epoch 3/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0335  
 Epoch 4/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0278  
 Epoch 5/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0249  
 Epoch 6/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0222

Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0214  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0190  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0156  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0100  
NEM  
Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0389  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0284  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0276  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0265  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0273  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0259  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0264  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0255  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0253  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0237  
NFLX  
Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0553  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0490  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0490  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0482  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0476  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0478  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0471  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0465  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0461

Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0456  
NFX  
Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0767  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0547  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0537  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0523  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0531  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0520  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0510  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0478  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0289  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0201  
NI  
Epoch 1/10  
756/756 [=====] - 5s 2ms/step - loss: 0.0487  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0260  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0167  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0123  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0076  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0060  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0059  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0060  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0062  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0058  
NKE  
Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0510  
Epoch 2/10

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756/756 [=====] - 2s 2ms/step - loss: 0.0465
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0441
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0451
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0450
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0442
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0453
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0453
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0440
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0445
NLSN
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0189
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0032
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0030
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0037
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0031
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0030
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0031
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0030
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0031
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0032
NOC
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0455
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0148
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0139
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0134
Epoch 5/10

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756/756 [=====] - 2s 2ms/step - loss: 0.0130
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0105
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0054
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0035
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0034
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0034
NOV
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0470
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0150
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0154
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0149
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0148
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0144
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0144
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0138
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0122
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0078
NRG
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0592
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0446
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0440
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0433
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0433
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0432
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0431
Epoch 8/10

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756/756 [=====] - 2s 3ms/step - loss: 0.0433
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0432
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0424
NSC
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0569
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0338
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0337
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0340
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0328
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0324
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0327
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0313
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0296
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0218
NTAP
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0295
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0236
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0231
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0233
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0232
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0226
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0226
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0218
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0218A:
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0220
NTRS

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Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0363  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0299  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0291  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0290  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0284  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0275  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0260  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0241  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0214  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0198  
NUE  
Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0142  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0061  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0035  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0037  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0024A  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0023  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0021  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0021  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0018  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0024  
NVDA  
Epoch 1/10  
756/756 [=====] - 6s 2ms/step - loss: 0.0260  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0121  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0119

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Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0119
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0115
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0112
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0110
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0111
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0112
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0116
NWL
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0465
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0189
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0191
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0181
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0186
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0184
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0182
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0182
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0179
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0180
NWS
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0511
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0167
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0168
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0161
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0164
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0167

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Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0166  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0161  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0164  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0161  
NWSA  
Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0661  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0406  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0378  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0346  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0331  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0317  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0245  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0098  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0088  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0090  
OKE  
Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0366  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0278  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0259  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0268  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0252  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0250  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0244  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0238  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0235

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Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0236
OMC
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0496
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0360
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0358
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0360
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0360
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0356
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0352
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0350A:
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0353
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0349
ORCL
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0289
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0075
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0059
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0056
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0052
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0048
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0042
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0042
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0038
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0034
ORLY
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0393
Epoch 2/10

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756/756 [=====] - 2s 3ms/step - loss: 0.0197
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0189
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0186
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0171
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0167
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0146
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0110
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0086
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0083
OXY
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0272
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0131
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0131
Epoch 4/10
756/756 [=====] - 3s 3ms/step - loss: 0.0131
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0130
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0130A: 0s -
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0129
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0125
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0123
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0134
PAYX
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0212
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0178
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0184
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0179
Epoch 5/10

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756/756 [=====] - 2s 3ms/step - loss: 0.0176
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0171
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0171
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0171
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0170
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0167
PBCT
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0585
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0380
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0381
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0375
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0372
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0371
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0374
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0377
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0369
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0370
PCAR
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0232
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0134
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0129
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0126
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0132
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0131
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0130
Epoch 8/10

```

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756/756 [=====] - 2s 2ms/step - loss: 0.0129
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0128
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0125
PCG
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0324
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0242
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0230
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0217
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0203
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0181
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0174
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0166
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0164
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0163
PCLN
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0756
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0655
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0599
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0497
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0447
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0442
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0433
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0416
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0399
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0327
PDC0

```

Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0353  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0225  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0204  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0194  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0182  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0177  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0177  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0176  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0176  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0181  
PEG  
Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0275  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0110A:  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0097  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0091  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0088  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0086  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0081  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0078  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0076  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0072  
PEP  
Epoch 1/10  
756/756 [=====] - 6s 2ms/step - loss: 0.0479  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0390  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0389

Epoch 4/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0380  
 Epoch 5/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0382  
 Epoch 6/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0373  
 Epoch 7/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0373  
 Epoch 8/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0375  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0377  
 Epoch 10/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0372  
 PFE  
 Epoch 1/10  
 756/756 [=====] - 6s 3ms/step - loss: 0.0508  
 Epoch 2/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0388  
 Epoch 3/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0392  
 Epoch 4/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0381  
 Epoch 5/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0387  
 Epoch 6/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0379  
 Epoch 7/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0380  
 Epoch 8/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0376  
 Epoch 9/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0376  
 Epoch 10/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0378  
 PFG  
 Epoch 1/10  
 756/756 [=====] - 7s 3ms/step - loss: 0.0460  
 Epoch 2/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0338  
 Epoch 3/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0336  
 Epoch 4/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0334  
 Epoch 5/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0328  
 Epoch 6/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0326

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Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0328
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0330
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0332
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0330
PG
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0263
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0112
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0105
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0105
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0098
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0099
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0098
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0092
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0086
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0077
PGR
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0464
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0341
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0342
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0333
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0331
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0323
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0314
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0309
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0301

```



Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0291  
PH

Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0477

Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0347

Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0342

Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0338

Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0338

Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0341

Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0334

Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0337

Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0335

Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0335  
PHM

Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0521

Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0393

Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0383

Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0385

Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0379

Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0378

Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0374

Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0373

Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0376

Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0374  
PKG

Epoch 1/10  
756/756 [=====] - 6s 2ms/step - loss: 0.0383

Epoch 2/10

```

756/756 [=====] - 2s 2ms/step - loss: 0.0255
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0247
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0239
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0237
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0245
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0238
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0237
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0244
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0240
PKI
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0387
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0293
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0249
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0225
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0204
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0216
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0191
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0174
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0165
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0145
PLD
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0396
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0316
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0300
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0307
Epoch 5/10

```

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756/756 [=====] - 2s 2ms/step - loss: 0.0279
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0268
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0267
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0231
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0197
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0152
PM
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0303
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0258
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0254
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0258
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0253
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0256
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0255
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0247
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0250
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0252
PNC
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0388
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0168A: 0s -
loss: 0
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0149
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0143
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0138
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0137
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0139

```

Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0132  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0127  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0115  
PNR  
Epoch 1/10  
756/756 [=====] - 6s 2ms/step - loss: 0.0268  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0162  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0164  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0162  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0161  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0166  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0158  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0162  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0163  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0157  
PNW  
Epoch 1/10  
756/756 [=====] - 6s 2ms/step - loss: 0.0656  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0521  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0515  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0518  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0504  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0505  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0484  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0425  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0387  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0371

PPG

Epoch 1/10

756/756 [=====] - 6s 2ms/step - loss: 0.0461

Epoch 2/10

756/756 [=====] - 2s 2ms/step - loss: 0.0380

Epoch 3/10

756/756 [=====] - 2s 3ms/step - loss: 0.0387

Epoch 4/10

756/756 [=====] - 2s 3ms/step - loss: 0.0387

Epoch 5/10

756/756 [=====] - 2s 2ms/step - loss: 0.0384

Epoch 6/10

756/756 [=====] - 2s 2ms/step - loss: 0.0386

Epoch 7/10

756/756 [=====] - 2s 3ms/step - loss: 0.0381

Epoch 8/10

756/756 [=====] - 2s 2ms/step - loss: 0.0376

Epoch 9/10

756/756 [=====] - 2s 3ms/step - loss: 0.0385

Epoch 10/10

756/756 [=====] - 2s 3ms/step - loss: 0.0376

PPL

Epoch 1/10

756/756 [=====] - 6s 3ms/step - loss: 0.0677

Epoch 2/10

756/756 [=====] - 2s 3ms/step - loss: 0.0354

Epoch 3/10

756/756 [=====] - 2s 2ms/step - loss: 0.0249

Epoch 4/10

756/756 [=====] - 2s 2ms/step - loss: 0.0233

Epoch 5/10

756/756 [=====] - 2s 3ms/step - loss: 0.0182

Epoch 6/10

756/756 [=====] - 2s 2ms/step - loss: 0.0119

Epoch 7/10

756/756 [=====] - 2s 3ms/step - loss: 0.0078

Epoch 8/10

756/756 [=====] - 2s 3ms/step - loss: 0.0063

Epoch 9/10

756/756 [=====] - 2s 2ms/step - loss: 0.0061

Epoch 10/10

756/756 [=====] - 2s 2ms/step - loss: 0.0058

PRG0

Epoch 1/10

756/756 [=====] - 6s 2ms/step - loss: 0.0348

Epoch 2/10

756/756 [=====] - 2s 3ms/step - loss: 0.0242

Epoch 3/10

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756/756 [=====] - 2s 2ms/step - loss: 0.0237
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0237
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0234
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0236
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0237
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0234
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0228
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0232
PRU
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0351
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0217
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0200
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0188
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0175
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0162
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0125
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0073
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0053
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0044
PSA
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0348
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0211
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0219
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0214
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0215
Epoch 6/10

```

```

756/756 [=====] - 2s 2ms/step - loss: 0.0216
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0212
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0211
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0212
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0211
PSX
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0476
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0261
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0256
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0257
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0247
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0249
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0244
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0238
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0240
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0233
PVH
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0725
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0425
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0406
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0396
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0396
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0381
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0359
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0317
Epoch 9/10

```

```

756/756 [=====] - 2s 2ms/step - loss: 0.0184
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0144
PWR
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0623
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0314
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0316
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0299
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0291
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0290
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0271
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0248
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0142
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0110
PX
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0590
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0444
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0416
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0381
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0326
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0236
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0155
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0141
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0137
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0135
PXD
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0661

```



Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0337  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0325  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0311  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0305  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0299  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0280  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0230  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0108  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0079  
QCOM  
Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0454  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0323  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0206  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0180  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0171  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0164  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0153  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0144  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0139  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0136  
RCL  
Epoch 1/10  
756/756 [=====] - 7s 3ms/step - loss: 0.0184  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0098  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0088  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0091

```

Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0090
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0089
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0085
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0087
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0085
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0087
RE
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0269
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0147
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0137
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0131
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0127
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0131
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0130
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0127
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0128
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0127
REG
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0631
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0538
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0373
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0257
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0213
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0169
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0142

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Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0129  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0115  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0120  
REGN  
Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0321  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0249  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0249  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0249  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0247  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0243  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0236  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0237  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0226  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0218  
RF  
Epoch 1/10  
756/756 [=====] - 5s 2ms/step - loss: 0.0785  
Epoch 2/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0619  
Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0566  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0460  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0142  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0098  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0095  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0093  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0092  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0094

RHI

Epoch 1/10

756/756 [=====] - 6s 2ms/step - loss: 0.0433

Epoch 2/10

756/756 [=====] - 2s 2ms/step - loss: 0.0260

Epoch 3/10

756/756 [=====] - 2s 2ms/step - loss: 0.0210

Epoch 4/10

756/756 [=====] - 2s 2ms/step - loss: 0.0202

Epoch 5/10

756/756 [=====] - 2s 2ms/step - loss: 0.0195

Epoch 6/10

756/756 [=====] - 2s 2ms/step - loss: 0.0185

Epoch 7/10

756/756 [=====] - 2s 2ms/step - loss: 0.0169

Epoch 8/10

756/756 [=====] - 2s 3ms/step - loss: 0.0148

Epoch 9/10

756/756 [=====] - 2s 2ms/step - loss: 0.0131

Epoch 10/10

756/756 [=====] - 2s 2ms/step - loss: 0.0126

RHT

Epoch 1/10

756/756 [=====] - 5s 2ms/step - loss: 0.0330

Epoch 2/10

756/756 [=====] - 2s 3ms/step - loss: 0.0272

Epoch 3/10

756/756 [=====] - 2s 3ms/step - loss: 0.0274

Epoch 4/10

756/756 [=====] - 2s 3ms/step - loss: 0.0266

Epoch 5/10

756/756 [=====] - 2s 3ms/step - loss: 0.0266

Epoch 6/10

756/756 [=====] - 2s 3ms/step - loss: 0.0261

Epoch 7/10

756/756 [=====] - 2s 3ms/step - loss: 0.0266

Epoch 8/10

756/756 [=====] - 2s 3ms/step - loss: 0.0264

Epoch 9/10

756/756 [=====] - 2s 3ms/step - loss: 0.0268

Epoch 10/10

756/756 [=====] - 2s 3ms/step - loss: 0.0262

RJF

Epoch 1/10

756/756 [=====] - 7s 3ms/step - loss: 0.0472

Epoch 2/10

756/756 [=====] - 2s 3ms/step - loss: 0.0182

Epoch 3/10

```

756/756 [=====] - 2s 3ms/step - loss: 0.0177
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0178
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0179
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0172
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0171
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0146
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0102
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0095
RL
Epoch 1/10
756/756 [=====] - 7s 3ms/step - loss: 0.0378
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0279
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0265
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0248
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0241
Epoch 6/10
756/756 [=====] - 3s 3ms/step - loss: 0.0245
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0242
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0239
Epoch 9/10
756/756 [=====] - ETA: 0s - loss: 0.024 - 2s 3ms/step -
loss: 0.0243
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0239
RMD
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0417
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0323
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0311
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0310
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0308

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Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0299  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0298  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0286  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0271  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0255  
R0K  
Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0372  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0166  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0126  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0125  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0125  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0125  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0120  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0125  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0121  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0119  
R0P  
Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0199  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0080  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0080  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0081  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0076  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0081  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0077  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0077

Epoch 9/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0078  
 Epoch 10/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0078  
 ROST  
 Epoch 1/10  
 756/756 [=====] - 6s 3ms/step - loss: 0.0471  
 Epoch 2/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0138  
 Epoch 3/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0130  
 Epoch 4/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0126  
 Epoch 5/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0124  
 Epoch 6/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0106  
 Epoch 7/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0092  
 Epoch 8/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0080  
 Epoch 9/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0077  
 Epoch 10/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0080  
 RRC  
 Epoch 1/10  
 756/756 [=====] - 6s 3ms/step - loss: 0.0142  
 Epoch 2/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0043  
 Epoch 3/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0045  
 Epoch 4/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0044  
 Epoch 5/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0042  
 Epoch 6/10  
 756/756 [=====] - ETA: 0s - loss: 0.004 - 2s 3ms/step -  
 loss: 0.0042  
 Epoch 7/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0041  
 Epoch 8/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0039  
 Epoch 9/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0041  
 Epoch 10/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0040  
 RSG

Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0202  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0071  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0066  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0068  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0066  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0068  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0068  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0066  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0067  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0065  
RTN  
Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0571  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0492  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0479  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0455  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0298  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0240  
Epoch 7/10  
756/756 [=====] - 3s 3ms/step - loss: 0.0234  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0221  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0206  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0197  
SBAC  
Epoch 1/10  
756/756 [=====] - 7s 3ms/step - loss: 0.0471  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0218  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0169



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Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0131
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0090
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0051
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0040
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0040
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0039
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0038
SBUX
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0323
Epoch 2/10
756/756 [=====] - 3s 3ms/step - loss: 0.0160
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0163
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0163
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0160
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0160
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0154
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0150
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0153
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0154
SCG
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0325
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0260
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0260
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0264A: 0s -
loss: 0.0
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0265
Epoch 6/10

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756/756 [=====] - 2s 3ms/step - loss: 0.0263
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0259
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0258
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0258
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0257
SCHW
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0435
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0267
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0188
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0170
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0151
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0124
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0099
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0094
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0094
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0090
SEE
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0465
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0264
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0186
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0175
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0174
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0170
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0169
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0171
Epoch 9/10

```

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756/756 [=====] - 2s 3ms/step - loss: 0.0169
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0166
SHW
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0707
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0565
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0539
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0518
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0395
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0149
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0130
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0121
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0116
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0114
SIG
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0215
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0133
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0126
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0126
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0120
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0123
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0130
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0121
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0123
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0119
SJM
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0384

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Epoch 2/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0222  
 Epoch 3/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0224  
 Epoch 4/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0215  
 Epoch 5/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0208  
 Epoch 6/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0207  
 Epoch 7/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0191  
 Epoch 8/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0153  
 Epoch 9/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0117  
 Epoch 10/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0113  
 SLB  
 Epoch 1/10  
 756/756 [=====] - 6s 3ms/step - loss: 0.0545  
 Epoch 2/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0384  
 Epoch 3/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0386  
 Epoch 4/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0373  
 Epoch 5/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0376  
 Epoch 6/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0367  
 Epoch 7/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0365  
 Epoch 8/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0343  
 Epoch 9/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0292  
 Epoch 10/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0256  
 SLG  
 Epoch 1/10  
 756/756 [=====] - 6s 3ms/step - loss: 0.0364  
 Epoch 2/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0160  
 Epoch 3/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0096  
 Epoch 4/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0092

Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0090  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0088  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0089  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0088  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0085  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0080  
SNA  
Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0455  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0268  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0251  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0249  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0237  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0229  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0197  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0105  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0095  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0088  
SNI  
Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0284  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0171  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0178  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0171  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0164  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0164  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0161

Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0163  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0161  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0158  
SNPS  
Epoch 1/10  
756/756 [=====] - 7s 3ms/step - loss: 0.0390  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0308  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0295  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0308  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0297  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0297  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0293  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0303  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0292  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0290  
S0  
Epoch 1/10  
756/756 [=====] - 7s 3ms/step - loss: 0.0336  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0223  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0203  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0190  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0183  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0185  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0184  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0185  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0183  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0182

SPG

Epoch 1/10

756/756 [=====] - 6s 3ms/step - loss: 0.0380

Epoch 2/10

756/756 [=====] - 2s 3ms/step - loss: 0.0219

Epoch 3/10

756/756 [=====] - 2s 3ms/step - loss: 0.0221

Epoch 4/10

756/756 [=====] - 2s 3ms/step - loss: 0.0216

Epoch 5/10

756/756 [=====] - 2s 3ms/step - loss: 0.0217

Epoch 6/10

756/756 [=====] - 2s 3ms/step - loss: 0.0220

Epoch 7/10

756/756 [=====] - 2s 3ms/step - loss: 0.0221

Epoch 8/10

756/756 [=====] - 2s 3ms/step - loss: 0.0219

Epoch 9/10

756/756 [=====] - 2s 3ms/step - loss: 0.0222

Epoch 10/10

756/756 [=====] - 2s 3ms/step - loss: 0.0220

SPGI

Epoch 1/10

756/756 [=====] - 6s 3ms/step - loss: 0.0711

Epoch 2/10

756/756 [=====] - 2s 3ms/step - loss: 0.0406

Epoch 3/10

756/756 [=====] - 2s 3ms/step - loss: 0.0296A:

Epoch 4/10

756/756 [=====] - 2s 3ms/step - loss: 0.0195

Epoch 5/10

756/756 [=====] - 2s 3ms/step - loss: 0.0158

Epoch 6/10

756/756 [=====] - 2s 3ms/step - loss: 0.0108

Epoch 7/10

756/756 [=====] - 2s 3ms/step - loss: 0.0083

Epoch 8/10

756/756 [=====] - 2s 3ms/step - loss: 0.0076

Epoch 9/10

756/756 [=====] - 2s 3ms/step - loss: 0.0076

Epoch 10/10

756/756 [=====] - 2s 3ms/step - loss: 0.0078

SRCL

Epoch 1/10

756/756 [=====] - 6s 3ms/step - loss: 0.0586

Epoch 2/10

756/756 [=====] - 2s 3ms/step - loss: 0.0449

Epoch 3/10

```

756/756 [=====] - 2s 3ms/step - loss: 0.0455
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0448
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0449
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0443
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0432
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0408
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0321
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0306
SRE
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0234
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0192
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0193
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0183
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0183
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0178
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0179
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0174
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0163
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0165
STI
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0741
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0545
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0541
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0539
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0538
Epoch 6/10

```



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756/756 [=====] - 2s 3ms/step - loss: 0.0538
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0534
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0532
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0530
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0531
STT
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0561
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0256
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0254
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0249
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0241
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0249
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0235
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0229
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0167
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0089
STX
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0227
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0054
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0046
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0046
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0046
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0047
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0043
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0041
Epoch 9/10

```

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756/756 [=====] - 2s 3ms/step - loss: 0.0038
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0034
STZ
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0254
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0112
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0115
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0109
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0111
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0112
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0110
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0112
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0106
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0111
SWK
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0522
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0375
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0194
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0147
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0117
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0080
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0054
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0042
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0039
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0036
SWKS
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0230

```

Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0102  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0091  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0089  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0091  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0089  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0096  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0085  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0088  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0090  
SYK  
Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0785  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0614  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0610  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0614  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0607  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0611  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0600  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0603  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0596  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0607  
SYMC  
Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0230  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0101  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0096  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0100

```

Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0092
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0090
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0088
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0085
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0087
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0078
SYY
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0409A: 0s - los
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0327
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0314
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0293
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0257
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0253
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0237
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0221
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0204
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0191
T
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0202
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0097
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0097
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0095
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0097
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0093
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0098

```

Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0094  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0094  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0093  
TAP  
Epoch 1/10  
756/756 [=====] - 8s 3ms/step - loss: 0.0247  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0130  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0124  
Epoch 4/10  
756/756 [=====] - 3s 4ms/step - loss: 0.0134  
Epoch 5/10  
756/756 [=====] - 3s 3ms/step - loss: 0.0126  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0125  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0118  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0122  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0124  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0123  
TDG  
Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0533  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0424  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0427  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0424  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0417  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0412  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0405  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0397  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0365  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0355

