Capstone / CapstoneProject.ipynb

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Ferdinand Beaman Capstone Project April 2024

My students often ask what I'm doing "in school", and more than once I've gotten this response when I tell them:

"That sounds *boooring*"

But when I say "That's because you didn't try to predict stock prices yet",that always raises the eyebrows.

"Day trader" is a surprisingly common self-identifier, despite the fact that most people who try their hand at is are overwhelmingly bad at it. The stock market, on the whole, climbs up in value year after year. But, depending on the source, it's assumed that anywhere between 90 and 99% of people who take part in day trading lose money. My personal hypothesis? Human beings are overconfident pattern seekers and would benefit greatly from some scientific rigor. They learn trading "strategies" that involve reading what may amount to just tea leaves, and lose. Beyond the fallability of humans, there is also the theory of the "Efficient-market hypothesis" in the way.

However, neural networks may have the power to make this a viable path. While a NN may not have access to the latest news on Elon Musk or global pandemics, and thus have poor predictive powers long term, they may have the ability to sift through the chaos over shorter timescales and do well. After all, in any given hour it's unlikely that a CEO will get caught for insider trading or a boat will get stuck in a canal and shut down global trade for days.

> Here stands my business problem: Can I use new stock price information (up to an hour old) to predict impending prices for a client, live?

The data I'm using comes from https://firstratedata.com/, but in the interest of reprodicibility I should mention that their free samples seem to be tied to the day you request for them. My sample covered an 11 day span of minute-to-minute data beginning near the end of February 2024. (Due to this small sample, I didn't feel the need to account for any cyclical trends).

The seven stocks I chose were based on two criteria: 1) there needed to be enough volume to give the models the best chance and 2) they were in largely different fields.

I chose to use GRU as my NN based on this paper:
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9141105/#:~:text=2.4.-,Recurrent%20Neural%20Networks%2
This ended up paying off quite a bit since some of my cells took over an hour to run. I would not want to rerun them with something more computationally demanding, like an LTSM.

I used a "walk forward" strategy to train my models, and used 5 different step-sizes: 25, 34, 45, 60, and 80 minutes (each step down is a 25% reduction). It quickly became apparent that the 80 minute models didn't have enough room to make enough steps for training and were scrapped midway through.

1.0 Data Exploration and Preprocessing

In [2]:
```
import pandas as pd
import matplotlib.pyplot as plt
# !pip install numpy==1.23.0
# One of the later cells refused to function with the newest numpy
import numpy as np

from sklearn.metrics import mean_squared_error as mse
```

```
from sklearn.preprocessing import StandardScaler

from datetime import datetime as dt

from keras.models import Sequential
from keras.layers import *
from keras.losses import MeanSquaredError
from keras.metrics import RootMeanSquaredError
from keras.optimizers import Adam
from keras.callbacks import EarlyStopping
from keras.layers import GRU
from keras.callbacks import ModelCheckpoint

import tensorflow as tf
import keras
```

In [3]:
```
print(np.__version__) # I found that it works up to ver 1.25.2
```

```
1.25.2
```

In [4]:
```
#American Airlines
df_aal = pd.read_csv("https://raw.githubusercontent.com/FerdinandBeaman/Capstone/main/1Mi
#Fed Ex
df_fdx = pd.read_csv("https://raw.githubusercontent.com/FerdinandBeaman/Capstone/main/1Mi
#Fidelity National
df_fis = pd.read_csv("https://raw.githubusercontent.com/FerdinandBeaman/Capstone/main/1Mi
#Macy's
df_mcy = pd.read_csv("https://raw.githubusercontent.com/FerdinandBeaman/Capstone/main/1Mi
#Sprint
df_spr = pd.read_csv("https://raw.githubusercontent.com/FerdinandBeaman/Capstone/main/1Mi
#Starbucks
df_sbx = pd.read_csv("https://raw.githubusercontent.com/FerdinandBeaman/Capstone/main/1Mi
#Tesla
df_tsl = pd.read_csv("https://raw.githubusercontent.com/FerdinandBeaman/Capstone/main/1Mi

all_dfs = [df_aal, df_fdx, df_fis, df_mcy, df_sbx, df_spr, df_tsl]
```

In [5]:
```
# Example data
all_dfs[0].head()
```

Out[5]:

	timestamp	open	high	low	close	volume
0	2024-02-26 04:03:00	15.10	15.10	15.10	15.10	999
1	2024-02-26 04:04:00	15.10	15.11	15.10	15.11	200
2	2024-02-26 04:10:00	15.09	15.09	15.09	15.09	372
3	2024-02-26 04:13:00	15.09	15.09	15.09	15.09	100
4	2024-02-26 04:30:00	15.09	15.09	15.09	15.09	142

How many data points do I have?

In [6]:
```
for df in all_dfs:
    print(len(df))
```

```
5700
4231
4396
5595
4776
5050
10005
```

Tesla is a fairly popular name in the Zeitgeist here in 2024, so it's no surprise that it shows more

Tesla is a fairly popular name in the zeitgeist here in 2024, so it's no surprise that it shows more movement than anyone else.