TEL

Epoch 1/10

756/756 [=====] - 6s 3ms/step - loss: 0.0704

Epoch 2/10

756/756 [=====] - 2s 3ms/step - loss: 0.0514

Epoch 3/10

756/756 [=====] - 2s 3ms/step - loss: 0.0359

Epoch 4/10

756/756 [=====] - 2s 3ms/step - loss: 0.0269

Epoch 5/10

756/756 [=====] - 2s 3ms/step - loss: 0.0247

Epoch 6/10

756/756 [=====] - 2s 3ms/step - loss: 0.0222

Epoch 7/10

756/756 [=====] - 2s 3ms/step - loss: 0.0187

Epoch 8/10

756/756 [=====] - 2s 3ms/step - loss: 0.0149

Epoch 9/10

756/756 [=====] - 2s 3ms/step - loss: 0.0140

Epoch 10/10

756/756 [=====] - 2s 3ms/step - loss: 0.0140

TGT

Epoch 1/10

756/756 [=====] - 7s 3ms/step - loss: 0.0541

Epoch 2/10

756/756 [=====] - 2s 3ms/step - loss: 0.0276

Epoch 3/10

756/756 [=====] - 2s 3ms/step - loss: 0.0266

Epoch 4/10

756/756 [=====] - 2s 3ms/step - loss: 0.0260

Epoch 5/10

756/756 [=====] - 2s 3ms/step - loss: 0.0262

Epoch 6/10

756/756 [=====] - 2s 3ms/step - loss: 0.0258

Epoch 7/10

756/756 [=====] - 2s 3ms/step - loss: 0.0255

Epoch 8/10

756/756 [=====] - 2s 3ms/step - loss: 0.0250

Epoch 9/10

756/756 [=====] - 2s 3ms/step - loss: 0.0215

Epoch 10/10

756/756 [=====] - 2s 3ms/step - loss: 0.0134

TIF

Epoch 1/10

756/756 [=====] - 6s 3ms/step - loss: 0.0245

Epoch 2/10

756/756 [=====] - 2s 3ms/step - loss: 0.0125

Epoch 3/10

```

756/756 [=====] - 2s 3ms/step - loss: 0.0117
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0114
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0117
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0112
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0112
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0112
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0111
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0106
TJX
Epoch 1/10
756/756 [=====] - 7s 3ms/step - loss: 0.0225
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0159
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0153
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0146
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0137
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0128
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0123
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0127
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0125
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0115
TMK
Epoch 1/10
756/756 [=====] - 7s 3ms/step - loss: 0.0251
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0155
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0148
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0143
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0144
Epoch 6/10

```

```

756/756 [=====] - 2s 3ms/step - loss: 0.0151
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0145
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0146
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0142
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0138
TMO
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0388
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0287
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0226
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0166
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0162
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0166
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0162
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0161
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0162
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0160
TPR
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0390
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0193
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0192
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0185
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0191
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0186
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0184
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0187
Epoch 9/10

```



```

756/756 [=====] - 2s 3ms/step - loss: 0.0185
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0183
TRIP
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0546
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0244
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0240
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0244
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0239
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0241
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0238
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0234
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0234
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0233
TROW
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0304
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0133
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0117
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0113
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0109
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0109
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0109
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0110
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0109
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0108
TRV
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0719

```

Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0620  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0546  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0475  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0379  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0313  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0284  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0274  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0269  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0264  
TSC0  
Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0345  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0195  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0179  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0175  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0163  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0160  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0152  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0118  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0099  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0079  
TSN  
Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0390  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0198  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0183  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0174

Epoch 5/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0162  
 Epoch 6/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0144  
 Epoch 7/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0124  
 Epoch 8/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0113  
 Epoch 9/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0109  
 Epoch 10/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0106  
 TSS  
 Epoch 1/10  
 756/756 [=====] - 6s 3ms/step - loss: 0.0497  
 Epoch 2/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0454  
 Epoch 3/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0442  
 Epoch 4/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0453  
 Epoch 5/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0444  
 Epoch 6/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0447  
 Epoch 7/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0435  
 Epoch 8/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0406  
 Epoch 9/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0373  
 Epoch 10/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0365  
 TWX  
 Epoch 1/10  
 756/756 [=====] - 6s 3ms/step - loss: 0.0258  
 Epoch 2/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0155  
 Epoch 3/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0151  
 Epoch 4/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0146  
 Epoch 5/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0142  
 Epoch 6/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0134  
 Epoch 7/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0134

Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0130A: 0  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0128  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0126  
TXN  
Epoch 1/10  
756/756 [=====] - 7s 3ms/step - loss: 0.0508  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0403  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0395  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0399  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0393  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0395  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0395  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0392  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0382  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0373  
TXT  
Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0466  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0337  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0232  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0171  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0156  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0147  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0137  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0132  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0124  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0120

UAA

Epoch 1/10

756/756 [=====] - 6s 3ms/step - loss: 0.0531

Epoch 2/10

756/756 [=====] - 2s 3ms/step - loss: 0.0481

Epoch 3/10

756/756 [=====] - 2s 3ms/step - loss: 0.0473

Epoch 4/10

756/756 [=====] - 2s 3ms/step - loss: 0.0464

Epoch 5/10

756/756 [=====] - 2s 3ms/step - loss: 0.0435

Epoch 6/10

756/756 [=====] - 2s 3ms/step - loss: 0.0401

Epoch 7/10

756/756 [=====] - 2s 3ms/step - loss: 0.0396

Epoch 8/10

756/756 [=====] - 2s 3ms/step - loss: 0.0385

Epoch 9/10

756/756 [=====] - 2s 3ms/step - loss: 0.0384

Epoch 10/10

756/756 [=====] - 2s 3ms/step - loss: 0.0384

UAL

Epoch 1/10

756/756 [=====] - 6s 3ms/step - loss: 0.0328

Epoch 2/10

756/756 [=====] - 2s 3ms/step - loss: 0.0122

Epoch 3/10

756/756 [=====] - 2s 3ms/step - loss: 0.0077

Epoch 4/10

756/756 [=====] - 2s 3ms/step - loss: 0.0073

Epoch 5/10

756/756 [=====] - 2s 3ms/step - loss: 0.0068

Epoch 6/10

756/756 [=====] - 2s 3ms/step - loss: 0.0066

Epoch 7/10

756/756 [=====] - 2s 3ms/step - loss: 0.0063

Epoch 8/10

756/756 [=====] - 2s 3ms/step - loss: 0.0062

Epoch 9/10

756/756 [=====] - 2s 3ms/step - loss: 0.0064

Epoch 10/10

756/756 [=====] - 2s 3ms/step - loss: 0.0062

UDR

Epoch 1/10

756/756 [=====] - 7s 2ms/step - loss: 0.0464

Epoch 2/10

756/756 [=====] - 2s 2ms/step - loss: 0.0279

Epoch 3/10

```

756/756 [=====] - 2s 2ms/step - loss: 0.0182
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0165
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0166
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0157
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0158
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0156
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0157
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0157
UHS
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0200
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0061
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0064
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0051
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0056
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0055
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0057
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0050
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0057
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0052
ULTA
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0198
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0069
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0061
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0060
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0060
Epoch 6/10

```

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756/756 [=====] - 2s 3ms/step - loss: 0.0060
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0060
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0063
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0062
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0062
UNH
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0286
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0192
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0194
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0196
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0191
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0191
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0193
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0190
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0187
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0188
UNM
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0619
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0462
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0458
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0461
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0459
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0453
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0447
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0453
Epoch 9/10

```

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756/756 [=====] - 2s 3ms/step - loss: 0.0454
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0453
UNP
Epoch 1/10
756/756 [=====] - 7s 3ms/step - loss: 0.0324
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0248
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0245
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0243
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0238
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0236
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0227
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0203
Epoch 9/10
756/756 [=====] - 3s 3ms/step - loss: 0.0187
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0182
UPS
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0626
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0421
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0430
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0421
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0415
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0426
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0413
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0410
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0414
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0394
URI
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0264

```



Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0240  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0241  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0241  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0237  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0241  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0240  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0237  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0237  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0237  
USB  
Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0617  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0411  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0397  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0394  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0386  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0392  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0384  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0384  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0379  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0381  
UTX  
Epoch 1/10  
756/756 [=====] - 7s 3ms/step - loss: 0.0346  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0126  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0111  
Epoch 4/10  
756/756 [=====] - 3s 3ms/step - loss: 0.0111

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Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0105
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0104
Epoch 7/10
756/756 [=====] - 3s 3ms/step - loss: 0.0100
Epoch 8/10
756/756 [=====] - 3s 4ms/step - loss: 0.0099
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0098
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0094
V
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0468
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0396
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0403
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0399
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0402
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0395
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0398
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0399
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0391
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0394
VAR
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0797
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0592
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0569
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0481
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0300
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0184
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0162

```

Epoch 8/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0149  
 Epoch 9/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0149  
 Epoch 10/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0146  
 VFC  
 Epoch 1/10  
 756/756 [=====] - 6s 3ms/step - loss: 0.0483  
 Epoch 2/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0104  
 Epoch 3/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0100  
 Epoch 4/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0100  
 Epoch 5/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0098  
 Epoch 6/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0099  
 Epoch 7/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0095  
 Epoch 8/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0088  
 Epoch 9/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0071  
 Epoch 10/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0062  
 VIAB  
 Epoch 1/10  
 756/756 [=====] - 6s 3ms/step - loss: 0.0537  
 Epoch 2/10  
 756/756 [=====] - 3s 3ms/step - loss: 0.0446  
 Epoch 3/10  
 756/756 [=====] - 3s 3ms/step - loss: 0.0438  
 Epoch 4/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0432  
 Epoch 5/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0418  
 Epoch 6/10  
 756/756 [=====] - 3s 3ms/step - loss: 0.0414  
 Epoch 7/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0405  
 Epoch 8/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0391  
 Epoch 9/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0365  
 Epoch 10/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0346

VLO

Epoch 1/10

756/756 [=====] - 7s 3ms/step - loss: 0.0203

Epoch 2/10

756/756 [=====] - 2s 3ms/step - loss: 0.0080

Epoch 3/10

756/756 [=====] - 2s 3ms/step - loss: 0.0075

Epoch 4/10

756/756 [=====] - 2s 3ms/step - loss: 0.0078

Epoch 5/10

756/756 [=====] - 2s 3ms/step - loss: 0.0074

Epoch 6/10

756/756 [=====] - 2s 3ms/step - loss: 0.0075

Epoch 7/10

756/756 [=====] - 2s 3ms/step - loss: 0.0073

Epoch 8/10

756/756 [=====] - 2s 3ms/step - loss: 0.0074

Epoch 9/10

756/756 [=====] - 2s 3ms/step - loss: 0.0074

Epoch 10/10

756/756 [=====] - 2s 3ms/step - loss: 0.0070

VMC

Epoch 1/10

756/756 [=====] - 6s 3ms/step - loss: 0.0369

Epoch 2/10

756/756 [=====] - 2s 3ms/step - loss: 0.0254

Epoch 3/10

756/756 [=====] - 2s 3ms/step - loss: 0.0257

Epoch 4/10

756/756 [=====] - 2s 3ms/step - loss: 0.0249

Epoch 5/10

756/756 [=====] - 2s 3ms/step - loss: 0.0258

Epoch 6/10

756/756 [=====] - 2s 3ms/step - loss: 0.0252

Epoch 7/10

756/756 [=====] - 2s 2ms/step - loss: 0.0250

Epoch 8/10

756/756 [=====] - 2s 3ms/step - loss: 0.0251

Epoch 9/10

756/756 [=====] - 2s 3ms/step - loss: 0.0247

Epoch 10/10

756/756 [=====] - 2s 3ms/step - loss: 0.0252

VNO

Epoch 1/10

756/756 [=====] - 6s 2ms/step - loss: 0.0278

Epoch 2/10

756/756 [=====] - 2s 2ms/step - loss: 0.0137

Epoch 3/10

```

756/756 [=====] - 2s 3ms/step - loss: 0.0135
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0132
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0135
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0134
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0127A: 0s -
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0129
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0124
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0125
VRSK
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0329
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0206
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0192
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0186
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0180
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0160
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0128
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0092
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0087
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0086
VRSN
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0799
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0679
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0670
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0620
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0355
Epoch 6/10

```

```

756/756 [=====] - 2s 2ms/step - loss: 0.0230
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0199
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0179
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0159
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0142
VRTX
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0569
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0438
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0436
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0436
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0434
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0429
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0426
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0428
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0428
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0427
VTR
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0427
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0343
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0340
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0338
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0336
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0328
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0317
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0309
Epoch 9/10

```

```

756/756 [=====] - 2s 2ms/step - loss: 0.0299
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0288
VZ
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0258
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0152
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0152
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0162
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0148
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0153
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0152
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0150
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0145
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0147
WAT
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0439
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0278
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0218
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0193
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0181
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0144
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0108
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0091
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0084
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0075
WBA
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0602

```

Epoch 2/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0304  
 Epoch 3/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0293  
 Epoch 4/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0291  
 Epoch 5/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0288  
 Epoch 6/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0285  
 Epoch 7/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0275  
 Epoch 8/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0203  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0075  
 Epoch 10/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0064  
 WDC  
 Epoch 1/10  
 756/756 [=====] - 5s 2ms/step - loss: 0.0317  
 Epoch 2/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0184  
 Epoch 3/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0168  
 Epoch 4/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0175  
 Epoch 5/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0173  
 Epoch 6/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0174  
 Epoch 7/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0172  
 Epoch 8/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0173  
 Epoch 9/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0170  
 Epoch 10/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0168  
 WEC  
 Epoch 1/10  
 756/756 [=====] - 5s 2ms/step - loss: 0.0693  
 Epoch 2/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0578  
 Epoch 3/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0588  
 Epoch 4/10  
 756/756 [=====] - 2s 2ms/step - loss: 0.0577



```

Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0567
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0536
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0518
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0382
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0300
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0288
WFC
Epoch 1/10
756/756 [=====] - ETA: 0s - loss: 0.056 - 5s 2ms/step -
loss: 0.0564
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0480
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0481
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0478
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0438
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0409
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0400
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0406
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0391
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0385
WHR
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0228
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0092
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0086
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0088
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0084
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0084
Epoch 7/10

```

```

756/756 [=====] - 2s 2ms/step - loss: 0.0085
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0082
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0087
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0085
WM
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0712
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0383
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0375
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0370
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0361
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0363
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0365
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0355
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0320
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0191
WMB
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0461
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0322
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0318
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0319
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0315
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0310
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0315
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0311
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0309
Epoch 10/10

```

```

756/756 [=====] - 2s 2ms/step - loss: 0.0309
WMT
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0407
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0296
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0281
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0276
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0275
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0266
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0269
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0263
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0271
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0265
WU
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0464
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0297
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0302
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0296
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0291
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0293
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0287
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0288
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0290
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0288
WY
Epoch 1/10
756/756 [=====] - 5s 2ms/step - loss: 0.0545
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0409

```

Epoch 3/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0393  
Epoch 4/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0371  
Epoch 5/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0353  
Epoch 6/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0270  
Epoch 7/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0140  
Epoch 8/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0114  
Epoch 9/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0112  
Epoch 10/10  
756/756 [=====] - 2s 2ms/step - loss: 0.0108  
WYN  
Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0383  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0125  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0118  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0106  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0092  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0060  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0034  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0032  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0032  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0033  
WYNN  
Epoch 1/10  
756/756 [=====] - 7s 3ms/step - loss: 0.0568  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0438  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0431  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0432  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0433

Epoch 6/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0426  
 Epoch 7/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0423  
 Epoch 8/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0418  
 Epoch 9/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0422  
 Epoch 10/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0421  
 XEC  
 Epoch 1/10  
 756/756 [=====] - 6s 3ms/step - loss: 0.0235  
 Epoch 2/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0118  
 Epoch 3/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0114  
 Epoch 4/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0117  
 Epoch 5/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0115  
 Epoch 6/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0117  
 Epoch 7/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0116  
 Epoch 8/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0112  
 Epoch 9/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0109  
 Epoch 10/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0112  
 XEL  
 Epoch 1/10  
 756/756 [=====] - 6s 3ms/step - loss: 0.0454  
 Epoch 2/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0324  
 Epoch 3/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0280  
 Epoch 4/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0186  
 Epoch 5/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0154  
 Epoch 6/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0149  
 Epoch 7/10  
 756/756 [=====] - 2s 3ms/step - loss: 0.0143  
 Epoch 8/10  
 756/756 [=====] - 3s 3ms/step - loss: 0.0141

Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0138  
Epoch 10/10  
756/756 [=====] - 3s 3ms/step - loss: 0.0133  
XL  
Epoch 1/10  
756/756 [=====] - 7s 4ms/step - loss: 0.0312  
Epoch 2/10  
756/756 [=====] - 3s 3ms/step - loss: 0.0268  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0261  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0241  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0155  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0131  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0132  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0136  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0129  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0130  
XLNX  
Epoch 1/10  
756/756 [=====] - 6s 3ms/step - loss: 0.0533  
Epoch 2/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0297  
Epoch 3/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0292  
Epoch 4/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0270  
Epoch 5/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0261  
Epoch 6/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0254  
Epoch 7/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0230  
Epoch 8/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0184  
Epoch 9/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0117  
Epoch 10/10  
756/756 [=====] - 2s 3ms/step - loss: 0.0103  
XOM  
Epoch 1/10

```

756/756 [=====] - 6s 3ms/step - loss: 0.0311
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0163
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0152
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0147
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0147
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0139
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0138
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0122
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0119
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0117
XRAY
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0568
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0363
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0359
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0348
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0354
Epoch 6/10
756/756 [=====] - 3s 3ms/step - loss: 0.0344
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0349
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0342
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0328
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0299
XRX
Epoch 1/10
756/756 [=====] - 7s 4ms/step - loss: 0.0306
Epoch 2/10
756/756 [=====] - 3s 4ms/step - loss: 0.0213
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0159
Epoch 4/10

```

```

756/756 [=====] - 2s 3ms/step - loss: 0.0095
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0100
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0082
Epoch 7/10
756/756 [=====] - 2s 2ms/step - loss: 0.0076
Epoch 8/10
756/756 [=====] - 2s 2ms/step - loss: 0.0073
Epoch 9/10
756/756 [=====] - 2s 2ms/step - loss: 0.0071
Epoch 10/10
756/756 [=====] - 2s 2ms/step - loss: 0.0065
XYL
Epoch 1/10
756/756 [=====] - 6s 2ms/step - loss: 0.0573
Epoch 2/10
756/756 [=====] - 2s 2ms/step - loss: 0.0472
Epoch 3/10
756/756 [=====] - 2s 2ms/step - loss: 0.0483
Epoch 4/10
756/756 [=====] - 2s 2ms/step - loss: 0.0482
Epoch 5/10
756/756 [=====] - 2s 2ms/step - loss: 0.0481
Epoch 6/10
756/756 [=====] - 2s 2ms/step - loss: 0.0488
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0481
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0479
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0480
Epoch 10/10
756/756 [=====] - 3s 4ms/step - loss: 0.0472
YUM
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0570
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0499
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0481
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0484
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0474
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0471
Epoch 7/10

```



```

756/756 [=====] - 2s 3ms/step - loss: 0.0483
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0466
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0456
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0444
ZBH
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0289
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0232
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0232
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0234
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0232
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0227
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0224
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0214
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0197
Epoch 10/10
756/756 [=====] - 2s 3ms/step - loss: 0.0187
ZION
Epoch 1/10
756/756 [=====] - 6s 3ms/step - loss: 0.0355
Epoch 2/10
756/756 [=====] - 2s 3ms/step - loss: 0.0171
Epoch 3/10
756/756 [=====] - 2s 3ms/step - loss: 0.0138
Epoch 4/10
756/756 [=====] - 2s 3ms/step - loss: 0.0137
Epoch 5/10
756/756 [=====] - 2s 3ms/step - loss: 0.0137
Epoch 6/10
756/756 [=====] - 2s 3ms/step - loss: 0.0137
Epoch 7/10
756/756 [=====] - 2s 3ms/step - loss: 0.0142
Epoch 8/10
756/756 [=====] - 2s 3ms/step - loss: 0.0140
Epoch 9/10
756/756 [=====] - 2s 3ms/step - loss: 0.0135
Epoch 10/10

```

```
756/756 [=====] - 2s 3ms/step - loss: 0.0133A: 0s -  
loss: 0.  
ZTS
```

[443]: 120229

```
[124]: Ytest = X_Test_Lstm['close'].tolist()
```

```
[128]: MSE_lstm = mean_squared_error(Ytest,predi)  
MSE_lstm
```

[128]: 2613.129600760327

```
[446]: len(Ytest)
```

[446]: 120229

### Hyper parameter Tuning LSTM

```
[132]: def best_hyperparameters(activ):  
  
    model = Sequential()  
    model.add(LSTM(128, return_sequences=True, input_shape= (1, 1)))  
    model.add(LSTM(64, return_sequences=True))  
    model.add(LSTM(32,return_sequences=False))  
    model.add(Dense(1,activation=activ))  
    model.compile(optimizer='adam', loss='mean_squared_error')  
  
    return model
```

```
[133]: activ = ['sigmoid','relu']  
epochs = [1,3,7,10]  
batch_size = [1, 5, 10, 15]
```

```
[134]: model = KerasRegressor(build_fn=best_hyperparameters)  
param_grid = dict(batch_size=batch_size, epochs=epochs ,activ = activ)  
  
grid = GridSearchCV(estimator=model, param_grid=param_grid, n_jobs= -1)
```

```
[135]: X_Train_Lstmsample = X_Train_Lstm[0:1512]  
X_Test_Lstmsample = X_Test_Lstm[0:502]
```