In [7]:
```
# Converting the dfs into datetime data
for df in all_dfs:
    df['timestamp'] = pd.to_datetime(df['timestamp'])
```

In [8]:
```
#Checking for null entries
for df in all_dfs:
  print(df.isnull().sum())
  print("\n")
```

```
timestamp    0
open         0
high         0
low          0
close        0
volume       0
dtype: int64


timestamp    0
open         0
high         0
low          0
close        0
volume       0
dtype: int64


timestamp    0
open         0
high         0
low          0
close        0
volume       0
dtype: int64


timestamp    0
open         0
high         0
low          0
close        0
volume       0
dtype: int64


timestamp    0
open         0
high         0
low          0
close        0
volume       0
dtype: int64


timestamp    0
open         0
high         0
low          0
close        0
volume       0
dtype: int64


timestamp    0
open         0
```

```
open         0
high         0
low          0
close        0
volume       0
dtype: int64
```

Instead of having null entries, the less popular stocks just don't have rows where nothing happened. Later on, this is addressed by forward-filling.

Ahead, I found the most exclusive boundaries (the latest starting time and the earliest ending time) so I could make all of my data uniform in length.

In [9]:
```
for df in all_dfs:
    print(df["timestamp"][0])
```

```
2024-02-26 04:03:00
2024-02-26 06:09:00
2024-02-26 06:06:00
2024-02-26 04:41:00
2024-02-26 08:00:00
2024-02-26 04:00:00
2024-02-26 04:00:00
```

In [10]:
```
for df in all_dfs:
    print(df["timestamp"].iloc[-1])
```

```
2024-03-11 19:44:00
2024-03-11 18:11:00
2024-03-11 16:00:00
2024-03-11 19:39:00
2024-03-11 19:04:00
2024-03-11 19:38:00
2024-03-11 19:54:00
```

8am on the 26th and 4pm on the 11th.

In [11]:
```
for df in all_dfs:
    df.set_index('timestamp', inplace=True)
```

In [12]:
```
#Finally ffilling the dfs, the last serious precursor to concatenation
for i, df in enumerate(all_dfs):
    all_dfs[i] = df.resample("1min").asfreq().ffill()
```

In [13]:
```
for i, df in enumerate(all_dfs):
    all_dfs[i] = df['2024-02-26 08:00' : "2024-03-11 16:00" ]
```

In [14]:
```
# Just removing superfluous columns
for i, df in enumerate(all_dfs):
    all_dfs[i].drop(["high", "low", "close"], axis = 1, inplace = True)
```

In [15]:
```
seven_dfs = pd.concat(all_dfs, axis=1)
```

Woops, didn't realize that the columns would all now have the same names.

In [16]:
```
## There appears to be an update to the "set_axis" method, and now it no longer
## accepts the "inplace" parameter. So I had to switch to using .iloc() instead
```

```
# cols = ["open_1", "volume_1", "open_2", "volume_2", "open_3",
#                    "volume_3", "open_4", "volume_4", "open_5", "volume_5",
#                    "open_6", "volume_6", "open_7", "volume_7"]

# seven_dfs.set_axis(cols, axis = 1, inplace = True)
```

To prevent long stretches of time where the price doesn't change by much from ruining my experiment, I removed all of the after-hours data.

In [17]:
```
seven_dfs["hour"] = np.nan
for i in range(len(seven_dfs)):
  seven_dfs["hour"][i] = seven_dfs.index[i].hour

seven_dfs["day"] = np.nan
for i in range(len(seven_dfs)):
  seven_dfs["day"][i] = seven_dfs.index[i].dayofweek


seven_dfs.drop(seven_dfs[(seven_dfs["hour"] < 8) |
                         (seven_dfs["hour"] > 15)].index, inplace = True)
seven_dfs.drop(seven_dfs[seven_dfs["day"] > 4].index, inplace = True)
```

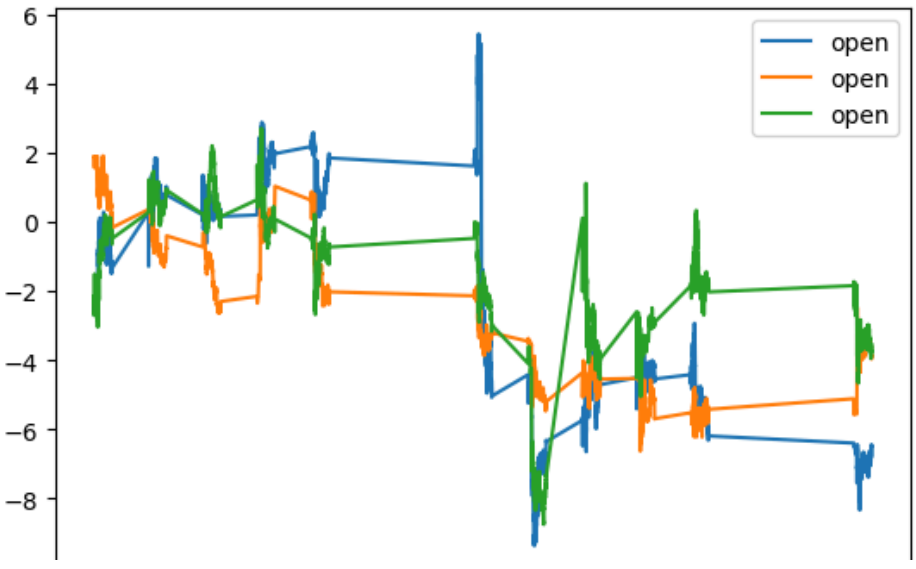
I only used the first day and a half's worth of data to scale everything else.