```
[136]: X_Train_Lstmsample = X_Train_Lstmsample.copy()
X_Test_Lstmsample = X_Test_Lstmsample.copy()
```

```
[137]: stock = X_Train_Lstmsample[(X_Train_Lstmsample['symbol'] == 'A')]
stock.head()
```

```
[137]:
```

	symbol	date	open	high	low	close	volume	day	\
0	A	2014-01-02	57.10	57.100	56.15	56.21	1916160	Thursday	
1	A	2014-01-03	56.39	57.345	56.26	56.92	1866651	Friday	
2	A	2014-01-06	57.40	57.700	56.56	56.64	1777472	Monday	
3	A	2014-01-07	56.95	57.630	56.93	57.45	1463208	Tuesday	
4	A	2014-01-08	57.33	58.540	57.17	58.39	2659468	Wednesday	

	1styrreturn	2ndyrreturn	3rdyrreturn	4thyrreturn	50daySMA	200daySMA	\
0	-27.165985	3.081854	11.968543	44.052484	56.21	56.21	
1	-27.165985	3.081854	11.968543	44.052484	56.92	56.92	
2	-27.165985	3.081854	11.968543	44.052484	56.64	56.64	
3	-27.165985	3.081854	11.968543	44.052484	57.45	57.45	
4	-27.165985	3.081854	11.968543	44.052484	58.39	58.39	

	date0r
0	735235
1	735236
2	735239
3	735240
4	735241

```
[139]: Xtrain = stock['date0r'].values
Xtrain.shape
```

```
[139]: (756,)
```

```
[140]: scaler = MinMaxScaler(feature_range=(0,1))
```

```
[141]: Xtrain = Xtrain.reshape(-1, 1)
```

```
[142]: scaler = MinMaxScaler(feature_range=(0,1))
scaled_data = scaler.fit_transform(Xtrain)
```

```
[143]: stock_test = X_Test_Lstmsample[(X_Test_Lstmsample['symbol'] == 'A')]
Xtest = stock_test['date0r'].values
Xtest.shape
```

```
[143]: (251,)
```

```
[144]: Xtest = Xtest.reshape(-1, 1)
Xtest.shape
```

[144]: (251, 1)

```
[145]: scaler = MinMaxScaler(feature_range=(0,1))
scaled_datatest = scaler.fit_transform(Xtest)
```

```
[146]: scaled_datatest = scaled_datatest.reshape(scaled_datatest.
↪shape[0],scaled_datatest.shape[1],1)
```

```
[147]: scaled_datatest.shape
```

[147]: (251, 1, 1)

```
[148]: Ytrain = stock['close'].values
```

```
[150]: Ytrain = Ytrain.reshape(-1, 1)
```

```
[152]: scaler = MinMaxScaler(feature_range=(0,1))
Yscaled_data = scaler.fit_transform(Ytrain)
```

```
[153]: scaled_data = scaled_data.reshape(scaled_data.shape[0],scaled_data.shape[1],1)
```

```
[154]: scaled_data.shape
```

[154]: (756, 1, 1)

```
[155]: Yscaled_data = Yscaled_data.reshape(Yscaled_data.shape[0],Yscaled_data.
↪shape[1],1)
Yscaled_data.shape
```

[155]: (756, 1, 1)

```
[161]: grid_result = grid.fit(scaled_data, Yscaled_data)
```

```
Epoch 1/10
152/152 [=====] - 6s 3ms/step - loss: 0.0655
Epoch 2/10
152/152 [=====] - 1s 3ms/step - loss: 0.0338A: 0s -
loss:
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0141
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0127
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0119
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0119
Epoch 7/10
```

```

152/152 [=====] - 1s 3ms/step - loss: 0.0119
Epoch 8/10
152/152 [=====] - 1s 3ms/step - loss: 0.0119
Epoch 9/10
152/152 [=====] - 1s 3ms/step - loss: 0.0112
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0116

```

```
[163]: grid_result.best_params_
```

```
[163]: {'activ': 'sigmoid', 'batch_size': 5, 'epochs': 10}
```

```

[164]: def flatten(i):
        return [item for sublist in i for item in sublist]
stocks = X_Train_Lstm.groupby('symbol')
predi = []
for sym in stocks.groups:
    stock = X_Train_Lstm[(X_Train_Lstm['symbol'] == sym)]
    Xtrain = stock['dateOr'].values
    Xtrain = Xtrain.reshape(-1, 1)
    Trainscaler = MinMaxScaler(feature_range=(0,1))
    scaled_data = Trainscaler.fit_transform(Xtrain)
    scaled_data = scaled_data.reshape(scaled_data.shape[0],scaled_data.
↪shape[1],1)
    stock_test = X_Test_Lstm[(X_Test_Lstm['symbol'] == sym)]
    Xtest = stock_test['dateOr'].values
    Xtest = Xtest.reshape(-1, 1)
    testscaler = MinMaxScaler(feature_range=(0,1))
    scaled_datatest = testscaler.fit_transform(Xtest)
    scaled_datatest = scaled_datatest.reshape(scaled_datatest.
↪shape[0],scaled_datatest.shape[1],1)
    Ytrain = stock['close'].values
    Ytrain = Ytrain.reshape(-1, 1)
    Yscaler = MinMaxScaler(feature_range=(0,1))
    Yscaled_data = Yscaler.fit_transform(Ytrain)
    Yscaled_data = Yscaled_data.reshape(Yscaled_data.shape[0],Yscaled_data.
↪shape[1],1)
    model = Sequential()
    model.add(LSTM(128, return_sequences=True, input_shape= (1, 1)))
    model.add(LSTM(64, return_sequences=True))
    model.add(LSTM(32,return_sequences=False))
    model.add(Dense(1,activation= 'sigmoid'))
    model.compile(optimizer='adam', loss='mean_squared_error')
    model.fit(scaled_data, Yscaled_data, batch_size=5, epochs=10)
    predictions = model.predict(scaled_datatest)
    predictions = Yscaler.inverse_transform(predictions)
    predictions = predictions.tolist()

```

```

    predictions = flatten(predictions)
    predi.extend(predictions)
    print(sym)
len(predi)

```

```

Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0625
Epoch 2/10
152/152 [=====] - 0s 3ms/step - loss: 0.0324
Epoch 3/10
152/152 [=====] - 1s 3ms/step - loss: 0.0137
Epoch 4/10
152/152 [=====] - 1s 3ms/step - loss: 0.0125
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0122
Epoch 6/10
152/152 [=====] - 1s 3ms/step - loss: 0.0119
Epoch 7/10
152/152 [=====] - 1s 3ms/step - loss: 0.0119
Epoch 8/10
152/152 [=====] - 1s 3ms/step - loss: 0.0118
Epoch 9/10
152/152 [=====] - 1s 3ms/step - loss: 0.0115
Epoch 10/10
152/152 [=====] - 1s 3ms/step - loss: 0.0116
A
Epoch 1/10
152/152 [=====] - 5s 3ms/step - loss: 0.0369
Epoch 2/10
152/152 [=====] - 1s 3ms/step - loss: 0.0369
Epoch 3/10
152/152 [=====] - 1s 3ms/step - loss: 0.0369
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0369
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0369
Epoch 6/10
152/152 [=====] - 1s 3ms/step - loss: 0.0369
Epoch 7/10
152/152 [=====] - 1s 3ms/step - loss: 0.0369
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0369
Epoch 9/10
152/152 [=====] - 1s 3ms/step - loss: 0.0369
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0369

```

AAL

Epoch 1/10

152/152 [=====] - 6s 4ms/step - loss: 0.0366

Epoch 2/10

152/152 [=====] - 1s 3ms/step - loss: 0.0163

Epoch 3/10

152/152 [=====] - 1s 3ms/step - loss: 0.0142

Epoch 4/10

152/152 [=====] - 1s 3ms/step - loss: 0.0139

Epoch 5/10

152/152 [=====] - 1s 3ms/step - loss: 0.0137

Epoch 6/10

152/152 [=====] - 1s 3ms/step - loss: 0.0135

Epoch 7/10

152/152 [=====] - 1s 3ms/step - loss: 0.0135

Epoch 8/10

152/152 [=====] - 1s 3ms/step - loss: 0.0134

Epoch 9/10

152/152 [=====] - 1s 3ms/step - loss: 0.0135

Epoch 10/10

152/152 [=====] - 1s 3ms/step - loss: 0.0132

AAP

Epoch 1/10

152/152 [=====] - 6s 4ms/step - loss: 0.0574

Epoch 2/10

152/152 [=====] - 0s 3ms/step - loss: 0.0476

Epoch 3/10

152/152 [=====] - 1s 3ms/step - loss: 0.0212

Epoch 4/10

152/152 [=====] - 1s 3ms/step - loss: 0.0151

Epoch 5/10

152/152 [=====] - 1s 3ms/step - loss: 0.0141

Epoch 6/10

152/152 [=====] - 0s 3ms/step - loss: 0.0132

Epoch 7/10

152/152 [=====] - 1s 3ms/step - loss: 0.0128

Epoch 8/10

152/152 [=====] - 1s 3ms/step - loss: 0.0122

Epoch 9/10

152/152 [=====] - 0s 3ms/step - loss: 0.0118

Epoch 10/10

152/152 [=====] - 0s 3ms/step - loss: 0.0117

AAPL

Epoch 1/10

152/152 [=====] - 5s 3ms/step - loss: 0.0473

Epoch 2/10

152/152 [=====] - 0s 3ms/step - loss: 0.0388

Epoch 3/10

```

152/152 [=====] - 1s 3ms/step - loss: 0.0296
Epoch 4/10
152/152 [=====] - 1s 3ms/step - loss: 0.0266
Epoch 5/10
152/152 [=====] - 1s 3ms/step - loss: 0.0265
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0263
Epoch 7/10
152/152 [=====] - 0s 3ms/step - loss: 0.0263
Epoch 8/10
152/152 [=====] - 0s 3ms/step - loss: 0.0264
Epoch 9/10
152/152 [=====] - 0s 3ms/step - loss: 0.0259
Epoch 10/10
152/152 [=====] - 0s 3ms/step - loss: 0.0260
ABBV
Epoch 1/10
152/152 [=====] - 6s 3ms/step - loss: 0.0743
Epoch 2/10
152/152 [=====] - 0s 3ms/step - loss: 0.0586
Epoch 3/10
152/152 [=====] - 0s 3ms/step - loss: 0.0238
Epoch 4/10
152/152 [=====] - 0s 3ms/step - loss: 0.0142
Epoch 5/10
152/152 [=====] - 1s 3ms/step - loss: 0.0106
Epoch 6/10
152/152 [=====] - 1s 3ms/step - loss: 0.0085
Epoch 7/10
152/152 [=====] - 0s 3ms/step - loss: 0.0076
Epoch 8/10
152/152 [=====] - 0s 3ms/step - loss: 0.0074
Epoch 9/10
152/152 [=====] - 1s 3ms/step - loss: 0.0073
Epoch 10/10
152/152 [=====] - 0s 3ms/step - loss: 0.0072
ABC
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0551
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0545
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0542
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0543
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0544
Epoch 6/10

```



```

152/152 [=====] - 1s 4ms/step - loss: 0.0543
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0541
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0536
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0513
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0327
ABT
Epoch 1/10
152/152 [=====] - 6s 3ms/step - loss: 0.0442
Epoch 2/10
152/152 [=====] - 0s 3ms/step - loss: 0.0058
Epoch 3/10
152/152 [=====] - 1s 3ms/step - loss: 0.0058
Epoch 4/10
152/152 [=====] - 1s 3ms/step - loss: 0.0058
Epoch 5/10
152/152 [=====] - 0s 3ms/step - loss: 0.0057
Epoch 6/10
152/152 [=====] - 0s 3ms/step - loss: 0.0057
Epoch 7/10
152/152 [=====] - 0s 3ms/step - loss: 0.0058
Epoch 8/10
152/152 [=====] - 0s 3ms/step - loss: 0.0059
Epoch 9/10
152/152 [=====] - 0s 3ms/step - loss: 0.0057
Epoch 10/10
152/152 [=====] - 0s 3ms/step - loss: 0.0057
ACN
Epoch 1/10
152/152 [=====] - 6s 3ms/step - loss: 0.0384
Epoch 2/10
152/152 [=====] - 0s 3ms/step - loss: 0.0056
Epoch 3/10
152/152 [=====] - 0s 3ms/step - loss: 0.0054
Epoch 4/10
152/152 [=====] - 1s 3ms/step - loss: 0.0056
Epoch 5/10
152/152 [=====] - 1s 3ms/step - loss: 0.0055
Epoch 6/10
152/152 [=====] - 0s 3ms/step - loss: 0.0057
Epoch 7/10
152/152 [=====] - 0s 3ms/step - loss: 0.0055
Epoch 8/10
152/152 [=====] - 0s 3ms/step - loss: 0.0054
Epoch 9/10

```

```

152/152 [=====] - 0s 3ms/step - loss: 0.0053
Epoch 10/10
152/152 [=====] - 0s 3ms/step - loss: 0.0055
ADBE
Epoch 1/10
152/152 [=====] - 5s 3ms/step - loss: 0.0312
Epoch 2/10
152/152 [=====] - 0s 3ms/step - loss: 0.0226
Epoch 3/10
152/152 [=====] - 0s 3ms/step - loss: 0.0219
Epoch 4/10
152/152 [=====] - 0s 3ms/step - loss: 0.0221
Epoch 5/10
152/152 [=====] - 0s 3ms/step - loss: 0.0219
Epoch 6/10
152/152 [=====] - 1s 3ms/step - loss: 0.0224
Epoch 7/10
152/152 [=====] - 0s 3ms/step - loss: 0.0218
Epoch 8/10
152/152 [=====] - 0s 3ms/step - loss: 0.0218
Epoch 9/10
152/152 [=====] - 0s 3ms/step - loss: 0.0220
Epoch 10/10
152/152 [=====] - 0s 3ms/step - loss: 0.0219
ADI
Epoch 1/10
152/152 [=====] - 6s 3ms/step - loss: 0.0483
Epoch 2/10
152/152 [=====] - 0s 3ms/step - loss: 0.0420
Epoch 3/10
152/152 [=====] - 0s 3ms/step - loss: 0.0407
Epoch 4/10
152/152 [=====] - 0s 3ms/step - loss: 0.0402
Epoch 5/10
152/152 [=====] - 0s 3ms/step - loss: 0.0406
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0404
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0399
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0403
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0399
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0395
ADM
Epoch 1/10
152/152 [=====] - 5s 3ms/step - loss: 0.0270

```

```

Epoch 2/10
152/152 [=====] - 1s 3ms/step - loss: 0.0138
Epoch 3/10
152/152 [=====] - 0s 3ms/step - loss: 0.0137
Epoch 4/10
152/152 [=====] - 0s 3ms/step - loss: 0.0134
Epoch 5/10
152/152 [=====] - 1s 3ms/step - loss: 0.0134
Epoch 6/10
152/152 [=====] - 1s 3ms/step - loss: 0.0133
Epoch 7/10
152/152 [=====] - 1s 3ms/step - loss: 0.0133
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0133
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0132
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0131
ADP
Epoch 1/10
152/152 [=====] - 6s 3ms/step - loss: 0.0612
Epoch 2/10
152/152 [=====] - 1s 3ms/step - loss: 0.0360
Epoch 3/10
152/152 [=====] - 1s 3ms/step - loss: 0.0302
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0278
Epoch 5/10
152/152 [=====] - 1s 3ms/step - loss: 0.0254A: 0s -
loss
Epoch 6/10
152/152 [=====] - 0s 3ms/step - loss: 0.0230
Epoch 7/10
152/152 [=====] - 0s 3ms/step - loss: 0.0210
Epoch 8/10
152/152 [=====] - 1s 3ms/step - loss: 0.0194
Epoch 9/10
152/152 [=====] - 1s 3ms/step - loss: 0.0178
Epoch 10/10
152/152 [=====] - 0s 3ms/step - loss: 0.0162
ADS
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0370
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0244
Epoch 3/10
152/152 [=====] - 0s 3ms/step - loss: 0.0215
Epoch 4/10

```

```

152/152 [=====] - 0s 3ms/step - loss: 0.0190
Epoch 5/10
152/152 [=====] - 0s 3ms/step - loss: 0.0158
Epoch 6/10
152/152 [=====] - 1s 3ms/step - loss: 0.0149
Epoch 7/10
152/152 [=====] - 0s 3ms/step - loss: 0.0146
Epoch 8/10
152/152 [=====] - 1s 3ms/step - loss: 0.0141
Epoch 9/10
152/152 [=====] - 0s 3ms/step - loss: 0.0135
Epoch 10/10
152/152 [=====] - 0s 3ms/step - loss: 0.0135
ADSK
Epoch 1/10
152/152 [=====] - 5s 3ms/step - loss: 0.0410
Epoch 2/10
152/152 [=====] - 1s 3ms/step - loss: 0.0153
Epoch 3/10
152/152 [=====] - 1s 3ms/step - loss: 0.0148
Epoch 4/10
152/152 [=====] - 1s 3ms/step - loss: 0.0145
Epoch 5/10
152/152 [=====] - 1s 3ms/step - loss: 0.0148
Epoch 6/10
152/152 [=====] - 0s 3ms/step - loss: 0.0141
Epoch 7/10
152/152 [=====] - 1s 3ms/step - loss: 0.0145
Epoch 8/10
152/152 [=====] - 1s 3ms/step - loss: 0.0143
Epoch 9/10
152/152 [=====] - 1s 3ms/step - loss: 0.0140
Epoch 10/10
152/152 [=====] - 1s 3ms/step - loss: 0.0140
AEE
Epoch 1/10
152/152 [=====] - 6s 3ms/step - loss: 0.0339
Epoch 2/10
152/152 [=====] - 0s 3ms/step - loss: 0.0173
Epoch 3/10
152/152 [=====] - 0s 3ms/step - loss: 0.0171
Epoch 4/10
152/152 [=====] - 0s 3ms/step - loss: 0.0171
Epoch 5/10
152/152 [=====] - 0s 3ms/step - loss: 0.0169
Epoch 6/10
152/152 [=====] - 0s 3ms/step - loss: 0.0171
Epoch 7/10

```

```

152/152 [=====] - 1s 3ms/step - loss: 0.0170
Epoch 8/10
152/152 [=====] - 0s 3ms/step - loss: 0.0171
Epoch 9/10
152/152 [=====] - 0s 3ms/step - loss: 0.0171
Epoch 10/10
152/152 [=====] - 0s 3ms/step - loss: 0.0170
AEP
Epoch 1/10
152/152 [=====] - 5s 3ms/step - loss: 0.0420
Epoch 2/10
152/152 [=====] - 1s 3ms/step - loss: 0.0212
Epoch 3/10
152/152 [=====] - 1s 3ms/step - loss: 0.0186
Epoch 4/10
152/152 [=====] - 1s 3ms/step - loss: 0.0164
Epoch 5/10
152/152 [=====] - 1s 3ms/step - loss: 0.0145
Epoch 6/10
152/152 [=====] - 1s 3ms/step - loss: 0.0129
Epoch 7/10
152/152 [=====] - 1s 3ms/step - loss: 0.0121
Epoch 8/10
152/152 [=====] - 1s 3ms/step - loss: 0.0121
Epoch 9/10
152/152 [=====] - 1s 3ms/step - loss: 0.0118
Epoch 10/10
152/152 [=====] - 1s 3ms/step - loss: 0.0118
AES
Epoch 1/10
152/152 [=====] - 5s 3ms/step - loss: 0.0415
Epoch 2/10
152/152 [=====] - 0s 3ms/step - loss: 0.0098
Epoch 3/10
152/152 [=====] - 0s 3ms/step - loss: 0.0084
Epoch 4/10
152/152 [=====] - 0s 3ms/step - loss: 0.0082
Epoch 5/10
152/152 [=====] - 1s 3ms/step - loss: 0.0082
Epoch 6/10
152/152 [=====] - 0s 3ms/step - loss: 0.0080
Epoch 7/10
152/152 [=====] - 1s 3ms/step - loss: 0.0080
Epoch 8/10
152/152 [=====] - 0s 3ms/step - loss: 0.0080
Epoch 9/10
152/152 [=====] - 1s 3ms/step - loss: 0.0079
Epoch 10/10

```

```

152/152 [=====] - 1s 3ms/step - loss: 0.0078
AET
Epoch 1/10
152/152 [=====] - 6s 3ms/step - loss: 0.0531
Epoch 2/10
152/152 [=====] - 1s 3ms/step - loss: 0.0301
Epoch 3/10
152/152 [=====] - 1s 3ms/step - loss: 0.0214
Epoch 4/10
152/152 [=====] - 1s 3ms/step - loss: 0.0193
Epoch 5/10
152/152 [=====] - 1s 3ms/step - loss: 0.0187
Epoch 6/10
152/152 [=====] - 1s 3ms/step - loss: 0.0187
Epoch 7/10
152/152 [=====] - 1s 3ms/step - loss: 0.0179
Epoch 8/10
152/152 [=====] - ETA: 0s - loss: 0.018 - 1s 3ms/step -
loss: 0.0181
Epoch 9/10
152/152 [=====] - 0s 3ms/step - loss: 0.0175
Epoch 10/10
152/152 [=====] - 1s 3ms/step - loss: 0.0182
AFL
Epoch 1/10
152/152 [=====] - 5s 3ms/step - loss: 0.0564
Epoch 2/10
152/152 [=====] - 0s 3ms/step - loss: 0.0506
Epoch 3/10
152/152 [=====] - 0s 3ms/step - loss: 0.0282
Epoch 4/10
152/152 [=====] - 0s 3ms/step - loss: 0.0188
Epoch 5/10
152/152 [=====] - 1s 3ms/step - loss: 0.0143
Epoch 6/10
152/152 [=====] - 0s 3ms/step - loss: 0.0117
Epoch 7/10
152/152 [=====] - 0s 3ms/step - loss: 0.0106
Epoch 8/10
152/152 [=====] - 1s 3ms/step - loss: 0.0098
Epoch 9/10
152/152 [=====] - 0s 3ms/step - loss: 0.0094
Epoch 10/10
152/152 [=====] - 1s 3ms/step - loss: 0.0092
AGN
Epoch 1/10
152/152 [=====] - 5s 3ms/step - loss: 0.0438
Epoch 2/10

```