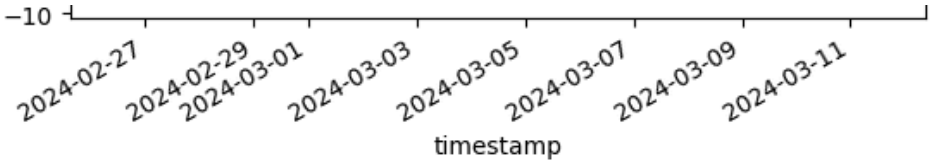
In [18]:
```
# Getting the first one and a half days of data for the initial training set
# to scale my data. If I only used the first few hours, there probably would not
# be enough variance in that small of a pool for the StD to be sensible.

prices = [0, 2, 4, 6, 8, 10, 12] # the location of the "open" columns

train_36_hrs = seven_dfs['2024-02-26 08:00' : "2024-02-28 12:00"].copy()

scaler = StandardScaler()

train_36_hrs.iloc[:, prices] = scaler.fit(train_36_hrs.iloc[:,prices])
seven_dfs.iloc[:, prices] = scaler.transform(seven_dfs.iloc[:,prices])
```

So what does this all look like now? Here's a sample:

In [19]:
```
# Some arbitrary columns
seven_dfs.iloc[:, [0, 8, 10]].plot()
```

Out[19]: <Axes: xlabel='timestamp'>





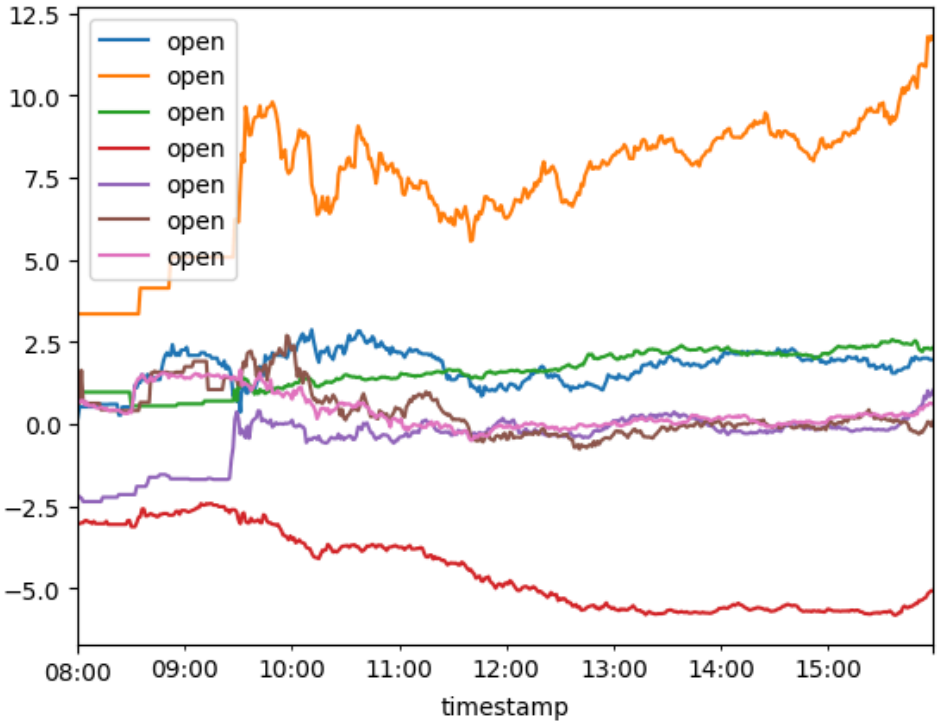
Those long horizontal lines frightened me half to death when I first saw them, but it turns out to not be bad at all (except visually). The graph still includes those after-hours times in the x-axis even though there's no price there. This means that in reality those long bars are just illustrating the difference between two adjacent data points which happen to be far apart in real time.

This was good to see, as there's no obvious pattern to what happens to prices during those times.

How much does a stock's price tend to move through the day? I should know what I'm working with to make sure that the predictions I'm trying to make have the potential to be meaningful.

In [20]:
```
# Over the course of one day:
seven_dfs.iloc[:,prices][1440:1920].plot()
```