```

152/152 [=====] - 0s 3ms/step - loss: 0.0310
Epoch 3/10
152/152 [=====] - 1s 3ms/step - loss: 0.0295
Epoch 4/10
152/152 [=====] - 0s 3ms/step - loss: 0.0290
Epoch 5/10
152/152 [=====] - 0s 3ms/step - loss: 0.0287
Epoch 6/10
152/152 [=====] - 0s 3ms/step - loss: 0.0287
Epoch 7/10
152/152 [=====] - 0s 3ms/step - loss: 0.0290
Epoch 8/10
152/152 [=====] - 0s 3ms/step - loss: 0.0288
Epoch 9/10
152/152 [=====] - 0s 3ms/step - loss: 0.0288
Epoch 10/10
152/152 [=====] - 0s 3ms/step - loss: 0.0288
AIG
Epoch 1/10
152/152 [=====] - 5s 3ms/step - loss: 0.0301
Epoch 2/10
152/152 [=====] - 1s 3ms/step - loss: 0.0102
Epoch 3/10
152/152 [=====] - 1s 3ms/step - loss: 0.0089
Epoch 4/10
152/152 [=====] - 1s 3ms/step - loss: 0.0085
Epoch 5/10
152/152 [=====] - 1s 3ms/step - loss: 0.0083
Epoch 6/10
152/152 [=====] - 1s 3ms/step - loss: 0.0081
Epoch 7/10
152/152 [=====] - 1s 3ms/step - loss: 0.0078
Epoch 8/10
152/152 [=====] - 1s 3ms/step - loss: 0.0074
Epoch 9/10
152/152 [=====] - 1s 3ms/step - loss: 0.0069
Epoch 10/10
152/152 [=====] - 1s 3ms/step - loss: 0.0068
AIV
Epoch 1/10
152/152 [=====] - 5s 3ms/step - loss: 0.0546
Epoch 2/10
152/152 [=====] - 0s 3ms/step - loss: 0.0154
Epoch 3/10
152/152 [=====] - 0s 3ms/step - loss: 0.0154
Epoch 4/10
152/152 [=====] - 0s 3ms/step - loss: 0.0151
Epoch 5/10

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152/152 [=====] - 1s 3ms/step - loss: 0.0151
Epoch 6/10
152/152 [=====] - 0s 3ms/step - loss: 0.0147
Epoch 7/10
152/152 [=====] - 0s 3ms/step - loss: 0.0148
Epoch 8/10
152/152 [=====] - 0s 3ms/step - loss: 0.0146
Epoch 9/10
152/152 [=====] - 0s 3ms/step - loss: 0.0143
Epoch 10/10
152/152 [=====] - 1s 3ms/step - loss: 0.0143
AIZ
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0388
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0351
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0349
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0347
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0347
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0346
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0347
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0347
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0346
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0346
AJG
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0471
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0467
Epoch 3/10
152/152 [=====] - 1s 3ms/step - loss: 0.0466
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0467
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0466
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0466
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0464
Epoch 8/10

```



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152/152 [=====] - 1s 4ms/step - loss: 0.0463
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0459
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0456
AKAM
Epoch 1/10
152/152 [=====] - 5s 3ms/step - loss: 0.0559
Epoch 2/10
152/152 [=====] - 1s 3ms/step - loss: 0.0458
Epoch 3/10
152/152 [=====] - 0s 3ms/step - loss: 0.0204
Epoch 4/10
152/152 [=====] - 1s 3ms/step - loss: 0.0121
Epoch 5/10
152/152 [=====] - 1s 3ms/step - loss: 0.0108
Epoch 6/10
152/152 [=====] - 1s 3ms/step - loss: 0.0090
Epoch 7/10
152/152 [=====] - 1s 3ms/step - loss: 0.0089
Epoch 8/10
152/152 [=====] - 1s 3ms/step - loss: 0.0083
Epoch 9/10
152/152 [=====] - 1s 3ms/step - loss: 0.0078
Epoch 10/10
152/152 [=====] - 1s 3ms/step - loss: 0.0083
ALB
Epoch 1/10
152/152 [=====] - 6s 3ms/step - loss: 0.0502
Epoch 2/10
152/152 [=====] - 1s 3ms/step - loss: 0.0091
Epoch 3/10
152/152 [=====] - 1s 3ms/step - loss: 0.0046
Epoch 4/10
152/152 [=====] - 1s 3ms/step - loss: 0.0044
Epoch 5/10
152/152 [=====] - 1s 3ms/step - loss: 0.0048
Epoch 6/10
152/152 [=====] - 1s 3ms/step - loss: 0.0042
Epoch 7/10
152/152 [=====] - 1s 3ms/step - loss: 0.0043
Epoch 8/10
152/152 [=====] - 1s 3ms/step - loss: 0.0043
Epoch 9/10
152/152 [=====] - 1s 3ms/step - loss: 0.0042
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0043
ALGN

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Epoch 1/10  
152/152 [=====] - 5s 3ms/step - loss: 0.0408  
Epoch 2/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0146  
Epoch 3/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0126  
Epoch 4/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0126  
Epoch 5/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0124  
Epoch 6/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0123  
Epoch 7/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0123  
Epoch 8/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0122  
Epoch 9/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0122  
Epoch 10/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0121  
ALK  
Epoch 1/10  
152/152 [=====] - 5s 3ms/step - loss: 0.0419  
Epoch 2/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0321  
Epoch 3/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0294  
Epoch 4/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0239  
Epoch 5/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0207  
Epoch 6/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0200  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0199  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0194  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0188  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0183  
ALL  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0372  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0118  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0106

Epoch 4/10  
 152/152 [=====] - 1s 3ms/step - loss: 0.0106  
 Epoch 5/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0105  
 Epoch 6/10  
 152/152 [=====] - 1s 3ms/step - loss: 0.0106  
 Epoch 7/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0106  
 Epoch 8/10  
 152/152 [=====] - 1s 3ms/step - loss: 0.0107  
 Epoch 9/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0106  
 Epoch 10/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0106  
 ALLE  
 Epoch 1/10  
 152/152 [=====] - 6s 4ms/step - loss: 0.0500  
 Epoch 2/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0242  
 Epoch 3/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0189  
 Epoch 4/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0177  
 Epoch 5/10  
 152/152 [=====] - 1s 3ms/step - loss: 0.0163  
 Epoch 6/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0158  
 Epoch 7/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0151  
 Epoch 8/10  
 152/152 [=====] - 1s 3ms/step - loss: 0.0151  
 Epoch 9/10  
 152/152 [=====] - 1s 3ms/step - loss: 0.0148  
 Epoch 10/10  
 152/152 [=====] - 1s 3ms/step - loss: 0.0149  
 ALXN  
 Epoch 1/10  
 152/152 [=====] - 6s 3ms/step - loss: 0.0516  
 Epoch 2/10  
 152/152 [=====] - 1s 3ms/step - loss: 0.0403  
 Epoch 3/10  
 152/152 [=====] - 1s 3ms/step - loss: 0.0323  
 Epoch 4/10  
 152/152 [=====] - 1s 3ms/step - loss: 0.0159  
 Epoch 5/10  
 152/152 [=====] - 1s 3ms/step - loss: 0.0144  
 Epoch 6/10  
 152/152 [=====] - 1s 3ms/step - loss: 0.0139

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Epoch 7/10
152/152 [=====] - 1s 3ms/step - loss: 0.0140
Epoch 8/10
152/152 [=====] - 1s 3ms/step - loss: 0.0136
Epoch 9/10
152/152 [=====] - 1s 3ms/step - loss: 0.0136
Epoch 10/10
152/152 [=====] - 1s 3ms/step - loss: 0.0127
AMAT
Epoch 1/10
152/152 [=====] - 5s 3ms/step - loss: 0.0607
Epoch 2/10
152/152 [=====] - 0s 3ms/step - loss: 0.0366
Epoch 3/10
152/152 [=====] - 0s 3ms/step - loss: 0.0328
Epoch 4/10
152/152 [=====] - 0s 3ms/step - loss: 0.0254
Epoch 5/10
152/152 [=====] - 1s 3ms/step - loss: 0.0179
Epoch 6/10
152/152 [=====] - 0s 3ms/step - loss: 0.0082
Epoch 7/10
152/152 [=====] - 1s 3ms/step - loss: 0.0058
Epoch 8/10
152/152 [=====] - 1s 3ms/step - loss: 0.0051
Epoch 9/10
152/152 [=====] - 1s 3ms/step - loss: 0.0043
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0043
AMD
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0439
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0315
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0293
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0282
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0273
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0269
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0259
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0251
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0245

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Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0227  
AME

Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0555

Epoch 2/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0253

Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0230

Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0219

Epoch 5/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0212

Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0185

Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0155

Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0124

Epoch 9/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0115

Epoch 10/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0111  
AMG

Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0583

Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0362

Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0190

Epoch 4/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0169

Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0160

Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0158

Epoch 7/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0157

Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0156

Epoch 9/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0155

Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0153  
AMGN

Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0486

Epoch 2/10

```

152/152 [=====] - 1s 4ms/step - loss: 0.0343
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0332
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0322
Epoch 5/10
152/152 [=====] - 1s 3ms/step - loss: 0.0314
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0282
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0201
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0149
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0112
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0096
AMP
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0407
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0228
Epoch 3/10
152/152 [=====] - 1s 3ms/step - loss: 0.0228
Epoch 4/10
152/152 [=====] - 1s 3ms/step - loss: 0.0229
Epoch 5/10
152/152 [=====] - 1s 3ms/step - loss: 0.0225
Epoch 6/10
152/152 [=====] - 1s 3ms/step - loss: 0.0227
Epoch 7/10
152/152 [=====] - 1s 3ms/step - loss: 0.0227
Epoch 8/10
152/152 [=====] - 1s 3ms/step - loss: 0.0226
Epoch 9/10
152/152 [=====] - 1s 3ms/step - loss: 0.0225
Epoch 10/10
152/152 [=====] - 1s 3ms/step - loss: 0.0228
AMT
Epoch 1/10
152/152 [=====] - 5s 3ms/step - loss: 0.0605
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0075
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0072
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0073
Epoch 5/10

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152/152 [=====] - 1s 3ms/step - loss: 0.0073
Epoch 6/10
152/152 [=====] - 1s 3ms/step - loss: 0.0074
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0070
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0073
Epoch 9/10
152/152 [=====] - 0s 3ms/step - loss: 0.0071
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0072
AMZN
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0447
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0162
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0125
Epoch 4/10
152/152 [=====] - 1s 3ms/step - loss: 0.0114
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0106
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0102
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0099
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0095
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0093
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0094
ANDV
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0478
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0222
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0192
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0190
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0184
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0181
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0177
Epoch 8/10

```

```

152/152 [=====] - 1s 4ms/step - loss: 0.0171
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0158
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0156
ANSS
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0457
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0208
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0092
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0084
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0079
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0075
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0073
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0071
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0070
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0069
ANTM
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0411
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0188
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0183
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0180
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0181
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0179
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0180
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0179
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0178
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0173
AON

```



Epoch 1/10  
152/152 [=====] - 5s 3ms/step - loss: 0.0543  
Epoch 2/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0087  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0082  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0080  
Epoch 5/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0078  
Epoch 6/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0079  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0081  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0080  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0078  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0077  
AOS  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0566  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0284  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0170  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0142  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0131  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0126  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0123  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0115  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0114  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0115  
APA  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0396  
Epoch 2/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0183  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0152

```

Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0126
Epoch 5/10
152/152 [=====] - 0s 3ms/step - loss: 0.0108
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0100
Epoch 7/10
152/152 [=====] - 1s 3ms/step - loss: 0.0100
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0099
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0098
Epoch 10/10
152/152 [=====] - 0s 3ms/step - loss: 0.0100
APC
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0436
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0344
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0305
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0229
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0188
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0184
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0187
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0184
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0183
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0181
APD
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0376
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0197
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0193
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0196
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0191
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0190

```

Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0192  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0190  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0187  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0186  
APH  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0413  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0209  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0210  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0204  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0202  
Epoch 6/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0202  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0197  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0191  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0186  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0174  
ARE  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0505  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0271  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0265  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0250  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0224  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0170  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0129  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0115  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0107

Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0102  
ARNC

Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0474

Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0078

Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0081

Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0078

Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0078

Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0078

Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0078

Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0079

Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0078

Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0078

ATVI

Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0438

Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0169

Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0075

Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0073

Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0074

Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0073

Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0073

Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0073

Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0072

Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0072

AVB

Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0474

Epoch 2/10

```

152/152 [=====] - 1s 4ms/step - loss: 0.0082
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0072
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0070
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0068
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0067
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0060
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0057
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0052
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0048
AVG0
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0492
Epoch 2/10
152/152 [=====] - 1s 3ms/step - loss: 0.0078
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0073
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0074
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0078
Epoch 6/10
152/152 [=====] - 1s 3ms/step - loss: 0.0076
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0074
Epoch 8/10
152/152 [=====] - 1s 3ms/step - loss: 0.0075
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0075
Epoch 10/10
152/152 [=====] - 1s 3ms/step - loss: 0.0075
AVY
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0481
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0082
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0074
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0073
Epoch 5/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0073
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0071
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0070
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0068
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0067
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0063
AWK
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0437
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0106
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0095
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0084
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0080
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0077
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0079
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0074
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0075
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0075
AXP
Epoch 1/10
152/152 [=====] - 6s 5ms/step - loss: 0.0486
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0066
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0067
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0066
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0067
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0067
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0067
Epoch 8/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0067
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0067
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0068
AYI
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0673
Epoch 2/10
152/152 [=====] - 1s 5ms/step - loss: 0.0098
Epoch 3/10
152/152 [=====] - 1s 5ms/step - loss: 0.0047
Epoch 4/10
152/152 [=====] - 1s 5ms/step - loss: 0.0047
Epoch 5/10
152/152 [=====] - 1s 5ms/step - loss: 0.0046
Epoch 6/10
152/152 [=====] - 1s 5ms/step - loss: 0.0046
Epoch 7/10
152/152 [=====] - 1s 5ms/step - loss: 0.0046
Epoch 8/10
152/152 [=====] - 1s 5ms/step - loss: 0.0045
Epoch 9/10
152/152 [=====] - 1s 5ms/step - loss: 0.0046
Epoch 10/10
152/152 [=====] - 1s 5ms/step - loss: 0.0045
AZO
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0391
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0382
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0375
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0375
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0372
Epoch 6/10
152/152 [=====] - 1s 5ms/step - loss: 0.0368
Epoch 7/10
152/152 [=====] - 1s 5ms/step - loss: 0.0362
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0366
Epoch 9/10
152/152 [=====] - 1s 5ms/step - loss: 0.0361
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0359
BA

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Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0241  
Epoch 2/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0226  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0226  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0226  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0226  
Epoch 6/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0226  
Epoch 7/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0226  
Epoch 8/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0226  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0227  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0225  
BAC  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0831  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0198  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0148  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0125  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0105  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0094  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0097  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0087  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0061  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0077  
BAX  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0248  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0238  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0238



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Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0238
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0238
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0237
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0238
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0237
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0238
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0238
BBT
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0353
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0279
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0274
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0272
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0272
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0271
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0267
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0266A: 0s - 1o
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0262
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0260
BBY
Epoch 1/10
152/152 [=====] - 5s 3ms/step - loss: 0.0460
Epoch 2/10
152/152 [=====] - 1s 3ms/step - loss: 0.0105
Epoch 3/10
152/152 [=====] - 1s 3ms/step - loss: 0.0100
Epoch 4/10
152/152 [=====] - 1s 3ms/step - loss: 0.0100
Epoch 5/10
152/152 [=====] - 0s 3ms/step - loss: 0.0096
Epoch 6/10
152/152 [=====] - 1s 3ms/step - loss: 0.0092

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Epoch 7/10
152/152 [=====] - 0s 3ms/step - loss: 0.0089
Epoch 8/10
152/152 [=====] - 0s 3ms/step - loss: 0.0082
Epoch 9/10
152/152 [=====] - 1s 3ms/step - loss: 0.0074
Epoch 10/10
152/152 [=====] - 1s 3ms/step - loss: 0.0069
BDX
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0621
Epoch 2/10
152/152 [=====] - 1s 3ms/step - loss: 0.0088
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0074
Epoch 4/10
152/152 [=====] - 1s 3ms/step - loss: 0.0065
Epoch 5/10
152/152 [=====] - 1s 3ms/step - loss: 0.0061
Epoch 6/10
152/152 [=====] - 1s 3ms/step - loss: 0.0060
Epoch 7/10
152/152 [=====] - 1s 3ms/step - loss: 0.0059A: 0s -
loss: 0.006
Epoch 8/10
152/152 [=====] - 1s 3ms/step - loss: 0.0057
Epoch 9/10
152/152 [=====] - 1s 3ms/step - loss: 0.0060
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0059
BEN
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0278
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0214
Epoch 3/10
152/152 [=====] - 1s 5ms/step - loss: 0.0171
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0159
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0154
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0150
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0148
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0143
Epoch 9/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0142
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0139
BF.B
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0359
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0306
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0297
Epoch 4/10
152/152 [=====] - 1s 3ms/step - loss: 0.0293
Epoch 5/10
152/152 [=====] - 1s 3ms/step - loss: 0.0290
Epoch 6/10
152/152 [=====] - 1s 3ms/step - loss: 0.0287
Epoch 7/10
152/152 [=====] - 1s 3ms/step - loss: 0.0288
Epoch 8/10
152/152 [=====] - 1s 3ms/step - loss: 0.0284
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0286
Epoch 10/10
152/152 [=====] - 1s 3ms/step - loss: 0.0285
BIIB
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0355
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0245
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0221
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0207
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0205
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0203
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0204
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0202
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0202
Epoch 10/10
152/152 [=====] - 1s 5ms/step - loss: 0.0202
BK
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0484

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Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0386
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0369
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0355
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0344
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0336
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0332
Epoch 8/10
152/152 [=====] - 1s 3ms/step - loss: 0.0329
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0325
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0321
BLK
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0328
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0160
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0132
Epoch 4/10
152/152 [=====] - 1s 3ms/step - loss: 0.0117
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0107
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0101
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0096
Epoch 8/10
152/152 [=====] - 1s 3ms/step - loss: 0.0092
Epoch 9/10
152/152 [=====] - 1s 3ms/step - loss: 0.0087
Epoch 10/10
152/152 [=====] - 0s 3ms/step - loss: 0.0083
BLL
Epoch 1/10
152/152 [=====] - 6s 3ms/step - loss: 0.0586
Epoch 2/10
152/152 [=====] - 1s 3ms/step - loss: 0.0329
Epoch 3/10
152/152 [=====] - 1s 3ms/step - loss: 0.0280
Epoch 4/10
152/152 [=====] - 1s 3ms/step - loss: 0.0276

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Epoch 5/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0273  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0273  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0270  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0269  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0270  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0268A: 0s - los  
BMV  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0289  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0220  
Epoch 3/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0212  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0201  
Epoch 5/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0187  
Epoch 6/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0163  
Epoch 7/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0154  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0148  
Epoch 9/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0144  
Epoch 10/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0137  
BRK.B  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0490  
Epoch 2/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0126  
Epoch 3/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0122  
Epoch 4/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0122  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0118  
Epoch 6/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0124  
Epoch 7/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0121

Epoch 8/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0121  
Epoch 9/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0123  
Epoch 10/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0121  
BSX  
Epoch 1/10  
152/152 [=====] - 5s 3ms/step - loss: 0.0529  
Epoch 2/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0137  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0129  
Epoch 4/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0121  
Epoch 5/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0106  
Epoch 6/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0092  
Epoch 7/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0089  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0084  
Epoch 9/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0084  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0083  
BWA  
Epoch 1/10  
152/152 [=====] - 5s 3ms/step - loss: 0.0422  
Epoch 2/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0381  
Epoch 3/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0365  
Epoch 4/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0335  
Epoch 5/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0283  
Epoch 6/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0270  
Epoch 7/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0270  
Epoch 8/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0269  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0267  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0269

BXP

Epoch 1/10

152/152 [=====] - 6s 3ms/step - loss: 0.0351

Epoch 2/10

152/152 [=====] - 1s 3ms/step - loss: 0.0338

Epoch 3/10

152/152 [=====] - 1s 4ms/step - loss: 0.0334

Epoch 4/10

152/152 [=====] - 1s 3ms/step - loss: 0.0333

Epoch 5/10

152/152 [=====] - 1s 3ms/step - loss: 0.0331

Epoch 6/10

152/152 [=====] - 1s 3ms/step - loss: 0.0330

Epoch 7/10

152/152 [=====] - 1s 4ms/step - loss: 0.0329

Epoch 8/10

152/152 [=====] - 1s 3ms/step - loss: 0.0332

Epoch 9/10

152/152 [=====] - 1s 3ms/step - loss: 0.0330

Epoch 10/10

152/152 [=====] - ETA: 0s - loss: 0.032 - 1s 3ms/step -  
loss: 0.0329

C

Epoch 1/10

152/152 [=====] - 5s 3ms/step - loss: 0.0493

Epoch 2/10

152/152 [=====] - 1s 3ms/step - loss: 0.0475

Epoch 3/10

152/152 [=====] - 0s 3ms/step - loss: 0.0450

Epoch 4/10

152/152 [=====] - 1s 3ms/step - loss: 0.0425

Epoch 5/10

152/152 [=====] - 1s 3ms/step - loss: 0.0397

Epoch 6/10

152/152 [=====] - 1s 3ms/step - loss: 0.0377

Epoch 7/10

152/152 [=====] - 1s 3ms/step - loss: 0.0336

Epoch 8/10

152/152 [=====] - 1s 3ms/step - loss: 0.0313

Epoch 9/10

152/152 [=====] - 1s 3ms/step - loss: 0.0280

Epoch 10/10

152/152 [=====] - 1s 4ms/step - loss: 0.0262

CA

Epoch 1/10

152/152 [=====] - 5s 4ms/step - loss: 0.0493

Epoch 2/10

152/152 [=====] - 1s 3ms/step - loss: 0.0170

Epoch 3/10  
 152/152 [=====] - 1s 3ms/step - loss: 0.0152  
 Epoch 4/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0148  
 Epoch 5/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0149  
 Epoch 6/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0147  
 Epoch 7/10  
 152/152 [=====] - 1s 5ms/step - loss: 0.0147  
 Epoch 8/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0147  
 Epoch 9/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0145  
 Epoch 10/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0146  
 CAG  
 Epoch 1/10  
 152/152 [=====] - 6s 4ms/step - loss: 0.0617  
 Epoch 2/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0541  
 Epoch 3/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0248  
 Epoch 4/10  
 152/152 [=====] - 1s 3ms/step - loss: 0.0171  
 Epoch 5/10  
 152/152 [=====] - 1s 3ms/step - loss: 0.0156  
 Epoch 6/10  
 152/152 [=====] - 1s 3ms/step - loss: 0.0149  
 Epoch 7/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0146  
 Epoch 8/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0143  
 Epoch 9/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0141  
 Epoch 10/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0140  
 CAH  
 Epoch 1/10  
 152/152 [=====] - 5s 3ms/step - loss: 0.0476  
 Epoch 2/10  
 152/152 [=====] - 1s 3ms/step - loss: 0.0253  
 Epoch 3/10  
 152/152 [=====] - 1s 3ms/step - loss: 0.0186  
 Epoch 4/10  
 152/152 [=====] - 1s 3ms/step - loss: 0.0160  
 Epoch 5/10  
 152/152 [=====] - 1s 3ms/step - loss: 0.0143



Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0131  
Epoch 7/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0125  
Epoch 8/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0124  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0121  
Epoch 10/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0121  
CAT  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0371  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0131  
Epoch 3/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0126  
Epoch 4/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0126  
Epoch 5/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0128  
Epoch 6/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0127  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0127  
Epoch 8/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0124  
Epoch 9/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0120  
Epoch 10/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0119  
CB  
Epoch 1/10  
152/152 [=====] - 5s 3ms/step - loss: 0.0608  
Epoch 2/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0606  
Epoch 3/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0606  
Epoch 4/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0601  
Epoch 5/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0569  
Epoch 6/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0441  
Epoch 7/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0207  
Epoch 8/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0182

Epoch 9/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0168  
Epoch 10/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0166  
CBG  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0314  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0143  
Epoch 3/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0135  
Epoch 4/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0135  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0136  
Epoch 6/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0136  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0136  
Epoch 8/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0135  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0136  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0137  
CBOE  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0430  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0358  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0311  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0301  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0298  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0296  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0293  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0290  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0280  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0269  
CBS  
Epoch 1/10

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152/152 [=====] - 5s 3ms/step - loss: 0.0287
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0127
Epoch 3/10
152/152 [=====] - 1s 3ms/step - loss: 0.0127
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0129
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0128
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0126
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0126
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0127
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0126
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0127
CCI
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0474
Epoch 2/10
152/152 [=====] - 1s 3ms/step - loss: 0.0211
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0149
Epoch 4/10
152/152 [=====] - 1s 3ms/step - loss: 0.0138
Epoch 5/10
152/152 [=====] - 1s 3ms/step - loss: 0.0130
Epoch 6/10
152/152 [=====] - 1s 3ms/step - loss: 0.0124
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0118
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0112
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0110
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0109
CCL
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0374
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0058
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0057
Epoch 4/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0057
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0057
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0056
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0055
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0056
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0051
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0051
CDNS
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0430
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0194
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0104
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0099
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0097
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0095
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0091
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0091
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0089
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0087
CELG
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0559
Epoch 2/10
152/152 [=====] - 1s 3ms/step - loss: 0.0553
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0553
Epoch 4/10
152/152 [=====] - 1s 3ms/step - loss: 0.0551
Epoch 5/10
152/152 [=====] - 1s 3ms/step - loss: 0.0549
Epoch 6/10
152/152 [=====] - 1s 3ms/step - loss: 0.0541
Epoch 7/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0511
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0359
Epoch 9/10
152/152 [=====] - 1s 3ms/step - loss: 0.0264
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0225
CERN
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0592
Epoch 2/10
152/152 [=====] - 1s 3ms/step - loss: 0.0149
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0088
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0075
Epoch 5/10
152/152 [=====] - 1s 3ms/step - loss: 0.0064
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0054
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0046
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0039
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0036
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0034
CF
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0435
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0098
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0089
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0090
Epoch 5/10
152/152 [=====] - 1s 3ms/step - loss: 0.0089
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0087
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0087
Epoch 8/10
152/152 [=====] - 1s 3ms/step - loss: 0.0089
Epoch 9/10
152/152 [=====] - 1s 3ms/step - loss: 0.0088
Epoch 10/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0088
CHD
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0627
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0069
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0039
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0037
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0036
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0035
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0035
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0033
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0035
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0035
CHK
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0465
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0347
Epoch 3/10
152/152 [=====] - 1s 3ms/step - loss: 0.0316
Epoch 4/10
152/152 [=====] - 1s 3ms/step - loss: 0.0246
Epoch 5/10
152/152 [=====] - 1s 3ms/step - loss: 0.0192
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0172
Epoch 7/10
152/152 [=====] - 1s 3ms/step - loss: 0.0168
Epoch 8/10
152/152 [=====] - 1s 3ms/step - loss: 0.0166
Epoch 9/10
152/152 [=====] - 1s 3ms/step - loss: 0.0163
Epoch 10/10
152/152 [=====] - 1s 3ms/step - loss: 0.0160
CHRW
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0427
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0102

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Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0083  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0078  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0074  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0071  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0070  
Epoch 8/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0069  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0065  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0061  
CHTR  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0351  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0060  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0050  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0048  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0046  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0044  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0043  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0041  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0040  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0039  
CI  
Epoch 1/10  
152/152 [=====] - 6s 5ms/step - loss: 0.0591  
Epoch 2/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0062  
Epoch 3/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0044  
Epoch 4/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0043  
Epoch 5/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0042

Epoch 6/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0046  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0042  
Epoch 8/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0044  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0042  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0043  
CINF  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0441  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0341  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0340  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0337  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0336  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0329  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0336  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0336  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0333  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0334  
CL  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0463  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0086  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0077  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0077  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0075  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0074  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0074  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0072



Epoch 9/10  
 152/152 [=====] - 1s 5ms/step - loss: 0.0073  
 Epoch 10/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0072  
 CLX  
 Epoch 1/10  
 152/152 [=====] - 6s 4ms/step - loss: 0.0253  
 Epoch 2/10  
 152/152 [=====] - 1s 5ms/step - loss: 0.0235  
 Epoch 3/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0232  
 Epoch 4/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0232  
 Epoch 5/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0232  
 Epoch 6/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0232  
 Epoch 7/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0232  
 Epoch 8/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0232  
 Epoch 9/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0234  
 Epoch 10/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0232  
 CMA  
 Epoch 1/10  
 152/152 [=====] - 6s 4ms/step - loss: 0.0320  
 Epoch 2/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0123  
 Epoch 3/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0125  
 Epoch 4/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0123  
 Epoch 5/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0125  
 Epoch 6/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0124  
 Epoch 7/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0124  
 Epoch 8/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0124  
 Epoch 9/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0124  
 Epoch 10/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0118  
 CMCSA  
 Epoch 1/10

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152/152 [=====] - 6s 4ms/step - loss: 0.0314
Epoch 2/10
152/152 [=====] - 1s 5ms/step - loss: 0.0112
Epoch 3/10
152/152 [=====] - 1s 5ms/step - loss: 0.0110
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0109
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0107
Epoch 6/10
152/152 [=====] - 1s 5ms/step - loss: 0.0107
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0108
Epoch 8/10
152/152 [=====] - 1s 5ms/step - loss: 0.0107
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0106
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0107
CME
Epoch 1/10
152/152 [=====] - 6s 5ms/step - loss: 0.0680
Epoch 2/10
152/152 [=====] - 1s 5ms/step - loss: 0.0248
Epoch 3/10
152/152 [=====] - 1s 5ms/step - loss: 0.0193
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0160
Epoch 5/10
152/152 [=====] - 1s 5ms/step - loss: 0.0146
Epoch 6/10
152/152 [=====] - 1s 5ms/step - loss: 0.0140
Epoch 7/10
152/152 [=====] - 1s 5ms/step - loss: 0.0131
Epoch 8/10
152/152 [=====] - 1s 5ms/step - loss: 0.0126
Epoch 9/10
152/152 [=====] - 1s 5ms/step - loss: 0.0125
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0124
CMG
Epoch 1/10
152/152 [=====] - 6s 5ms/step - loss: 0.0523
Epoch 2/10
152/152 [=====] - 1s 5ms/step - loss: 0.0296
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0245
Epoch 4/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0193
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0146
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0112
Epoch 7/10
152/152 [=====] - 1s 5ms/step - loss: 0.0099
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0093
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0090
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0082
CMI
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0381
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0098
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0099
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0096
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0098
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0095
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0097
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0097
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0096
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0095
CMS
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0503
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0145
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0099
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0098
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0098
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0095
Epoch 7/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0094
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0091
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0090
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0088
CNC
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0685
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0598
Epoch 3/10
152/152 [=====] - 1s 5ms/step - loss: 0.0502
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0435
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0374
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0312
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0259
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0193
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0125
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0091
CNP
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0396
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0364
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0358
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0355
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0356
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0354
Epoch 7/10
152/152 [=====] - 1s 5ms/step - loss: 0.0353
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0353
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0350
Epoch 10/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0347
COF
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0345
Epoch 2/10
152/152 [=====] - 1s 5ms/step - loss: 0.0144
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0131
Epoch 4/10
152/152 [=====] - 1s 5ms/step - loss: 0.0130
Epoch 5/10
152/152 [=====] - 1s 5ms/step - loss: 0.0129
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0127
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0121
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0121
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0120
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0119
COG
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0491
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0369
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0305
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0285
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0271
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0259
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0244
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0226
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0210
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0195
COL
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0639
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0545

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Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0517  
Epoch 4/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0479  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0420  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0387  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0379  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0376  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0372  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0367  
C00  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0472  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0137  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0128  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0122  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0112  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0104  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0098  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0095  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0093  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0094  
C0P  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0555  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0154  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0112  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0108  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0107

Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0104  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0104  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0102  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0101  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0103  
COST  
Epoch 1/10  
152/152 [=====] - 6s 5ms/step - loss: 0.0525  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0170  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0126  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0115  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0112  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0107  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0105  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0104  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0103  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0103  
COTY  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0464  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0136  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0127  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0115  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0100  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0086  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0080  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0079

Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0078  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0076  
CPB  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0527  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0200  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0173  
Epoch 4/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0166  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0162  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0159  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0157  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0156  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0155  
Epoch 10/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0154  
CRM  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0491  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0289  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0266  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0248  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0242  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0231  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0228  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0222  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0213  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0205  
CSC0  
Epoch 1/10



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152/152 [=====] - 5s 4ms/step - loss: 0.0558
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0545
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0544
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0542
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0540
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0541
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0541
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0543
Epoch 9/10
152/152 [=====] - 1s 3ms/step - loss: 0.0542
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0542
CSX
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0418
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0085
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0084
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0085
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0084
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0080
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0080
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0078
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0071
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0066
CTAS
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0567
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0366
Epoch 3/10
152/152 [=====] - 1s 3ms/step - loss: 0.0361
Epoch 4/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0352
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0336A: 0s -
loss: 0.03
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0281
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0207
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0174
Epoch 9/10
152/152 [=====] - 1s 3ms/step - loss: 0.0158
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0146
CTL
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0514
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0307
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0198
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0168
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0149
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0133
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0123
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0117
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0115
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0116
CTSH
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0393
Epoch 2/10
152/152 [=====] - 1s 3ms/step - loss: 0.0113
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0113
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0113
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0111
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0111

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Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0112  
Epoch 8/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0111  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0111  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0112  
CTXS  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0560  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0340  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0134  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0113  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0105  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0100  
Epoch 7/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0099  
Epoch 8/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0096  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0096  
Epoch 10/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0095  
CVS  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0388  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0195  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0143  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0116  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0099  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0092  
Epoch 7/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0087  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0084  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0084

Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0083  
CVX

Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0431

Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0419

Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0417

Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0417

Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0418

Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0416

Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0416

Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0416

Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0416

Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0415

CX0

Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0329

Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0281

Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0278

Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0278

Epoch 5/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0276

Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0276

Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0275

Epoch 8/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0272

Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0276

Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0274

D

Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0476

Epoch 2/10

```

152/152 [=====] - 1s 4ms/step - loss: 0.0390
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0316
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0234
Epoch 5/10
152/152 [=====] - 1s 3ms/step - loss: 0.0225
Epoch 6/10
152/152 [=====] - 1s 3ms/step - loss: 0.0219
Epoch 7/10
152/152 [=====] - 1s 3ms/step - loss: 0.0220
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0222
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0218
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0218
DAL
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0396
Epoch 2/10
152/152 [=====] - 1s 3ms/step - loss: 0.0383
Epoch 3/10
152/152 [=====] - 1s 3ms/step - loss: 0.0380
Epoch 4/10
152/152 [=====] - 1s 3ms/step - loss: 0.0377
Epoch 5/10
152/152 [=====] - 1s 3ms/step - loss: 0.0377
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0372
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0367
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0367
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0365
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0364
DE
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0288
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0285
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0283
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0279
Epoch 5/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0279
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0279
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0277
Epoch 8/10
152/152 [=====] - 1s 5ms/step - loss: 0.0278
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0277
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0273
DFS
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0455
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0220
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0212
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0213
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0211
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0212
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0212
Epoch 8/10
152/152 [=====] - 1s 3ms/step - loss: 0.0212
Epoch 9/10
152/152 [=====] - 1s 3ms/step - loss: 0.0211
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0212
DG
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0355
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0155
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0153
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0151
Epoch 5/10
152/152 [=====] - 1s 3ms/step - loss: 0.0151
Epoch 6/10
152/152 [=====] - 1s 3ms/step - loss: 0.0152
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0150
Epoch 8/10

```

152/152 [=====] - 1s 4ms/step - loss: 0.0141  
Epoch 9/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0130  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0109  
DGX  
Epoch 1/10  
152/152 [=====] - 6s 3ms/step - loss: 0.0408  
Epoch 2/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0171  
Epoch 3/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0157  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0151  
Epoch 5/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0146  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0141  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0141  
Epoch 8/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0141  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0138  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0139  
DHI  
Epoch 1/10  
152/152 [=====] - 5s 3ms/step - loss: 0.0413  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0201  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0119  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0101  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0090  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0085  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0082  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0080  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0079  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0079  
DIS

Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0868  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0295  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0122  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0064  
Epoch 5/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0058  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0054  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0053  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0048  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0044  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0045  
DISCA  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0831  
Epoch 2/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0281  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0127  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0074  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0067  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0067  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0067  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0059  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0056  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0053  
DISCK  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0389  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0300  
Epoch 3/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0298



Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0285  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0268  
Epoch 6/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0236  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0165  
Epoch 8/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0103  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0086  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0083  
DISH  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0488  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0107  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0088  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0090  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0087  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0087  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0085  
Epoch 8/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0083  
Epoch 9/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0082  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0080  
DLR  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0463  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0185  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0177  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0173  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0170  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0171

Epoch 7/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0170  
 Epoch 8/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0170  
 Epoch 9/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0166  
 Epoch 10/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0164  
 DLTR  
 Epoch 1/10  
 152/152 [=====] - 6s 4ms/step - loss: 0.0421  
 Epoch 2/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0174  
 Epoch 3/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0115  
 Epoch 4/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0103  
 Epoch 5/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0098  
 Epoch 6/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0094  
 Epoch 7/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0090  
 Epoch 8/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0091  
 Epoch 9/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0092  
 Epoch 10/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0088  
 DOV  
 Epoch 1/10  
 152/152 [=====] - 5s 4ms/step - loss: 0.0561  
 Epoch 2/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0106  
 Epoch 3/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0058  
 Epoch 4/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0055  
 Epoch 5/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0055  
 Epoch 6/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0054  
 Epoch 7/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0053  
 Epoch 8/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0052  
 Epoch 9/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0051

Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0050  
DPS  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0370  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0133  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0125  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0122  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0121  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0121  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0124  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0121  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0120  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0120  
DRE  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0411  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0204  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0170  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0162  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0159  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0156  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0155  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0151  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0147  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0142  
DRI  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0388  
Epoch 2/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0153
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0148
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0149
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0148
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0149
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0146
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0145
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0140
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0134
DTE
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0452
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0393
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0385
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0385
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0383
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0381
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0382
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0378
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0374
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0371
DUK
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0438
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0416
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0410
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0401
Epoch 5/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0379
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0338
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0302
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0293
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0279
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0272
DVA
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0445
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0179
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0147
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0113
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0094
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0090
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0087
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0086
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0089
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0085
DVN
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0565
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0087
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0058
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0056
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0056
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0054
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0054
Epoch 8/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0054
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0054
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0053
EA
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0802
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0300
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0213
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0180
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0172
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0179
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0144
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0141
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0131
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0157
EBAY
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0434
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0322
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0309
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0308
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0311
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0307
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0304
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0307
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0305
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0307
ECL

```

Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0493  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0152  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0148  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0145  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0147  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0147  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0150  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0150  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0145  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0145  
ED  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0467  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0062  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0060  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0061  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0061  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0061  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0060  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0062  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0060  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0061  
EFX  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0345  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0155  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0154

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Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0153
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0153
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0152
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0153
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0152
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0153
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0151
EIX
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0507
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0238
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0201
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0191
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0187
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0183
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0181
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0180
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0179
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0179
EL
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0404
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0222
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0211
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0207
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0204
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0203

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Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0204  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0203  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0203  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0203  
EMN  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0459  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0153  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0122  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0110  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0103  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0097  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0096  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0096  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0096  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0092  
EMR  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0394  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0329  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0310  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0282  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0242  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0204  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0184  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0176  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0171

Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0168  
EOG

Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0429

Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0043

Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0044

Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0042

Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0043

Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0042

Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0042

Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0044

Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0043

Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0043

EQIX

Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0574

Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0542

Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0391

Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0199

Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0167

Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0151

Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0143

Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0133

Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0130

Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0126

EQR

Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0378

Epoch 2/10

```

152/152 [=====] - 1s 4ms/step - loss: 0.0161
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0146
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0142
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0139
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0137
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0134
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0134
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0132
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0132
EQT
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0620
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0609
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0608
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0606
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0609
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0605
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0604
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0591
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0464
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0281
ESRX
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0415
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0192
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0079
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0074
Epoch 5/10

```

```

152/152 [=====] - 1s 4ms/step - loss: 0.0072
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0072
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0071
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0072
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0072
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0071
ESS
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0499
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0291
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0279
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0272
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0267
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0265
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0262
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0262
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0260
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0258
ETFC
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0429
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0267
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0244
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0227
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0209
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0195
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0180
Epoch 8/10

```

```

152/152 [=====] - 1s 4ms/step - loss: 0.0170
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0166
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0163
ETN
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0459
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0447
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0446
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0446
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0446
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0444
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0443
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0443
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0443
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0441
ETR
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0429
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0090
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0090
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0089
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0090
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0089
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0090
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0089
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0088
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0087
EW

```

Epoch 1/10  
 152/152 [=====] - 6s 4ms/step - loss: 0.0455  
 Epoch 2/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0443  
 Epoch 3/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0442  
 Epoch 4/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0441  
 Epoch 5/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0441  
 Epoch 6/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0442  
 Epoch 7/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0441  
 Epoch 8/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0441  
 Epoch 9/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0441  
 Epoch 10/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0441  
 EXC  
 Epoch 1/10  
 152/152 [=====] - 5s 4ms/step - loss: 0.0300  
 Epoch 2/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0133  
 Epoch 3/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0132  
 Epoch 4/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0130  
 Epoch 5/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0134  
 Epoch 6/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0130  
 Epoch 7/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0129  
 Epoch 8/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0129  
 Epoch 9/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0131  
 Epoch 10/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0131  
 EXPD  
 Epoch 1/10  
 152/152 [=====] - 6s 4ms/step - loss: 0.0419  
 Epoch 2/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0116  
 Epoch 3/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0102

Epoch 4/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0100  
 Epoch 5/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0099  
 Epoch 6/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0101  
 Epoch 7/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0099  
 Epoch 8/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0097  
 Epoch 9/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0095  
 Epoch 10/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0093  
 EXPE  
 Epoch 1/10  
 152/152 [=====] - 5s 4ms/step - loss: 0.0503  
 Epoch 2/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0112  
 Epoch 3/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0088  
 Epoch 4/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0081  
 Epoch 5/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0075  
 Epoch 6/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0073  
 Epoch 7/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0071  
 Epoch 8/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0068  
 Epoch 9/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0067  
 Epoch 10/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0065  
 EXR  
 Epoch 1/10  
 152/152 [=====] - 5s 4ms/step - loss: 0.0409  
 Epoch 2/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0155  
 Epoch 3/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0155  
 Epoch 4/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0153  
 Epoch 5/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0154  
 Epoch 6/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0156

Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0151  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0150  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0150  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0151  
F  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0489  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0371  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0320  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0302  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0285  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0276  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0266  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0259  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0255  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0255  
FAST  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0403  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0038  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0037  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0039  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0039  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0038  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0038  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0038  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0037



Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0037  
FB

Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0430

Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0123

Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0120

Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0120

Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0121

Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0119

Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0115

Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0115

Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0113

Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0112

FBHS

Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0599

Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0110

Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0069

Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0068

Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0067

Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0067

Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0067

Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0065

Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0065

Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0065

FCX

Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0417

Epoch 2/10