Out[20]: <Axes: xlabel='timestamp'>

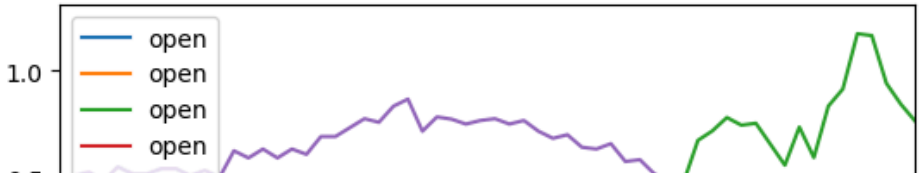


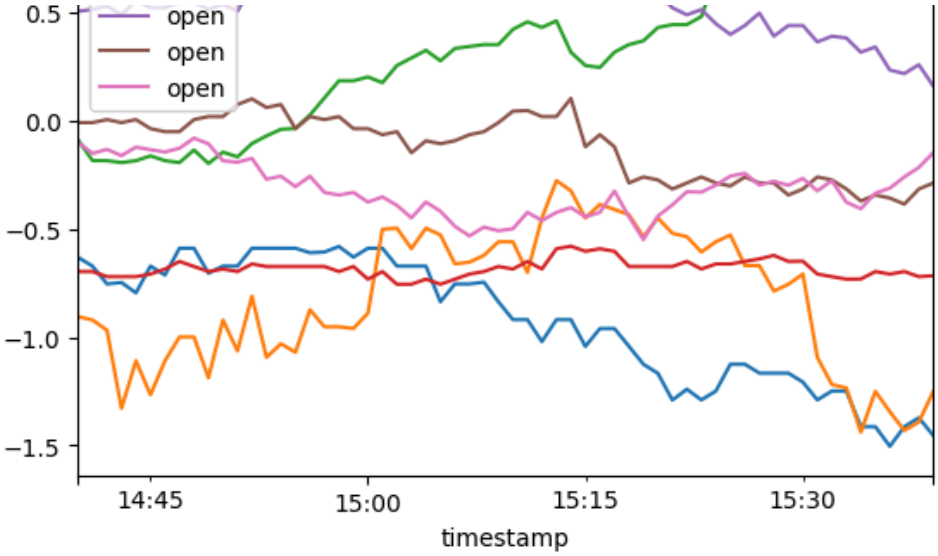
There is a lack of normal activity in the first hour or so of my current window. I set my early boundary to be 9am after looking at a few more slices.

In the meantime, I have yet to see if it's even meaningful to guess how much

In [21]:
```
seven_dfs.iloc[:,prices][400:460].plot()
```

Out[21]: <Axes: xlabel='timestamp'>



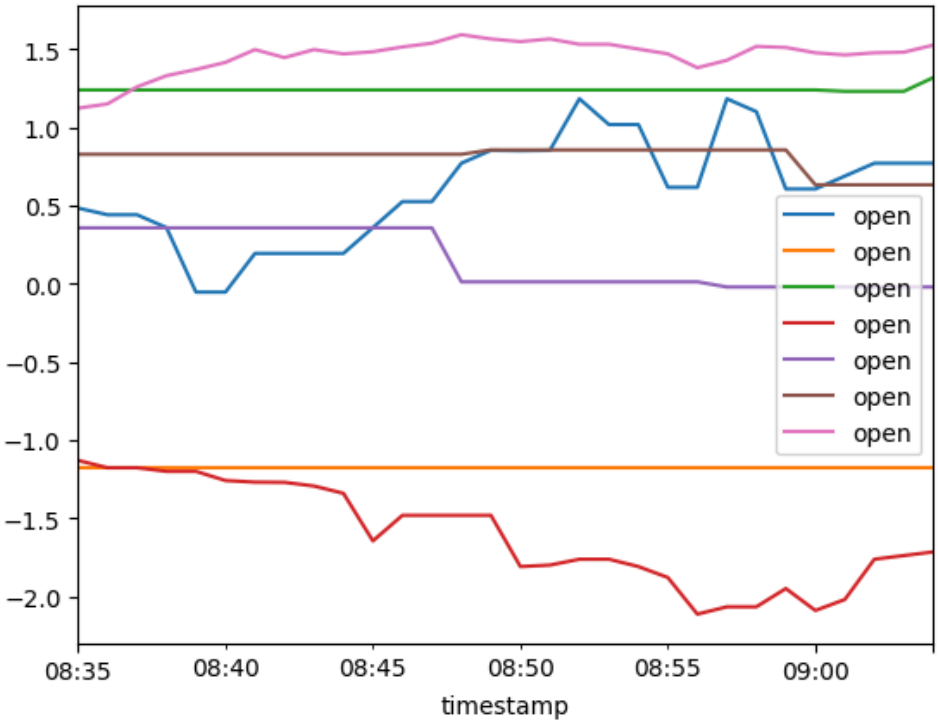


Sometimes, quite a bit! The price tracked by either the green or the blue line changed by an entire standard deviation in about 50 minutes.

What about in an arbitrary half-hour?

In [22]:
```
seven_dfs.iloc[:,prices][515:545].plot()
```

Out[22]: <Axes: xlabel='timestamp'>



This time, it's the red and orange lines that are most on the move.

That was all promising. And before I had a chance to forget, I removed the first hour's prices from the list.

In [23]:
```
seven_dfs.drop(seven_dfs[seven_dfs["hour"] < 9].index, inplace = True)
```

Which left me with this many data points for prices:

In [24]:

In [24]:
```
len(seven_dfs)*7
```

Out[24]: 32340

2.0 Building the Model

In [25]:
```
# Code repurposed from Greg Hogg: https://www.youtube.com/watch?v=c0k-YLQGKjY
def df_to_Xy(df, window):
  df_np = df.to_numpy()
  X = []
  y = []
  for i in range(0, len(df)-window, window):
    row = [a for a in df_np[i:i+window]]
    X.append(row)
    y.append(df_np[i+window][[0,2,4,6,8,10,12]]) # y is just the 7 price cols
  return np.array(X), np.array(y,dtype=np.float32)
```

In [26]:
```
X25, y25 = df_to_Xy(seven_dfs, 25)
X34, y34 = df_to_Xy(seven_dfs, 34)
X45, y45 = df_to_Xy(seven_dfs, 45)
X60, y60 = df_to_Xy(seven_dfs, 60)
```