```

152/152 [=====] - 1s 4ms/step - loss: 0.0348
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0338
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0315
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0282
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0266
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0263
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0260
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0258
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0255
FDX
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0356
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0326
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0326
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0326
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0325
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0327
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0326
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0323
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0323
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0322
FE
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0427
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0413
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0410
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0411
Epoch 5/10

```

```

152/152 [=====] - 1s 4ms/step - loss: 0.0410
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0408
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0405
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0406
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0394
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0356
FFIV
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0446
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0186
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0179
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0185
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0182
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0181
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0177
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0173
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0170
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0164
FIS
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0491
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0034
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0030
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0030
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0029
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0030
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0029A: 0s - 1o
Epoch 8/10

```

152/152 [=====] - 1s 4ms/step - loss: 0.0029  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0029  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0029  
FISV  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0245  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0237  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0235  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0235  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0234  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0232  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0229  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0223  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0213  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0209  
FITB  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0351  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0168  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0122  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0120  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0120  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0120  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0119  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0120  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0120  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0120  
FL

Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0389  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0340  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0291  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0267  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0247  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0237  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0228  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0219  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0214  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0209  
FLIR  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0546  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0150  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0063  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0063  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0063  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0061  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0060  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0060  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0060  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0059  
FLR  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0560  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0098  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0052

```

Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0052
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0050
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0051
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0050
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0051
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0050
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0051
FLS
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0478
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0188
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0126
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0117
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0113
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0107
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0103
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0103
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0100
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0098
FMC
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0423
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0188
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0187
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0182
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0176
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0169

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Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0160  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0146  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0137  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0131  
FOX  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0392  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0178  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0174  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0168  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0151  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0137  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0120  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0114  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0114  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0111  
FOXA  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0338  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0129  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0109  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0109  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0106  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0106  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0107  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0107  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0106

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Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0106
FRT
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0565
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0153
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0112
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0107
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0104
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0103
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0101
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0099
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0099
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0099
FTI
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0242
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0127
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0112
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0107
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0103
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0101
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0099A: 0s - 1
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0099
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0097
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0093
GD
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0416
Epoch 2/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0187
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0174
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0177
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0172
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0164
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0158
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0151
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0144
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0143
GE
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0423
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0299
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0188
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0173
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0171
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0172
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0170
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0172
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0170
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0172
GGP
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0569
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0563
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0478
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0233
Epoch 5/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0117
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0114
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0109
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0107
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0105
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0103
GILD
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0360
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0119
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0115
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0117
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0116
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0114
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0114
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0112
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0112
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0114
GIS
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0553
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0548
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0538
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0531
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0492
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0411
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0328
Epoch 8/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0286
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0265
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0251
GLW
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0354
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0293
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0284
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0280
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0277
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0277
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0276
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0278
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0276
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0276
GM
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0577
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0149
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0143
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0129
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0120
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0106
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0098
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0092
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0093
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0089
GOOGL

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Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0423  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0356  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0359  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0355  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0353  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0355  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0357  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0355  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0356  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0355  
GPC  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0609  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0064  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0064  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0063  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0062  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0063  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0062  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0062  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0061  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0063  
GPN  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0477  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0123  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0110

Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0093  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0077  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0068  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0064  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0063  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0063  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0062  
GPS  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0551  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0379  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0280  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0212  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0161  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0136  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0128  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0123  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0119  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0115  
GRMN  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0416  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0382  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0379  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0379  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0378  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0376

Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0378  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0377  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0377  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0376  
GS  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0337  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0247  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0230  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0222  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0221  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0217  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0214  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0210  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0205  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0196  
GT  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0337  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0192  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0187  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0180  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0167  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0151  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0139  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0128  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0123

Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0122  
GWW

Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0488

Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0362A: 0s -  
loss

Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0269

Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0220

Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0202

Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0193

Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0188

Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0182

Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0177

Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0179

HAL

Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0603

Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0115

Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0106

Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0105

Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0105

Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0107

Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0103

Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0102

Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0098

Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0097

HAS

Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0342

Epoch 2/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0312  
 Epoch 3/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0298  
 Epoch 4/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0294  
 Epoch 5/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0291  
 Epoch 6/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0286  
 Epoch 7/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0283  
 Epoch 8/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0281  
 Epoch 9/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0279  
 Epoch 10/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0277  
 HBAN  
 Epoch 1/10  
 152/152 [=====] - 5s 4ms/step - loss: 0.0530  
 Epoch 2/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0458  
 Epoch 3/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0185  
 Epoch 4/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0094  
 Epoch 5/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0080  
 Epoch 6/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0075  
 Epoch 7/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0072  
 Epoch 8/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0069  
 Epoch 9/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0068  
 Epoch 10/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0066  
 HBI  
 Epoch 1/10  
 152/152 [=====] - 6s 4ms/step - loss: 0.0454  
 Epoch 2/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0186  
 Epoch 3/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0144  
 Epoch 4/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0144



Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0144  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0143  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0147  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0144  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0145  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0143  
HCA  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0412  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0354  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0273  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0245  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0240  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0232  
Epoch 7/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0221  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0212  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0197  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0186  
HCN  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0326  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0212  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0207  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0205  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0205  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0201  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0200

Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0204  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0204  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0199  
HCP  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0632  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0088  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0056  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0054  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0053  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0052  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0051  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0050  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0049  
Epoch 10/10  
152/152 [=====] - ETA: 0s - loss: 0.004 - 1s 4ms/step -  
loss: 0.0048  
HD  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0413  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0158  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0142  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0135  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0125  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0120  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0116  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0115  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0114  
Epoch 10/10

```

152/152 [=====] - 1s 4ms/step - loss: 0.0113
HES
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0470
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0195
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0144
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0143
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0141
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0141
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0142
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0141
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0140
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0138
HIG
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0512
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0143
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0124
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0122
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0122
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0120
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0120
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0120
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0120
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0119
HII
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0400
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0166

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Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0136  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0114  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0104  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0098  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0095  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0096  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0093  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0093  
HOG  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0581  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0121  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0086  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0084  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0084  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0080  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0077  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0074  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0071  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0070  
HOLX  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0398  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0128  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0123  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0124  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0122

Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0124  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0122  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0127  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0122  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0123  
HON  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0556  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0306  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0161  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0148  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0148  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0146  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0144  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0145  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0141  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0143  
HP  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0669  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0390  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0219  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0175  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0182  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0164  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0188  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0161

Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0159  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0159  
HRB  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0457  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0105  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0090  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0077  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0073  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0069  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0068  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0069  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0069  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0067  
HRL  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0360  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0139  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0120  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0107  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0102  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0102  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0101A: 0s -  
loss  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0101  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0098  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0098  
HRS

Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0455  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0122  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0119  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0118  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0116  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0117  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0117  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0114  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0115  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0116  
HSIC  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0466  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0243  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0221  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0172  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0129  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0103  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0094  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0091  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0090  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0086  
HST  
Epoch 1/10  
152/152 [=====] - 6s 6ms/step - loss: 0.0460  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0449  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0447

Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0448  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0448  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0446  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0444  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0443  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0437  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0423  
HSY  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0451  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0123  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0088  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0087  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0087  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0088  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0086  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0086  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0084  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0084  
HUM  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0421  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0167  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0149  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0146  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0140  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0135



Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0134  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0134  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0132  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0131  
IBM  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0516  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0177  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0104  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0085  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0081  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0082  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0076  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0077  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0073  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0069  
IDXX  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0334  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0132  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0130  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0132  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0132  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0132  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0132  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0134  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0131

Epoch 10/10  
152/152 [=====] - ETA: 0s - loss: 0.013 - 1s 4ms/step -  
loss: 0.0131  
IFF

Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0368

Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0353

Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0332

Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0306

Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0273

Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0209

Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0168

Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0161

Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0155

Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0150

ILMN

Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0537

Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0273

Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0198

Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0184

Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0175A: 0s - los

Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0161

Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0150

Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0135

Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0125

Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0120

INCY

Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0534

Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0455  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0439  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0429  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0415  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0365A: 0s - 1o  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0273  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0229  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0209  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0202  
INTC  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0399  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0146  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0138  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0136  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0135  
Epoch 6/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0132  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0129  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0127  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0121  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0118  
INTU  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0475  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0415  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0406  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0404

Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0402  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0398  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0382  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0275  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0112  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0090  
IP  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0460  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0180  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0157  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0155  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0152  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0153  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0153  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0154  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0151  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0150  
IPG  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0501  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0189  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0156  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0153  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0152  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0149  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0152

Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0152  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0149  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0150  
IQV  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0375  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0340  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0325  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0295  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0252  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0246  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0245  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0239  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0242  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0244  
IR  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0638  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0624  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0617  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0611  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0600  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0552  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0479  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0459  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0449  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0447

IRM

Epoch 1/10

152/152 [=====] - 5s 4ms/step - loss: 0.0369

Epoch 2/10

152/152 [=====] - 1s 4ms/step - loss: 0.0104

Epoch 3/10

152/152 [=====] - 1s 4ms/step - loss: 0.0103

Epoch 4/10

152/152 [=====] - 1s 4ms/step - loss: 0.0104

Epoch 5/10

152/152 [=====] - 1s 4ms/step - loss: 0.0103

Epoch 6/10

152/152 [=====] - 1s 4ms/step - loss: 0.0101

Epoch 7/10

152/152 [=====] - 1s 4ms/step - loss: 0.0102

Epoch 8/10

152/152 [=====] - 1s 4ms/step - loss: 0.0102

Epoch 9/10

152/152 [=====] - 1s 4ms/step - loss: 0.0100

Epoch 10/10

152/152 [=====] - 1s 4ms/step - loss: 0.0105

ISRG

Epoch 1/10

152/152 [=====] - 5s 4ms/step - loss: 0.0372

Epoch 2/10

152/152 [=====] - 1s 4ms/step - loss: 0.0121

Epoch 3/10

152/152 [=====] - 1s 4ms/step - loss: 0.0109

Epoch 4/10

152/152 [=====] - 1s 4ms/step - loss: 0.0108

Epoch 5/10

152/152 [=====] - 1s 4ms/step - loss: 0.0108

Epoch 6/10

152/152 [=====] - 1s 4ms/step - loss: 0.0106

Epoch 7/10

152/152 [=====] - 1s 4ms/step - loss: 0.0107

Epoch 8/10

152/152 [=====] - 1s 3ms/step - loss: 0.0105

Epoch 9/10

152/152 [=====] - 1s 4ms/step - loss: 0.0103

Epoch 10/10

152/152 [=====] - 1s 4ms/step - loss: 0.0106

IT

Epoch 1/10

152/152 [=====] - 6s 5ms/step - loss: 0.0505

Epoch 2/10

152/152 [=====] - 1s 4ms/step - loss: 0.0175

Epoch 3/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0123
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0114
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0110
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0111
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0106
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0106
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0107
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0104
ITW
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0526
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0263
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0241
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0238
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0228
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0213
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0173
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0112
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0093
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0086
IVZ
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0304
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0244
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0239
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0241
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0238
Epoch 6/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0239
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0236
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0238
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0238
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0237
JBHT
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0528
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0467
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0436
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0426
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0417
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0413
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0407
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0406A: 0s -
loss: 0.04
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0403
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0399
JCI
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0573
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0536
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0481
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0249
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0177
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0159
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0151
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0141

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Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0136  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0131  
JEC  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0355  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0202  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0176  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0168  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0166  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0167  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0159  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0158  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0163  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0154  
JNJ  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0319  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0313  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0313  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0312  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0311  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0312  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0310  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0311  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0310  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0311  
JNPR  
Epoch 1/10

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152/152 [=====] - 6s 4ms/step - loss: 0.0463
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0266
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0185
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0184
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0181
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0176
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0179
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0176
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0170
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0170
JPM
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0642
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0383
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0345
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0324
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0285
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0203
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0112
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0084
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0079
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0073
JWN
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0363
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0122
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0119
Epoch 4/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0115
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0112
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0111
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0108
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0105A: 0s - 1o
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0100
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0094
K
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0319
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0296
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0296
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0294
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0297
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0298
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0294
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0295
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0294
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0297
KEY
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0336
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0176
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0175
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0176
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0175
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0175
Epoch 7/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0173
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0172
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0174
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0174
KIM
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0428
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0420
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0409
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0390
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0356
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0271
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0199
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0158
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0143
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0138
KLAC
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0648
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0347
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0336
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0324
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0289
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0236
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0194
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0164
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0154
Epoch 10/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0147
KMB
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0597
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0278
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0240
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0188
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0117
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0057
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0046
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0043
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0042
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0040
KMI
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0652
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0625
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0603
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0563
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0486
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0426
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0368
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0289
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0191
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0167
KMX
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0348
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0284

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Epoch 3/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0283  
 Epoch 4/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0279  
 Epoch 5/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0279  
 Epoch 6/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0281  
 Epoch 7/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0279  
 Epoch 8/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0279  
 Epoch 9/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0279  
 Epoch 10/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0280  
 K0  
 Epoch 1/10  
 152/152 [=====] - 5s 4ms/step - loss: 0.0588  
 Epoch 2/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0163  
 Epoch 3/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0090  
 Epoch 4/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0086  
 Epoch 5/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0085  
 Epoch 6/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0082  
 Epoch 7/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0081  
 Epoch 8/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0080  
 Epoch 9/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0079  
 Epoch 10/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0078  
 KORS  
 Epoch 1/10  
 152/152 [=====] - 6s 4ms/step - loss: 0.0536  
 Epoch 2/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0236  
 Epoch 3/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0069  
 Epoch 4/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0060  
 Epoch 5/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0056

Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0054  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0051  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0051  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0050  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0051  
KR  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0439  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0331  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0320  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0304  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0303  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0286  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0236  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0169  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0118  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0086  
KSS  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0375  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0254  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0247  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0233  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0205  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0165  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0136  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0125

Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0121  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0120  
KSU  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0419  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0345  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0238  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0202  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0178  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0158  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0146  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0137  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0130  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0123  
L  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0726  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0447  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0181  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0155  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0146  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0140  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0135  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0129  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0124  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0123  
LB  
Epoch 1/10



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152/152 [=====] - 6s 4ms/step - loss: 0.0483
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0160
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0121
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0117
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0116
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0115
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0113
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0115
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0112
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0111
LEG
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0489
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0339
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0248
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0211
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0185
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0167
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0168
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0160
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0156
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0154
LEN
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0483
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0196
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0169
Epoch 4/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0164
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0164
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0161
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0159
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0159
Epoch 9/10
152/152 [=====] - 1s 3ms/step - loss: 0.0158A: 0s -
loss
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0155
LH
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0415
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0236
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0229
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0223
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0223
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0220
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0218
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0215
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0215
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0215
LKQ
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0535
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0269
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0183
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0142
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0145
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0137

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Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0136
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0139
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0133
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0131
LLL
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0445
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0188
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0100
Epoch 4/10
152/152 [=====] - ETA: 0s - loss: 0.009 - 1s 4ms/step -
loss: 0.0095
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0091
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0090
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0090
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0087
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0087
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0088
LLY
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0397
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0059
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0055
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0054
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0053
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0052
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0052
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0048
Epoch 9/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0046
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0044
LMT
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0334
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0327
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0317
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0319
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0315
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0316
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0317
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0317
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0316
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0315
LNC
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0239
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0099
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0092
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0091
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0090
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0091
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0089
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0088
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0089
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0088
LNT
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0647

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Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0181  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0100  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0095  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0092  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0088  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0087  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0085  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0084  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0083  
LOW  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0302  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0177  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0171  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0175  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0174  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0171  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0172  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0169  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0171  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0167  
LRCX  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0484  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0190  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0178  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0165

Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0151  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0140  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0135  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0126  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0124  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0120  
LUK  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0485  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0251  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0137  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0125  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0124  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0121  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0121  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0121  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0120  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0120  
LUV  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0487  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0408  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0396  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0391  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0393  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0391  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0390

Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0389  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0386  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0385  
LYB  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0572  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0214  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0172  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0152A: 0s - lo  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0133  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0097  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0071  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0062  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0058  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0056  
M  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0416  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0156  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0141  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0141A: 0s -  
loss  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0139  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0139  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0140  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0137  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0138  
Epoch 10/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0136
MA
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0367
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0090
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0088
Epoch 4/10
152/152 [=====] - 1s 5ms/step - loss: 0.0083
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0078
Epoch 6/10
152/152 [=====] - 1s 5ms/step - loss: 0.0072
Epoch 7/10
152/152 [=====] - 1s 5ms/step - loss: 0.0069
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0066
Epoch 9/10
152/152 [=====] - 1s 5ms/step - loss: 0.0067
Epoch 10/10
152/152 [=====] - 1s 5ms/step - loss: 0.0066
MAA
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0416
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0201
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0154
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0151
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0148
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0147
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0148
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0140
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0135
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0133
MAC
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0462
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0414

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Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0322  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0154  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0142  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0142  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0138  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0137  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0136  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0135  
MAR  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0382  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0100  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0099  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0101  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0096  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0098  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0098  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0097  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0102  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0097  
MAS  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0358  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0304  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0195  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0099  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0084

Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0073  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0066  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0062  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0060  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0059  
MAT  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0535  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0182  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0163  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0129  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0093  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0073  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0069  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0066  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0066  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0064  
MCD  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0476  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0292  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0156  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0088  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0084  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0081  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0086  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0080

Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0081  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0078  
MCHP  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0440  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0371  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0309  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0287  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0270  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0246  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0208  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0166  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0139  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0131  
MCK  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0500  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0388  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0246  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0192  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0193  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0192  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0191  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0190  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0190  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0188  
MCO  
Epoch 1/10

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152/152 [=====] - 6s 4ms/step - loss: 0.0478
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0195
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0181
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0176
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0175
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0172
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0163
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0161
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0155
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0153
MDLZ
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0433
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0170
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0137
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0132
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0129
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0127
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0127
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0125
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0125
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0124
MDT
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0516
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0346
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0329
Epoch 4/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0336
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0330
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0328
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0326
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0324
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0319
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0313
MET
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0416
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0416
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0415
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0415
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0414
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0409
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0288
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0126
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0109
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0110
MGM
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0582
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0178
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0144
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0140
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0138
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0135
Epoch 7/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0131
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0127
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0121
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0115
MHK
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0401
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0064
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0061
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0061
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0059
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0057
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0055
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0054
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0055
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0055
MKC
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0405
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0134
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0122
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0122
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0122
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0121
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0123
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0120
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0120
Epoch 10/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0118
MLM
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0432
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0143
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0141
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0143
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0138
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0138
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0130
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0121
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0108
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0091
MMC
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0477
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0265
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0262
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0256
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0252
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0253
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0249
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0245
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0237
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0224
MMM
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0712
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0158

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Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0079  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0077  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0076  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0075  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0074  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0074  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0074  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0074  
MNST  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0418  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0067  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0057  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0055  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0053  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0051  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0049  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0047  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0043  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0040  
M0  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0519  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0344  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0296  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0216  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0140



Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0108  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0103  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0101  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0102  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0105  
MON  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0627  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0098  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0092  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0081  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0064  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0054  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0053  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0054  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0050  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0051  
MOS  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0409  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0407  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0403  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0398  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0391  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0389  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0388  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0365

Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0323  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0272  
MPC  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0461  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0457  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0457  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0455  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0452  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0447  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0435  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0412  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0282  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0200  
MRK  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0524  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0111  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0087  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0080  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0076  
Epoch 6/10  
152/152 [=====] - 1s 3ms/step - loss: 0.0072  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0069  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0068  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0067  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0067  
MRO  
Epoch 1/10

```

152/152 [=====] - 5s 4ms/step - loss: 0.0420
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0420
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0419
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0419
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0418
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0415
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0416
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0415
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0416
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0416
MS
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0358
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0110
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0107
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0109
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0108
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0108
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0108
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0107
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0107
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0105
MSFT
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0438
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0248
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0185
Epoch 4/10

```

```

152/152 [=====] - 1s 4ms/step - loss: 0.0174
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0170
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0172
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0173
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0170
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0172
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0169
MSI
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0264
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0218
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0214
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0213
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0213
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0211
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0209
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0210
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0210
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0211
MTB
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0448
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0120
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0115
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0113
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0110
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0110
Epoch 7/10

```

```

152/152 [=====] - 1s 4ms/step - loss: 0.0104
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0101
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0092
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0077
MTD
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0693
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0324
Epoch 3/10
152/152 [=====] - 1s 5ms/step - loss: 0.0263
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0235
Epoch 5/10
152/152 [=====] - 1s 5ms/step - loss: 0.0190
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0102
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0072
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0070
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0067
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0068
MU
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0457
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0395
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0358
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0330
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0307
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0273
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0206
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0173
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0154
Epoch 10/10

```

```

152/152 [=====] - 1s 4ms/step - loss: 0.0143
MYL
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0573
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0141
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0073
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0071A: 0s - 1
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0069
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0072
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0070
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0071
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0069
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0069
NBL
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0777
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0506
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0267
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0216
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0192
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0168
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0153
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0135
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0121
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0118
NCLH
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0499
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0044

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Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0043  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0040  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0042  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0041  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0040  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0040  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0040  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0040  
NDAQ  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0380  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0130  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0127  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0130  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0129  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0127  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0129  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0127  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0126  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0125  
NEE  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0596  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0395  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0292  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0223  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0192

Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0179  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0170  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0161  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0149  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0131  
NEM  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0533  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0211  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0199  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0197  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0187  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0174  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0151  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0136  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0126  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0120  
NFLX  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0561  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0462  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0437  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0431  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0424  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0421  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0417  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0419



Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0411  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0408  
NFX  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0750  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0476  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0456  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0423  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0338  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0188  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0144  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0145  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0097  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0121  
NI  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0513  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0110  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0088  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0079  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0073  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0070  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0069  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0069  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0066  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0069  
NKE  
Epoch 1/10

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152/152 [=====] - 6s 4ms/step - loss: 0.0585
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0432
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0423
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0416
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0416
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0412
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0412
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0408
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0399
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0386
NLSN
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0417
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0037
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0036
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0035
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0037
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0033
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0033
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0033
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0032
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0032
NOC
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0705
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0097
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0045
Epoch 4/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0042
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0042
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0042
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0042
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0042
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0042
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0042
NOV
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0573
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0097
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0084
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0081
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0078
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0074
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0070
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0070
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0067
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0067
NRG
Epoch 1/10
152/152 [=====] - 6s 5ms/step - loss: 0.0482
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0417
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0410
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0382
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0295
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0186
Epoch 7/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0144
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0130
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0123
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0120
NSC
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0467
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0301
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0282
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0244
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0200
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0166
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0156
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0149
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0150
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0145
NTAP
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0322
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0235
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0220
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0218
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0215
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0214
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0213
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0211
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0210
Epoch 10/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0210
NTRS
Epoch 1/10
152/152 [=====] - 5s 5ms/step - loss: 0.0299
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0290
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0288
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0287
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0288
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0285
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0286
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0281
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0274
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0265
NUE
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0736
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0295
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0068
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0032
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0029
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0021
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0020
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0017
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0015
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0015
NVDA
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0421
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0112

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Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0108
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0112
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0107
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0112
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0108
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0108
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0109
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0107
NWL
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0453
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0162
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0160
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0159
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0160A: 0s - 1o
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0159
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0159
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0159
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0158
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0160
NWS
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0451
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0135
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0134
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0130
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0130

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Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0130A: 0s -  
loss: 0.  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0129  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0128  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0127  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0128  
NWSA  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0552  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0219  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0176  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0155  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0141  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0130  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0126  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0120  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0116  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0112  
OKE  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0432  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0234  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0215  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0215  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0212  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0213  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0210  
Epoch 8/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0213
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0215
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0210
OMC
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0355
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0349
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0344
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0344
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0344
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0343
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0343
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0343
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0342
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0341
ORCL
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0638
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0059
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0028
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0027
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0027
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0026
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0027
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0027
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0026
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0026
ORLY

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Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0477  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0166  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0111  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0107  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0103  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0104  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0099  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0101  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0099  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0099  
OXY  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0467  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0134  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0129  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0130  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0130  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0129  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0125  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0127  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0127  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0125  
PAYX  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0402  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0217  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0170

Epoch 4/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0168  
 Epoch 5/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0166  
 Epoch 6/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0166  
 Epoch 7/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0165  
 Epoch 8/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0164  
 Epoch 9/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0165  
 Epoch 10/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0164  
 PBCT  
 Epoch 1/10  
 152/152 [=====] - 6s 4ms/step - loss: 0.0480  
 Epoch 2/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0358  
 Epoch 3/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0351  
 Epoch 4/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0347  
 Epoch 5/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0336  
 Epoch 6/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0303  
 Epoch 7/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0226  
 Epoch 8/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0165  
 Epoch 9/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0145  
 Epoch 10/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0136  
 PCAR  
 Epoch 1/10  
 152/152 [=====] - 5s 4ms/step - loss: 0.0420  
 Epoch 2/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0140  
 Epoch 3/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0133  
 Epoch 4/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0133  
 Epoch 5/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0132  
 Epoch 6/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0129

Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0127  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0124  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0121  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0115  
PCG  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0327  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0191  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0169  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0161  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0159  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0160  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0160  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0161  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0160  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0169  
PCLN  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0695  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0497  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0335  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0291  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0282  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0278  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0277  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0280  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0275

Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0274  
PDC0

Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0335

Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0215

Epoch 3/10  
152/152 [=====] - ETA: 0s - loss: 0.018 - 1s 4ms/step -  
loss: 0.0189

Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0176

Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0174

Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0172

Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0172

Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0172

Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0173

Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0169

PEG

Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0346

Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0120

Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0106

Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0097

Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0096

Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0092

Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0087

Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0080

Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0071

Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0065

PEP

Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0453

Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0365  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0354  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0352  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0352  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0346  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0342  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0337  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0325  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0297  
PFE  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0375  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0370  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0370  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0370  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0369  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0369  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0370  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0369  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0369  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0369  
PFG  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0329  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0323  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0320  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0319

Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0318  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0317  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0314  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0309  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0303  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0281  
PG  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0437  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0074  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0069  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0070  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0069  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0067  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0067  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0066  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0067  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0065  
PGR  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0334  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0331  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0327  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0316  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0309  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0296  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0243

Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0125  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0097  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0095  
PH  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0338  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0333  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0331  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0329  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0328  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0328  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0327  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0328  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0326  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0327  
PHM  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0380  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0368  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0367  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0361  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0363  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0364  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0361  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0360  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0357  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0356

PKG

Epoch 1/10

152/152 [=====] - 6s 4ms/step - loss: 0.0417

Epoch 2/10

152/152 [=====] - 1s 4ms/step - loss: 0.0232

Epoch 3/10

152/152 [=====] - 1s 4ms/step - loss: 0.0226

Epoch 4/10

152/152 [=====] - 1s 4ms/step - loss: 0.0226

Epoch 5/10

152/152 [=====] - 1s 4ms/step - loss: 0.0225

Epoch 6/10

152/152 [=====] - 1s 4ms/step - loss: 0.0225

Epoch 7/10

152/152 [=====] - 1s 4ms/step - loss: 0.0227

Epoch 8/10

152/152 [=====] - 1s 4ms/step - loss: 0.0227

Epoch 9/10

152/152 [=====] - 1s 4ms/step - loss: 0.0229

Epoch 10/10

152/152 [=====] - 1s 4ms/step - loss: 0.0224

PKI

Epoch 1/10

152/152 [=====] - 5s 4ms/step - loss: 0.0520

Epoch 2/10

152/152 [=====] - 1s 4ms/step - loss: 0.0257

Epoch 3/10

152/152 [=====] - 1s 4ms/step - loss: 0.0172

Epoch 4/10

152/152 [=====] - 1s 4ms/step - loss: 0.0146

Epoch 5/10

152/152 [=====] - 1s 4ms/step - loss: 0.0146

Epoch 6/10

152/152 [=====] - 1s 4ms/step - loss: 0.0143

Epoch 7/10

152/152 [=====] - 1s 4ms/step - loss: 0.0134

Epoch 8/10

152/152 [=====] - 1s 4ms/step - loss: 0.0130

Epoch 9/10

152/152 [=====] - 1s 4ms/step - loss: 0.0130

Epoch 10/10

152/152 [=====] - 1s 4ms/step - loss: 0.0128

PLD

Epoch 1/10

152/152 [=====] - 6s 4ms/step - loss: 0.0503

Epoch 2/10

152/152 [=====] - 1s 4ms/step - loss: 0.0268

Epoch 3/10



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152/152 [=====] - 1s 4ms/step - loss: 0.0237
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0235
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0230
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0220
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0207
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0191
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0161
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0135
PM
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0402
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0297
Epoch 3/10
152/152 [=====] - ETA: 0s - loss: 0.025 - 1s 4ms/step -
loss: 0.0259
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0249
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0251
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0250
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0249
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0249
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0246
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0251
PNC
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0328
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0138
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0117
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0114
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0113

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Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0109  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0107  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0106  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0105  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0106  
PNR  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0473  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0155  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0153  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0150  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0153  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0152  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0154  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0152  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0151  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0155  
PNW  
Epoch 1/10  
152/152 [=====] - 6s 5ms/step - loss: 0.0511  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0504  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0504  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0503  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0502  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0501  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0491  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0436

Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0377  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0352  
PPG  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0436  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0375  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0371  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0370  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0371  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0372  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0372  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0371  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0371  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0367  
PPL  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0628  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0223  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0111  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0094  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0088  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0080  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0074  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0068  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0064  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0062  
PRGO  
Epoch 1/10

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152/152 [=====] - 5s 4ms/step - loss: 0.0241
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0235
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0230
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0227
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0226
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0224
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0223
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0222
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0221
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0218
PRU
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0453
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0150
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0127
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0108
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0095
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0090
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0087
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0083
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0081
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0079
PSA
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0224
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0202
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0204
Epoch 4/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0204
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0203
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0204
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0204
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0207
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0203
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0204
PSX
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0381
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0223
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0214
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0202
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0187
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0170
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0159
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0157
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0147
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0146
PVH
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0566
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0278
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0239
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0215
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0198
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0187
Epoch 7/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0176
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0175
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0168
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0163
PWR
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0529
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0231
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0180
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0163
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0139
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0123
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0109
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0102
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0101
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0096
PX
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0527
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0448
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0331
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0250
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0218
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0201
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0193
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0183
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0178
Epoch 10/10

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```

152/152 [=====] - 1s 4ms/step - loss: 0.0173
PXD
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0549
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0174
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0136
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0113
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0096
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0087
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0084
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0078
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0076
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0070
QCOM
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0445
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0161
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0137
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0133
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0130
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0127
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0129
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0126
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0124
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0125
RCL
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0241
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0094

```

```

Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0089
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0085
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0085
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0085
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0085
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0082
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0082
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0083
RE
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0341
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0129
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0126
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0125
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0125
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0124
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0127
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0125
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0124
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0125
REG
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0612
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0397
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0250
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0208
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0182

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Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0153  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0129  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0121  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0105  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0103  
REGN  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0271  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0245  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0245  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0245  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0244  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0244  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0243  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0245  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0244  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0243  
RF  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0658  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0566  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0459  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0384  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0225  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0117  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0100  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0098

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Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0097
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0092
RHI
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0573
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0264
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0146
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0139
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0135
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0132
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0128
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0125
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0123
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0121
RHT
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0296
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0268
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0260
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0256
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0254
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0251
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0241
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0216A: 0s -
loss
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0177
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0145
RJF

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Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0587  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0131  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0120  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0115  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0110  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0103  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0096  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0094  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0095  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0093  
RL  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0375  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0254  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0234  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0227  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0225  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0225  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0226  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0223  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0225  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0222  
RMD  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0305  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0305  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0305

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Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0305
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0305
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0304
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0293
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0274
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0244
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0208
R0K
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0419
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0126
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0105
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0105
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0105
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0106
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0105
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0104
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0106
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0106
R0P
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0412
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0087
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0083
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0082
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0079
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0078

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Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0078  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0071  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0069  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0062  
ROST  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0551  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0118  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0081  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0081  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0080  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0079  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0080  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0079  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0080  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0080  
RRC  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0329  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0047  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0046  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0045  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0044  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0044  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0043  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0043  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0043

Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0041  
RSG

Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0464

Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0063

Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0058

Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0056

Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0056

Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0056

Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0056

Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0055

Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0056

Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0054  
RTN

Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0482

Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0474

Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0402

Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0247

Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0214

Epoch 6/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0202

Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0190

Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0186

Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0180

Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0177  
SBAC

Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0630

Epoch 2/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0080
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0044
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0041
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0038
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0037
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0036
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0036
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0036
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0036
SBUX
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0496
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0126
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0119
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0121
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0119
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0118
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0117
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0117
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0116
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0117
SCG
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0349
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0264
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0253
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0250
Epoch 5/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0249
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0250
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0250
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0248
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0248
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0246
SCHW
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0483
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0134
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0107
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0108
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0104
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0103
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0101
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0097
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0095
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0092
SEE
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0531
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0262
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0148
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0140
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0137
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0136
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0134
Epoch 8/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0130
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0128
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0125
SHW
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0562
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0556
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0485
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0298
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0135
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0116
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0118
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0111
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0111
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0109
SIG
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0385
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0105
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0103
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0103
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0103
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0104
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0100
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0100
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0098
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0099
SJM

```

Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0350  
Epoch 2/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0209  
Epoch 3/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0181  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0165  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0148  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0139  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0136  
Epoch 8/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0131  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0129  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0128  
SLB  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0374  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0371  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0370  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0369  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0370  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0369  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0368  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0365  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0363  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0360  
SLG  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0467  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0141  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0068

Epoch 4/10  
 152/152 [=====] - 1s 5ms/step - loss: 0.0067  
 Epoch 5/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0067  
 Epoch 6/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0068  
 Epoch 7/10  
 152/152 [=====] - 1s 5ms/step - loss: 0.0066  
 Epoch 8/10  
 152/152 [=====] - 1s 5ms/step - loss: 0.0065  
 Epoch 9/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0065  
 Epoch 10/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0065  
 SNA  
 Epoch 1/10  
 152/152 [=====] - 6s 4ms/step - loss: 0.0407  
 Epoch 2/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0188  
 Epoch 3/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0139  
 Epoch 4/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0107  
 Epoch 5/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0083  
 Epoch 6/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0073  
 Epoch 7/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0070  
 Epoch 8/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0070  
 Epoch 9/10  
 152/152 [=====] - 1s 5ms/step - loss: 0.0070  
 Epoch 10/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0070  
 SNI  
 Epoch 1/10  
 152/152 [=====] - 6s 4ms/step - loss: 0.0490  
 Epoch 2/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0187  
 Epoch 3/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0179  
 Epoch 4/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0178  
 Epoch 5/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0174  
 Epoch 6/10  
 152/152 [=====] - 1s 5ms/step - loss: 0.0175

Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0172  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0170  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0163  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0160  
SNPS  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0457  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0281  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0275  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0275  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0275  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0273  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0271  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0276  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0272  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0269  
S0  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0356  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0181  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0178  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0177  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0176  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0177  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0176  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0177  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0176

Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0178  
SPG

Epoch 1/10  
152/152 [=====] - 6s 5ms/step - loss: 0.0462

Epoch 2/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0230

Epoch 3/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0224

Epoch 4/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0225

Epoch 5/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0221

Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0221

Epoch 7/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0214

Epoch 8/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0202

Epoch 9/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0183

Epoch 10/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0168  
SPGI

Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0562

Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0271

Epoch 3/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0121

Epoch 4/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0100

Epoch 5/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0089

Epoch 6/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0085

Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0074

Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0075

Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0066

Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0076  
SRCL

Epoch 1/10  
152/152 [=====] - 6s 5ms/step - loss: 0.0448

Epoch 2/10

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152/152 [=====] - 1s 5ms/step - loss: 0.0442
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0436
Epoch 4/10
152/152 [=====] - 1s 5ms/step - loss: 0.0434
Epoch 5/10
152/152 [=====] - 1s 5ms/step - loss: 0.0429
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0403
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0315
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0295
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0289
Epoch 10/10
152/152 [=====] - 1s 5ms/step - loss: 0.0280
SRE
Epoch 1/10
152/152 [=====] - 6s 5ms/step - loss: 0.0283
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0202
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0179
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0172
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0164
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0155
Epoch 7/10
152/152 [=====] - 1s 5ms/step - loss: 0.0137
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0131
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0115
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0117
STI
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0584
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0541
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0529
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0520
Epoch 5/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0518
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0520
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0517
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0515
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0517
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0516
STT
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0473
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0176
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0150
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0115
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0093
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0082
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0075
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0074
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0070
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0070
STX
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0482
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0032
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0028
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0028
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0029
Epoch 6/10
152/152 [=====] - 1s 5ms/step - loss: 0.0028
Epoch 7/10
152/152 [=====] - 1s 5ms/step - loss: 0.0028A: 0s
Epoch 8/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0028
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0028
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0028
STZ
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0367
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0118
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0117
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0118
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0116
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0116
Epoch 7/10
152/152 [=====] - 1s 5ms/step - loss: 0.0114
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0112
Epoch 9/10
152/152 [=====] - 1s 5ms/step - loss: 0.0113
Epoch 10/10
152/152 [=====] - 1s 5ms/step - loss: 0.0111
SWK
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0492
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0199
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0103
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0086
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0074
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0063
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0057
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0054
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0052
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0052
SWKS

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Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0380  
Epoch 2/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0091  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0091  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0091  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0091  
Epoch 6/10  
152/152 [=====] - ETA: 0s - loss: 0.008 - 1s 5ms/step -  
loss: 0.0089  
Epoch 7/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0087  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0089  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0088  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0086  
SYK  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0619  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0605  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0596  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0591  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0590  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0589  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0590  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0590  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0591  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0591  
SYMC  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0643  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0116  
Epoch 3/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0067
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0060
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0060
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0060
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0059
Epoch 8/10
152/152 [=====] - 1s 5ms/step - loss: 0.0061
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0060
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0057
SYN
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0630
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0310
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0227
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0209
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0199
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0182
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0171
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0159
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0147
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0133
T
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0386
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0090
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0093
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0089
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0090
Epoch 6/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0089
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0088
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0089A: 0s - 1o
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0088
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0087
TAP
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0383
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0122
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0121
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0120
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0121
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0121
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0119
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0118
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0117
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0120
TDG
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0422
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0417
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0405
Epoch 4/10
152/152 [=====] - 1s 5ms/step - loss: 0.0366
Epoch 5/10
152/152 [=====] - 1s 5ms/step - loss: 0.0340
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0330
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0318
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0306
Epoch 9/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0292
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0271
TEL
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0705
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0408
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0167
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0155
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0152
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0146
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0145
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0141
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0138
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0138
TGT
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0471
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0217
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0208
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0203
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0188
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0172
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0151
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0138
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0132
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0129
TIF
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0368

```

Epoch 2/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0105  
 Epoch 3/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0098  
 Epoch 4/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0096  
 Epoch 5/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0096  
 Epoch 6/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0096  
 Epoch 7/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0096  
 Epoch 8/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0099  
 Epoch 9/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0098  
 Epoch 10/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0096  
 TJX  
 Epoch 1/10  
 152/152 [=====] - 6s 4ms/step - loss: 0.0469  
 Epoch 2/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0229  
 Epoch 3/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0154  
 Epoch 4/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0144  
 Epoch 5/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0131  
 Epoch 6/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0127  
 Epoch 7/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0124  
 Epoch 8/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0118  
 Epoch 9/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0116  
 Epoch 10/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0118  
 TMK  
 Epoch 1/10  
 152/152 [=====] - 5s 4ms/step - loss: 0.0400  
 Epoch 2/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0130  
 Epoch 3/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0129  
 Epoch 4/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0125

Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0124  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0127  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0128  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0129  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0127  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0124  
TMO  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0362  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0303  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0286  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0248  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0173  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0160  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0157  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0158  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0157  
Epoch 10/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0155  
TPR  
Epoch 1/10  
152/152 [=====] - 6s 5ms/step - loss: 0.0361  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0182  
Epoch 3/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0179  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0181  
Epoch 5/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0180  
Epoch 6/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0181  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0178

Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0178  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0178  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0178  
TRIP  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0373  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0217  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0215  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0213  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0211  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0207  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0199  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0194  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0189  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0182  
TROW  
Epoch 1/10  
152/152 [=====] - 6s 5ms/step - loss: 0.0399  
Epoch 2/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0141  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0118  
Epoch 4/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0112  
Epoch 5/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0112  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0109  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0105  
Epoch 8/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0103  
Epoch 9/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0100  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0099

TRV

Epoch 1/10

152/152 [=====] - 6s 5ms/step - loss: 0.0734

Epoch 2/10

152/152 [=====] - 1s 4ms/step - loss: 0.0589

Epoch 3/10

152/152 [=====] - 1s 4ms/step - loss: 0.0410

Epoch 4/10

152/152 [=====] - 1s 4ms/step - loss: 0.0314

Epoch 5/10

152/152 [=====] - 1s 4ms/step - loss: 0.0292

Epoch 6/10

152/152 [=====] - 1s 5ms/step - loss: 0.0277

Epoch 7/10

152/152 [=====] - 1s 4ms/step - loss: 0.0263

Epoch 8/10

152/152 [=====] - 1s 4ms/step - loss: 0.0257

Epoch 9/10

152/152 [=====] - 1s 4ms/step - loss: 0.0249

Epoch 10/10

152/152 [=====] - 1s 4ms/step - loss: 0.0243

TSC0

Epoch 1/10

152/152 [=====] - 6s 5ms/step - loss: 0.0699

Epoch 2/10

152/152 [=====] - 1s 5ms/step - loss: 0.0116

Epoch 3/10

152/152 [=====] - 1s 5ms/step - loss: 0.0091

Epoch 4/10

152/152 [=====] - 1s 4ms/step - loss: 0.0083

Epoch 5/10

152/152 [=====] - 1s 4ms/step - loss: 0.0081

Epoch 6/10

152/152 [=====] - 1s 4ms/step - loss: 0.0079

Epoch 7/10

152/152 [=====] - 1s 4ms/step - loss: 0.0069

Epoch 8/10

152/152 [=====] - 1s 4ms/step - loss: 0.0062

Epoch 9/10

152/152 [=====] - 1s 5ms/step - loss: 0.0060

Epoch 10/10

152/152 [=====] - 1s 4ms/step - loss: 0.0058

TSN

Epoch 1/10

152/152 [=====] - 6s 5ms/step - loss: 0.0585

Epoch 2/10

152/152 [=====] - 1s 4ms/step - loss: 0.0103

Epoch 3/10



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152/152 [=====] - 1s 4ms/step - loss: 0.0102
Epoch 4/10
152/152 [=====] - 1s 5ms/step - loss: 0.0100
Epoch 5/10
152/152 [=====] - 1s 5ms/step - loss: 0.0100
Epoch 6/10
152/152 [=====] - 1s 5ms/step - loss: 0.0100
Epoch 7/10
152/152 [=====] - 1s 5ms/step - loss: 0.0099
Epoch 8/10
152/152 [=====] - 1s 5ms/step - loss: 0.0101
Epoch 9/10
152/152 [=====] - 1s 5ms/step - loss: 0.0099
Epoch 10/10
152/152 [=====] - 1s 5ms/step - loss: 0.0099
TSS
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0494
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0445
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0432
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0417
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0386
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0357
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0347
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0343
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0341
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0340
TWX
Epoch 1/10
152/152 [=====] - 6s 5ms/step - loss: 0.0437
Epoch 2/10
152/152 [=====] - 1s 5ms/step - loss: 0.0156
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0138
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0131
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0128
Epoch 6/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0126
Epoch 7/10
152/152 [=====] - 1s 5ms/step - loss: 0.0127
Epoch 8/10
152/152 [=====] - 1s 5ms/step - loss: 0.0124
Epoch 9/10
152/152 [=====] - 1s 5ms/step - loss: 0.0127
Epoch 10/10
152/152 [=====] - 1s 5ms/step - loss: 0.0119
TXN
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0389
Epoch 2/10
152/152 [=====] - 1s 5ms/step - loss: 0.0386
Epoch 3/10
152/152 [=====] - 1s 5ms/step - loss: 0.0385
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0383
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0380
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0369
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0350
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0342
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0332
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0316
TXT
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0446
Epoch 2/10
152/152 [=====] - 1s 5ms/step - loss: 0.0245
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0154
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0135
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0127
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0121
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0117
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0116
Epoch 9/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0116
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0114
UAA
Epoch 1/10
152/152 [=====] - 6s 5ms/step - loss: 0.0529
Epoch 2/10
152/152 [=====] - 1s 5ms/step - loss: 0.0478
Epoch 3/10
152/152 [=====] - 1s 5ms/step - loss: 0.0445
Epoch 4/10
152/152 [=====] - 1s 5ms/step - loss: 0.0415
Epoch 5/10
152/152 [=====] - 1s 5ms/step - loss: 0.0385
Epoch 6/10
152/152 [=====] - 1s 5ms/step - loss: 0.0369
Epoch 7/10
152/152 [=====] - 1s 5ms/step - loss: 0.0363
Epoch 8/10
152/152 [=====] - 1s 5ms/step - loss: 0.0354
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0329
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0265
UAL
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0417
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0108
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0064
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0063
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0063
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0064
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0063
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0063
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0063
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0062
UDR
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0485