In [27]:
```
X_train25, y_train25 = X25[:129], y25[:129] #Just over 70% of the data
X_val25, y_val25 = X25[129:157], y25[129:157]
X_test25, y_test25 = X25[157:], y25[157:]

X_train34, y_train34 = X34[:95], y34[:95]
X_val34, y_val34 = X34[95:115], y34[95:115]
X_test34, y_test34 = X34[115:], y34[115:]

X_train45, y_train45 = X45[:72], y45[:72]
X_val45, y_val45 = X45[72:87], y45[72:87]
X_test45, y_test45 = X45[87:], y45[87:]

X_train60, y_train60 = X60[:55], y60[:55]
X_val60, y_val60 = X60[55:65], y60[55:65]
X_test60, y_test60 = X60[65:], y60[65:]
```

Below are just the functions used for graphing. In order, they will: show a particular prediction and price in dollars; show all of a model's predictions and prices but scaled; and show the training/validation loss curves.

In [36]:
```
def pred_plot_real(model, X, y, col):
  preds = scaler.inverse_transform(model.predict(X))[:,col]
  actuals = scaler.inverse_transform(y)[:,col]
  df = pd.DataFrame(data={"Predictions":preds, "Actuals":actuals})
  plt.plot(df["Predictions"][:], label = "Predictions")
  plt.plot(df["Actuals"][:], label = "Actuals")
  plt.legend()
  plt.xlabel("Step Number")
  plt.ylabel("Price in Dollars")
  plt.show()

def pred_plot_all(model, X, y):
  fig, ((ax1, ax2), (ax3, ax4), (ax5, ax6), (ax7, ax8)) = plt.subplots(4, 2)
  fig.set_figheight(22)
  fig.set_figwidth(15)
  axes = [ax1, ax2, ax3, ax4, ax5, ax6, ax7]
  for i, ax in enumerate(axes):
    actual = y[:,i].flatten()
    preds = model.predict(X)[:,i].flatten()
```

```
    ax = ax
    ax.plot(preds)
    ax.plot(actual)
    ax.legend(["Prediction", "Actual"])
    plt.legend()
  plt.show()

def plot_error(history):
  hist_dict = history.history
  rmse = hist_dict["root_mean_squared_error"]
  v_rmse = hist_dict["val_root_mean_squared_error"]
  df = pd.DataFrame(data={"Train_error":rmse, "Val_Error":v_rmse})
  plt.plot(df["Train_error"][:], label = "Train error")
  plt.plot(df["Val_Error"][:], label = "Val Error")
  plt.title('Training and Validation Loss')
  plt.xlabel('Epochs')
  plt.ylabel('Loss')
  plt.legend()
```

I chose two variables to adjust, and each one has two states:

Learning rate, which is either Default (0.0001) or Fast (0.01). Number of hidden layers: Short (2) vs Long (4)

In [29]:

```
# All of the training and validation datasets
the_X_trains = [X_train25, X_train34, X_train45, X_train60]
the_y_trains = [y_train25, y_train34, y_train45, y_train60]

the_X_vals = [X_val25, X_val34, X_val45, X_val60]
the_y_vals = [y_val25, y_val34, y_val45, y_val60]


## Instantiating models, checkpoints, and what will be their histories,
## then putting all of them in lists

# Default/Short
mod_25_DeSh = Sequential()
mod_34_DeSh = Sequential()
mod_45_DeSh = Sequential()
mod_60_DeSh = Sequential()

cp_25_DeSh = ModelCheckpoint("model_25_DeSh/", save_best_only=True)
cp_34_DeSh = ModelCheckpoint("model_34_DeSh/", save_best_only=True)
cp_45_DeSh = ModelCheckpoint("model_45_DeSh/", save_best_only=True)
cp_60_DeSh = ModelCheckpoint("model_60_DeSh/", save_best_only=True)

hist_25_DeSh = None
hist_34_DeSh = None
hist_45_DeSh = None
hist_60_DeSh = None

mods_DeSh = [mod_25_DeSh, mod_34_DeSh, mod_45_DeSh, mod_60_DeSh]

cps_DeSh = [cp_25_DeSh, cp_34_DeSh, cp_45_DeSh, cp_60_DeSh]

hists_DeSh = [hist_25_DeSh, hist_34_DeSh, hist_45_DeSh, hist_60_DeSh]

# Fast/Short
mod_25_FaSh = Sequential()
mod_34_FaSh = Sequential()
mod_45_FaSh = Sequential()
mod_60_FaSh = Sequential()

cp_25_FaSh = ModelCheckpoint("model_25_FaSh/", save_best_only=True)
cp_34_FaSh = ModelCheckpoint("model_34_FaSh/", save_best_only=True)
cp_45_FaSh = ModelCheckpoint("model_45_FaSh/", save_best_only=True)
cp_60_FaSh = ModelCheckpoint("model_60_FaSh/", save_best_only=True)
```

```
hist_25_FaSh = None
hist_34_FaSh = None
hist_45_FaSh = None
hist_60_FaSh = None

mods_FaSh = [mod_25_FaSh, mod_34_FaSh, mod_45_FaSh, mod_60_FaSh]

cps_FaSh = [cp_25_FaSh, cp_34_FaSh, cp_45_FaSh, cp_60_FaSh]

hists_FaSh = [hist_25_FaSh, hist_34_FaSh, hist_45_FaSh, hist_60_FaSh]

# Default/Long
mod_25_DeLo = Sequential()
mod_34_DeLo = Sequential()
mod_45_DeLo = Sequential()
mod_60_DeLo = Sequential()

cp_25_DeLo = ModelCheckpoint("model_25_DeLo/", save_best_only=True)
cp_34_DeLo = ModelCheckpoint("model_34_DeLo/", save_best_only=True)
cp_45_DeLo = ModelCheckpoint("model_45_DeLo/", save_best_only=True)
cp_60_DeLo = ModelCheckpoint("model_60_DeLo/", save_best_only=True)

hist_25_DeLo = None
hist_34_DeLo = None
hist_45_DeLo = None
hist_60_DeLo = None

mods_DeLo = [mod_25_DeLo, mod_34_DeLo, mod_45_DeLo, mod_60_DeLo]

cps_DeLo = [cp_25_DeLo, cp_34_DeLo, cp_45_DeLo, cp_60_DeLo]

hists_DeLo = [hist_25_DeLo, hist_34_DeLo, hist_45_DeLo, hist_60_DeLo]

# Fast/Long
mod_25_FaLo = Sequential()
mod_34_FaLo = Sequential()
mod_45_FaLo = Sequential()
mod_60_FaLo = Sequential()

cp_25_FaLo = ModelCheckpoint("model_25_FaLo/", save_best_only=True)
cp_34_FaLo = ModelCheckpoint("model_34_FaLo/", save_best_only=True)
cp_45_FaLo = ModelCheckpoint("model_45_FaLo/", save_best_only=True)
cp_60_FaLo = ModelCheckpoint("model_60_FaLo/", save_best_only=True)

hist_25_FaLo = None
hist_34_FaLo = None
hist_45_FaLo = None
hist_60_FaLo = None

mods_FaLo = [mod_25_FaLo, mod_34_FaLo, mod_45_FaLo, mod_60_FaLo]

cps_FaLo = [cp_25_FaLo, cp_34_FaLo, cp_45_FaLo, cp_60_FaLo]

hists_FaLo = [hist_25_FaLo, hist_34_FaLo, hist_45_FaLo, hist_60_FaLo]
```

I gave models with a fast learning rate a maximum of 30 epochs to train, but few if any needed that long. The default learning rate-models were given 300 epochs, and many of them could have used even *more* time.

Model type 1: Default LR, Shorter Network

In [30]:

```
# Default and Short models
for i, n in enumerate([25, 34, 45, 60]):
  mods_DeSh[i].add(InputLayer((n,16)))
  mods_DeSh[i].add(GRU(64))
  mods_DeSh[i].add(Dense(16, "relu"))
```

```
    mods_DeSh[i].add(Dense(14, "relu"))
    mods_DeSh[i].add(Dense(7, "linear"))

    mods_DeSh[i].compile(loss=MeanSquaredError(),
                         optimizer=Adam(learning_rate=.0001),
                         metrics=[RootMeanSquaredError()])

    print("Default and Short, samples = " + str(n))
    hists_DeSh[i] = mods_DeSh[i].fit(the_X_trains[i], the_y_trains[i],
        validation_data=(the_X_vals[i], the_y_vals[i]), epochs = 300,
        callbacks = [cps_DeSh[i], EarlyStopping(patience=5, start_from_epoch=10)])

    print("\n")
    print("\n")
```

```
Default and Short, samples = 25
Epoch 1/300
5/5 [==============================] - 10s 1s/step - loss: 15.6266 - root_mean_squared_err
or: 3.9530 - val_loss: 40.2035 - val_root_mean_squared_error: 6.3406
Epoch 2/300
5/5 [==============================] - 4s 904ms/step - loss: 15.5570 - root_mean_squared_e
rror: 3.9442 - val_loss: 40.0491 - val_root_mean_squared_error: 6.3284
Epoch 3/300
5/5 [==============================] - 4s 878ms/step - loss: 15.5090 - root_mean_squared_e
rror: 3.9381 - val_loss: 39.9583 - val_root_mean_squared_error: 6.3213
Epoch 4/300
5/5 [==============================] - 4s 1s/step - loss: 15.4596 - root_mean_squared_erro
r: 3.9319 - val_loss: 39.8498 - val_root_mean_squared_error: 6.3127
Epoch 5/300
5/5 [==============================] - 4s 1s/step - loss: 15.3848 - root_mean_squared_erro
r: 3.9223 - val_loss: 39.6985 - val_root_mean_squared_error: 6.3007
Epoch 6/300
5/5 [==============================] - 4s 878ms/step - loss: 15.3349 - root_mean_squared_e
rror: 3.9160 - val_loss: 39.6403 - val_root_mean_squared_error: 6.2961
Epoch 7/300
5/5 [==============================] - 4s 1s/step - loss: 15.2968 - root_mean_squared_erro
r: 3.9111 - val_loss: 39.4745 - val_root_mean_squared_error: 6.2829
Epoch 8/300
5/5 [==============================] - 4s 1s/step - loss: 15.2599 - root_mean_squared_erro
r: 3.9064 - val_loss: 39.3543 - val_root_mean_squared_error: 6.2733
Epoch 9/300
5/5 [==============================] - 3s 856ms/step - loss: 15.2241 - root_mean_squared_e
rror: 3.9018 - val_loss: 39.2705 - val_root_mean_squared_error: 6.2666
Epoch 10/300
5/5 [==============================] - 4s 1s/step - loss: 15.1970 - root_mean_squared_erro
r: 3.8983 - val_loss: 39.1852 - val_root_mean_squared_error: 6.2598
Epoch 11/300
5/5 [==============================] - 4s 1s/step - loss: 15.1570 - root_mean_squared_erro
r: 3.8932 - val_loss: 39.1059 - val_root_mean_squared_error: 6.2535
Epoch 12/300
5/5 [==============================] - 4s 893ms/step - loss: 15.1256 - root_mean_squared_e
rror: 3.8892 - val_loss: 39.0333 - val_root_mean_squared_error: 6.2477
Epoch 13/300
5/5 [==============================] - 4s 1s/step - loss: 15.0962 - root_mean_squared_erro
r: 3.8854 - val_loss: 38.9672 - val_root_mean_squared_error: 6.2424
Epoch 14/300
5/5 [==============================] - 4s 1s/step - loss: 15.0705 - root_mean_squared_erro
r: 3.8821 - val_loss: 38.9046 - val_root_mean_squared_error: 6.2374
Epoch 15/300
5/5 [==============================] - 3s 853ms/step - loss: 15.0438 - root_mean_squared_e
rror: 3.8786 - val_loss: 38.8416 - val_root_mean_squared_error: 6.2323
Epoch 16/300