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Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0239  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0152  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0149  
Epoch 5/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0151  
Epoch 6/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0147  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0150  
Epoch 8/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0147  
Epoch 9/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0149  
Epoch 10/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0149  
UHS  
Epoch 1/10  
152/152 [=====] - 6s 5ms/step - loss: 0.0517  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0065  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0062  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0061  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0060  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0060  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0060  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0060  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0061  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0056  
ULTA  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0359  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0072  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0067  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0066

Epoch 5/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0066  
 Epoch 6/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0064  
 Epoch 7/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0062  
 Epoch 8/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0059  
 Epoch 9/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0057  
 Epoch 10/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0051  
 UNH  
 Epoch 1/10  
 152/152 [=====] - 6s 5ms/step - loss: 0.0186  
 Epoch 2/10  
 152/152 [=====] - 1s 5ms/step - loss: 0.0185  
 Epoch 3/10  
 152/152 [=====] - 1s 5ms/step - loss: 0.0183  
 Epoch 4/10  
 152/152 [=====] - 1s 5ms/step - loss: 0.0180  
 Epoch 5/10  
 152/152 [=====] - 1s 5ms/step - loss: 0.0176  
 Epoch 6/10  
 152/152 [=====] - 1s 5ms/step - loss: 0.0169  
 Epoch 7/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0152  
 Epoch 8/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0115  
 Epoch 9/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0095  
 Epoch 10/10  
 152/152 [=====] - 1s 5ms/step - loss: 0.0099  
 UNM  
 Epoch 1/10  
 152/152 [=====] - 6s 5ms/step - loss: 0.0493  
 Epoch 2/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0452  
 Epoch 3/10  
 152/152 [=====] - 1s 5ms/step - loss: 0.0441  
 Epoch 4/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0443  
 Epoch 5/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0439  
 Epoch 6/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0439  
 Epoch 7/10  
 152/152 [=====] - 1s 4ms/step - loss: 0.0438

Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0429  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0392  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0196  
UNP  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0324  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0239  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0211  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0179  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0170  
Epoch 6/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0167  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0166  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0166  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0170  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0165  
UPS  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0530  
Epoch 2/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0385  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0341  
Epoch 4/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0271  
Epoch 5/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0211  
Epoch 6/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0179  
Epoch 7/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0172  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0166  
Epoch 9/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0166  
Epoch 10/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0163

URI

Epoch 1/10

152/152 [=====] - 5s 4ms/step - loss: 0.0303

Epoch 2/10

152/152 [=====] - 1s 4ms/step - loss: 0.0248

Epoch 3/10

152/152 [=====] - 1s 4ms/step - loss: 0.0235

Epoch 4/10

152/152 [=====] - 1s 4ms/step - loss: 0.0231

Epoch 5/10

152/152 [=====] - 1s 4ms/step - loss: 0.0230

Epoch 6/10

152/152 [=====] - 1s 4ms/step - loss: 0.0230

Epoch 7/10

152/152 [=====] - 1s 5ms/step - loss: 0.0230

Epoch 8/10

152/152 [=====] - 1s 4ms/step - loss: 0.0230

Epoch 9/10

152/152 [=====] - 1s 4ms/step - loss: 0.0230

Epoch 10/10

152/152 [=====] - 1s 4ms/step - loss: 0.0228

USB

Epoch 1/10

152/152 [=====] - 6s 5ms/step - loss: 0.0498A: 0s -  
loss: 0

Epoch 2/10

152/152 [=====] - 1s 4ms/step - loss: 0.0368

Epoch 3/10

152/152 [=====] - 1s 5ms/step - loss: 0.0355

Epoch 4/10

152/152 [=====] - 1s 4ms/step - loss: 0.0332

Epoch 5/10

152/152 [=====] - 1s 4ms/step - loss: 0.0287

Epoch 6/10

152/152 [=====] - 1s 4ms/step - loss: 0.0228

Epoch 7/10

152/152 [=====] - 1s 5ms/step - loss: 0.0192

Epoch 8/10

152/152 [=====] - 1s 4ms/step - loss: 0.0178

Epoch 9/10

152/152 [=====] - 1s 4ms/step - loss: 0.0170

Epoch 10/10

152/152 [=====] - 1s 4ms/step - loss: 0.0169

UTX

Epoch 1/10

152/152 [=====] - 5s 4ms/step - loss: 0.0592

Epoch 2/10

152/152 [=====] - 1s 3ms/step - loss: 0.0103

```

Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0081
Epoch 4/10
152/152 [=====] - 1s 3ms/step - loss: 0.0081
Epoch 5/10
152/152 [=====] - 1s 3ms/step - loss: 0.0079
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0081
Epoch 7/10
152/152 [=====] - 1s 3ms/step - loss: 0.0079
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0080
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0078
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0080
V
Epoch 1/10
152/152 [=====] - ETA: 0s - loss: 0.040 - 5s 4ms/step -
loss: 0.0409
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0389
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0385
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0376
Epoch 5/10
152/152 [=====] - ETA: 0s - loss: 0.036 - 1s 4ms/step -
loss: 0.0363
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0330
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0299
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0277
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0247
Epoch 10/10
152/152 [=====] - 1s 3ms/step - loss: 0.0215
VAR
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0625
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0585
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0435
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0390

```



Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0345  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0268  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0188  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0151  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0142  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0143  
VFC  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0602  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0058  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0056  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0056  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0055  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0055  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0056  
Epoch 8/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0056  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0056  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0057  
VIAB  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0503  
Epoch 2/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0391  
Epoch 3/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0366  
Epoch 4/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0333  
Epoch 5/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0293  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0255  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0239

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Epoch 8/10
152/152 [=====] - 1s 5ms/step - loss: 0.0235
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0233
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0232
VLO
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0425
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0065
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0065
Epoch 4/10
152/152 [=====] - 1s 5ms/step - loss: 0.0065
Epoch 5/10
152/152 [=====] - 1s 5ms/step - loss: 0.0063
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0063
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0064
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0064
Epoch 9/10
152/152 [=====] - 1s 5ms/step - loss: 0.0063
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0064
VMC
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0265
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0249
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0245
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0244
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0244
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0245
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0245
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0245
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0245
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0245

```

VNO

Epoch 1/10

152/152 [=====] - 6s 4ms/step - loss: 0.0497

Epoch 2/10

152/152 [=====] - 1s 4ms/step - loss: 0.0125

Epoch 3/10

152/152 [=====] - 1s 4ms/step - loss: 0.0113

Epoch 4/10

152/152 [=====] - 1s 4ms/step - loss: 0.0112

Epoch 5/10

152/152 [=====] - 1s 4ms/step - loss: 0.0112

Epoch 6/10

152/152 [=====] - 1s 4ms/step - loss: 0.0112

Epoch 7/10

152/152 [=====] - 1s 5ms/step - loss: 0.0111

Epoch 8/10

152/152 [=====] - 1s 5ms/step - loss: 0.0114

Epoch 9/10

152/152 [=====] - 1s 5ms/step - loss: 0.0114

Epoch 10/10

152/152 [=====] - 1s 5ms/step - loss: 0.0111

VRSK

Epoch 1/10

152/152 [=====] - 6s 5ms/step - loss: 0.0493

Epoch 2/10

152/152 [=====] - 1s 5ms/step - loss: 0.0128

Epoch 3/10

152/152 [=====] - 1s 4ms/step - loss: 0.0115

Epoch 4/10

152/152 [=====] - 1s 4ms/step - loss: 0.0104

Epoch 5/10

152/152 [=====] - 1s 4ms/step - loss: 0.0093

Epoch 6/10

152/152 [=====] - 1s 5ms/step - loss: 0.0091

Epoch 7/10

152/152 [=====] - 1s 5ms/step - loss: 0.0086

Epoch 8/10

152/152 [=====] - 1s 4ms/step - loss: 0.0082

Epoch 9/10

152/152 [=====] - 1s 4ms/step - loss: 0.0082

Epoch 10/10

152/152 [=====] - 1s 4ms/step - loss: 0.0082

VRSN

Epoch 1/10

152/152 [=====] - 6s 4ms/step - loss: 0.0669

Epoch 2/10

152/152 [=====] - 1s 4ms/step - loss: 0.0668

Epoch 3/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0667
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0666
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0604
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0297
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0144
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0133
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0126
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0125
VRTX
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0420
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0419
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0419
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0420
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0419
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0419
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0419
Epoch 8/10
152/152 [=====] - 1s 5ms/step - loss: 0.0419
Epoch 9/10
152/152 [=====] - 1s 5ms/step - loss: 0.0419
Epoch 10/10
152/152 [=====] - 1s 5ms/step - loss: 0.0419A: 0s -
VTR
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0373
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0322
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0313A: 0s - 1o
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0302
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0298
Epoch 6/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0302
Epoch 7/10
152/152 [=====] - 1s 5ms/step - loss: 0.0290
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0295
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0295
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0289
VZ
Epoch 1/10
152/152 [=====] - 6s 5ms/step - loss: 0.0389
Epoch 2/10
152/152 [=====] - 1s 5ms/step - loss: 0.0141
Epoch 3/10
152/152 [=====] - 1s 5ms/step - loss: 0.0139
Epoch 4/10
152/152 [=====] - 1s 5ms/step - loss: 0.0141
Epoch 5/10
152/152 [=====] - 1s 5ms/step - loss: 0.0138
Epoch 6/10
152/152 [=====] - 1s 5ms/step - loss: 0.0142
Epoch 7/10
152/152 [=====] - 1s 5ms/step - loss: 0.0138
Epoch 8/10
152/152 [=====] - 1s 5ms/step - loss: 0.0139
Epoch 9/10
152/152 [=====] - 1s 5ms/step - loss: 0.0138
Epoch 10/10
152/152 [=====] - 1s 5ms/step - loss: 0.0139
WAT
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0441
Epoch 2/10
152/152 [=====] - 1s 3ms/step - loss: 0.0229
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0162
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0145
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0132
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0115
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0105
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0100
Epoch 9/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0097
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0096
WBA
Epoch 1/10
152/152 [=====] - 7s 5ms/step - loss: 0.0524
Epoch 2/10
152/152 [=====] - 1s 5ms/step - loss: 0.0187
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0158
Epoch 4/10
152/152 [=====] - 1s 5ms/step - loss: 0.0126
Epoch 5/10
152/152 [=====] - 1s 5ms/step - loss: 0.0091
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0070
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0065
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0062
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0058
Epoch 10/10
152/152 [=====] - 1s 5ms/step - loss: 0.0058
WDC
Epoch 1/10
152/152 [=====] - 6s 5ms/step - loss: 0.0396
Epoch 2/10
152/152 [=====] - 1s 5ms/step - loss: 0.0156
Epoch 3/10
152/152 [=====] - 1s 5ms/step - loss: 0.0153
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0152
Epoch 5/10
152/152 [=====] - 1s 5ms/step - loss: 0.0153
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0152
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0155
Epoch 8/10
152/152 [=====] - 1s 5ms/step - loss: 0.0151
Epoch 9/10
152/152 [=====] - 1s 5ms/step - loss: 0.0151
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0150
WEC
Epoch 1/10
152/152 [=====] - 6s 5ms/step - loss: 0.0573

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Epoch 2/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0572  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0571  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0571  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0570  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0565  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0545  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0445  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0297  
Epoch 10/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0268  
WFC  
Epoch 1/10  
152/152 [=====] - 6s 5ms/step - loss: 0.0514  
Epoch 2/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0470  
Epoch 3/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0422  
Epoch 4/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0378  
Epoch 5/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0354  
Epoch 6/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0317  
Epoch 7/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0250  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0195  
Epoch 9/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0169  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0165  
WHR  
Epoch 1/10  
152/152 [=====] - 6s 5ms/step - loss: 0.0451  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0096  
Epoch 3/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0089  
Epoch 4/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0085

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Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0084
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0085
Epoch 7/10
152/152 [=====] - 1s 5ms/step - loss: 0.0085
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0083
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0082
Epoch 10/10
152/152 [=====] - 1s 5ms/step - loss: 0.0078A: 0s -
loss:
WM
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0554
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0311
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0301
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0267
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0192
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0118
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0089
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0083
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0081
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0079
WMB
Epoch 1/10
152/152 [=====] - 6s 5ms/step - loss: 0.0377
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0303
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0298
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0296
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0285
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0251
Epoch 7/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0164
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0081
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0068
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0063
WMT
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0447
Epoch 2/10
152/152 [=====] - 1s 5ms/step - loss: 0.0272
Epoch 3/10
152/152 [=====] - 1s 5ms/step - loss: 0.0254
Epoch 4/10
152/152 [=====] - 1s 5ms/step - loss: 0.0250
Epoch 5/10
152/152 [=====] - 1s 5ms/step - loss: 0.0251
Epoch 6/10
152/152 [=====] - 1s 5ms/step - loss: 0.0248
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0249
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0248
Epoch 9/10
152/152 [=====] - 1s 5ms/step - loss: 0.0249
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0246
WU
Epoch 1/10
152/152 [=====] - 6s 5ms/step - loss: 0.0337
Epoch 2/10
152/152 [=====] - 1s 5ms/step - loss: 0.0296
Epoch 3/10
152/152 [=====] - 1s 5ms/step - loss: 0.0285
Epoch 4/10
152/152 [=====] - 1s 5ms/step - loss: 0.0279
Epoch 5/10
152/152 [=====] - 1s 5ms/step - loss: 0.0280
Epoch 6/10
152/152 [=====] - 1s 5ms/step - loss: 0.0281
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0282
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0278
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0280
Epoch 10/10

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152/152 [=====] - 1s 4ms/step - loss: 0.0281
WY
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0439
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0391
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0350
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0339
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0334
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0278
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0149
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0115
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0105
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0104
WYN
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0564
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0154
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0044
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0039
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0036
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0034
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0034
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0032
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0032
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0032
WYNN
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0423
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0418

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Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0419  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0419  
Epoch 5/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0420  
Epoch 6/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0419  
Epoch 7/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0418  
Epoch 8/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0419  
Epoch 9/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0418  
Epoch 10/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0418  
XEC  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0334  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0105  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0104  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0103  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0103  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0101  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0102  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0101  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0105  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0101  
XEL  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0397  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0313  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0176  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0140  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0129

Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0120  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0116  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0110  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0110  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0106  
XL  
Epoch 1/10  
152/152 [=====] - 5s 4ms/step - loss: 0.0316  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0272  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0235  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0190  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0168  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0164  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0162  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0155  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0154  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0150  
XLNX  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0409  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0199  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0148  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0126  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0111  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0101  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0096  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0094

Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0093  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0092  
XOM  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0505  
Epoch 2/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0122  
Epoch 3/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0117  
Epoch 4/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0118  
Epoch 5/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0116  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0117  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0114  
Epoch 8/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0114  
Epoch 9/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0112  
Epoch 10/10  
152/152 [=====] - 1s 5ms/step - loss: 0.0115  
XRAY  
Epoch 1/10  
152/152 [=====] - 6s 4ms/step - loss: 0.0601  
Epoch 2/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0313  
Epoch 3/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0287  
Epoch 4/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0270  
Epoch 5/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0229  
Epoch 6/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0175  
Epoch 7/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0136  
Epoch 8/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0119  
Epoch 9/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0107  
Epoch 10/10  
152/152 [=====] - 1s 4ms/step - loss: 0.0093  
XRX  
Epoch 1/10

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152/152 [=====] - 5s 3ms/step - loss: 0.0523
Epoch 2/10
152/152 [=====] - 1s 3ms/step - loss: 0.0214
Epoch 3/10
152/152 [=====] - 1s 3ms/step - loss: 0.0066
Epoch 4/10
152/152 [=====] - 1s 3ms/step - loss: 0.0049
Epoch 5/10
152/152 [=====] - 1s 3ms/step - loss: 0.0051
Epoch 6/10
152/152 [=====] - 1s 3ms/step - loss: 0.0049
Epoch 7/10
152/152 [=====] - 1s 3ms/step - loss: 0.0048
Epoch 8/10
152/152 [=====] - 1s 3ms/step - loss: 0.0048
Epoch 9/10
152/152 [=====] - 1s 3ms/step - loss: 0.0049
Epoch 10/10
152/152 [=====] - 1s 3ms/step - loss: 0.0047
XYL
Epoch 1/10
152/152 [=====] - 6s 4ms/step - loss: 0.0484
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0479
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0475
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0466
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0462
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0458
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0455
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0455
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0455
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0452
YUM
Epoch 1/10
152/152 [=====] - 5s 3ms/step - loss: 0.0625
Epoch 2/10
152/152 [=====] - 1s 3ms/step - loss: 0.0492
Epoch 3/10
152/152 [=====] - 1s 3ms/step - loss: 0.0465
Epoch 4/10

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152/152 [=====] - 1s 3ms/step - loss: 0.0463
Epoch 5/10
152/152 [=====] - 1s 3ms/step - loss: 0.0460
Epoch 6/10
152/152 [=====] - 1s 3ms/step - loss: 0.0460
Epoch 7/10
152/152 [=====] - 1s 3ms/step - loss: 0.0457
Epoch 8/10
152/152 [=====] - 1s 3ms/step - loss: 0.0456
Epoch 9/10
152/152 [=====] - 1s 3ms/step - loss: 0.0455
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0453
ZBH
Epoch 1/10
152/152 [=====] - 5s 4ms/step - loss: 0.0267
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0233
Epoch 3/10
152/152 [=====] - 1s 4ms/step - loss: 0.0231
Epoch 4/10
152/152 [=====] - 1s 4ms/step - loss: 0.0230
Epoch 5/10
152/152 [=====] - 1s 4ms/step - loss: 0.0228
Epoch 6/10
152/152 [=====] - 1s 4ms/step - loss: 0.0228
Epoch 7/10
152/152 [=====] - 1s 4ms/step - loss: 0.0227
Epoch 8/10
152/152 [=====] - 1s 4ms/step - loss: 0.0227
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0225
Epoch 10/10
152/152 [=====] - 1s 4ms/step - loss: 0.0225
ZION
Epoch 1/10
152/152 [=====] - 5s 3ms/step - loss: 0.0511
Epoch 2/10
152/152 [=====] - 1s 4ms/step - loss: 0.0162
Epoch 3/10
152/152 [=====] - 1s 3ms/step - loss: 0.0107
Epoch 4/10
152/152 [=====] - 1s 3ms/step - loss: 0.0098
Epoch 5/10
152/152 [=====] - 1s 3ms/step - loss: 0.0095
Epoch 6/10
152/152 [=====] - 1s 3ms/step - loss: 0.0091
Epoch 7/10

```

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152/152 [=====] - 1s 4ms/step - loss: 0.0086
Epoch 8/10
152/152 [=====] - 1s 3ms/step - loss: 0.0081
Epoch 9/10
152/152 [=====] - 1s 4ms/step - loss: 0.0078
Epoch 10/10
152/152 [=====] - 1s 3ms/step - loss: 0.0077
ZTS

```

[164]: 120229

```
[165]: Ytest = X_Test_Lstm['close'].tolist()
```

```
[166]: MSE_lstm = mean_squared_error(Ytest,predi)
MSE_lstm
```

[166]: 2630.508193655047

```
[167]: from prettytable import PrettyTable
x = PrettyTable()
x.field_names = ["Model", "MSE"]
x.add_row(["Linear Regression",6.587946089200638e+38])
x.add_row(["Fb Prophet",937.42])
x.add_row(["Neural Prophet",961.298])
x.add_row(["LSTM",2630.50])
print(x)
```

Model	MSE
Linear Regression	6.587946089200638e+38
Fb Prophet	937.42
Neural Prophet	961.298
LSTM	2630.5

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