5/5 [==============================] - 4s 961ms/step - loss: 15.0149 - root_mean_squared_e
rror: 3.8749 - val_loss: 38.7722 - val_root_mean_squared_error: 6.2267
Epoch 17/300
5/5 [==============================] - 4s 1s/step - loss: 14.9861 - root_mean_squared_erro
r: 3.8712 - val_loss: 38.7058 - val_root_mean_squared_error: 6.2214
Epoch 18/300
5/5 [==============================] - 3s 826ms/step - loss: 14.9587 - root_mean_squared_e
rror: 3.8677 - val_loss: 38.6465 - val_root_mean_squared_error: 6.2166
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Epoch 19/300
5/5 [==============================] - 3s 841ms/step - loss: 14.9318 - root_mean_squared_e
rror: 3.8642 - val_loss: 38.5858 - val_root_mean_squared_error: 6.2117
Epoch 20/300
5/5 [==============================] - 5s 1s/step - loss: 14.9033 - root_mean_squared_erro
r: 3.8605 - val_loss: 38.5216 - val_root_mean_squared_error: 6.2066
Epoch 21/300
5/5 [==============================] - 3s 861ms/step - loss: 14.8727 - root_mean_squared_e
rror: 3.8565 - val_loss: 38.4662 - val_root_mean_squared_error: 6.2021
Epoch 22/300
5/5 [==============================] - 3s 855ms/step - loss: 14.8424 - root_mean_squared_e
rror: 3.8526 - val_loss: 38.4102 - val_root_mean_squared_error: 6.1976
Epoch 23/300
5/5 [==============================] - 4s 1s/step - loss: 14.8129 - root_mean_squared_erro
r: 3.8488 - val_loss: 38.3526 - val_root_mean_squared_error: 6.1929
Epoch 24/300
5/5 [==============================] - 4s 1s/step - loss: 14.7830 - root_mean_squared_erro
r: 3.8449 - val_loss: 38.2975 - val_root_mean_squared_error: 6.1885
Epoch 25/300
5/5 [==============================] - 3s 847ms/step - loss: 14.7534 - root_mean_squared_e
rror: 3.8410 - val_loss: 38.2410 - val_root_mean_squared_error: 6.1839
Epoch 26/300
5/5 [==============================] - 4s 1s/step - loss: 14.7240 - root_mean_squared_erro
r: 3.8372 - val_loss: 38.1735 - val_root_mean_squared_error: 6.1785
Epoch 27/300
5/5 [==============================] - 4s 978ms/step - loss: 14.6943 - root_mean_squared_e
rror: 3.8333 - val_loss: 38.0932 - val_root_mean_squared_error: 6.1720
Epoch 28/300
5/5 [==============================] - 3s 847ms/step - loss: 14.6614 - root_mean_squared_e
rror: 3.8290 - val_loss: 38.0223 - val_root_mean_squared_error: 6.1662
Epoch 29/300
5/5 [==============================] - 5s 1s/step - loss: 14.6324 - root_mean_squared_erro
r: 3.8252 - val_loss: 37.9586 - val_root_mean_squared_error: 6.1611
Epoch 30/300
5/5 [==============================] - 4s 872ms/step - loss: 14.6053 - root_mean_squared_e
rror: 3.8217 - val_loss: 37.9043 - val_root_mean_squared_error: 6.1566
Epoch 31/300
5/5 [==============================] - 3s 853ms/step - loss: 14.5805 - root_mean_squared_e
rror: 3.8184 - val_loss: 37.8561 - val_root_mean_squared_error: 6.1527
Epoch 32/300
5/5 [==============================] - 4s 917ms/step - loss: 14.5560 - root_mean_squared_e
rror: 3.8152 - val_loss: 37.8056 - val_root_mean_squared_error: 6.1486
Epoch 33/300
5/5 [==============================] - 5s 1s/step - loss: 14.5305 - root_mean_squared_erro
r: 3.8119 - val_loss: 37.7397 - val_root_mean_squared_error: 6.1433
Epoch 34/300
5/5 [==============================] - 3s 840ms/step - loss: 14.4992 - root_mean_squared_e
rror: 3.8078 - val_loss: 37.6744 - val_root_mean_squared_error: 6.1380
Epoch 35/300
5/5 [==============================] - 3s 847ms/step - loss: 14.4695 - root_mean_squared_e
rror: 3.8039 - val_loss: 37.6080 - val_root_mean_squared_error: 6.1325
Epoch 36/300
5/5 [==============================] - 5s 1s/step - loss: 14.4411 - root_mean_squared_erro
r: 3.8001 - val_loss: 37.5498 - val_root_mean_squared_error: 6.1278
Epoch 37/300
5/5 [==============================] - 3s 858ms/step - loss: 14.4121 - root_mean_squared_e
rror: 3.7963 - val_loss: 37.4861 - val_root_mean_squared_error: 6.1226
Epoch 38/300
5/5 [==============================] - 3s 870ms/step - loss: 14.3838 - root_mean_squared_e
rror: 3.7926 - val_loss: 37.4189 - val_root_mean_squared_error: 6.1171
Epoch 39/300
5/5 [==============================] - 5s 1s/step - loss: 14.3536 - root_mean_squared_erro
r: 3.7886 - val_loss: 37.3602 - val_root_mean_squared_error: 6.1123
Epoch 40/300
5/5 [==============================] - 3s 849ms/step - loss: 14.3271 - root_mean_squared_e
rror: 3.7851 - val_loss: 37.3046 - val_root_mean_squared_error: 6.1077
Epoch 41/300
5/5 [==============================] - 3s 842ms/step - loss: 14.2971 - root_mean_squared_e
rror: 3.7812 - val_loss: 37.2462 - val_root_mean_squared_error: 6.1030
Epoch 42/300
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5/5 [==============================] - 5s 1s/step - loss: 14.2648 - root_mean_squared_erro
r: 3.7769 - val_loss: 37.1740 - val_root_mean_squared_error: 6.0971
Epoch 43/300
5/5 [==============================] - 3s 856ms/step - loss: 14.2298 - root_mean_squared_e
rror: 3.7722 - val_loss: 37.0977 - val_root_mean_squared_error: 6.0908
Epoch 44/300
5/5 [==============================] - 3s 815ms/step - loss: 14.1939 - root_mean_squared_e
rror: 3.7675 - val_loss: 37.0377 - val_root_mean_squared_error: 6.0859
Epoch 45/300
5/5 [==============================] - 5s 1s/step - loss: 14.1601 - root_mean_squared_erro
r: 3.7630 - val_loss: 36.9805 - val_root_mean_squared_error: 6.0812
Epoch 46/300
5/5 [==============================] - 3s 850ms/step - loss: 14.1286 - root_mean_squared_e
rror: 3.7588 - val_loss: 36.9226 - val_root_mean_squared_error: 6.0764
Epoch 47/300
5/5 [==============================] - 3s 835ms/step - loss: 14.0932 - root_mean_squared_e
rror: 3.7541 - val_loss: 36.8650 - val_root_mean_squared_error: 6.0717
Epoch 48/300
5/5 [==============================] - 4s 880ms/step - loss: 14.0525 - root_mean_squared_e
rror: 3.7487 - val_loss: 36.7700 - val_root_mean_squared_error: 6.0638
Epoch 49/300
5/5 [==============================] - 5s 1s/step - loss: 14.0119 - root_mean_squared_erro
r: 3.7433 - val_loss: 36.6860 - val_root_mean_squared_error: 6.0569
Epoch 50/300
5/5 [==============================] - 3s 837ms/step - loss: 13.9636 - root_mean_squared_e
rror: 3.7368 - val_loss: 36.5787 - val_root_mean_squared_error: 6.0480
Epoch 51/300
5/5 [==============================] - 3s 859ms/step - loss: 13.9222 - root_mean_squared_e
rror: 3.7312 - val_loss: 36.4932 - val_root_mean_squared_error: 6.0410
Epoch 52/300
5/5 [==============================] - 5s 1s/step - loss: 13.8921 - root_mean_squared_erro
r: 3.7272 - val_loss: 36.4120 - val_root_mean_squared_error: 6.0342
Epoch 53/300
5/5 [==============================] - 3s 863ms/step - loss: 13.8536 - root_mean_squared_e
rror: 3.7220 - val_loss: 36.3212 - val_root_mean_squared_error: 6.0267
Epoch 54/300
5/5 [==============================] - 3s 863ms/step - loss: 13.8130 - root_mean_squared_e
rror: 3.7166 - val_loss: 36.2369 - val_root_mean_squared_error: 6.0197
Epoch 55/300
5/5 [==============================] - 5s 1s/step - loss: 13.7768 - root_mean_squared_erro
r: 3.7117 - val_loss: 36.1569 - val_root_mean_squared_error: 6.0131
Epoch 56/300
5/5 [==============================] - 3s 857ms/step - loss: 13.7389 - root_mean_squared_e
rror: 3.7066 - val_loss: 36.0658 - val_root_mean_squared_error: 6.0055
Epoch 57/300
5/5 [==============================] - 3s 868ms/step - loss: 13.6936 - root_mean_squared_e
rror: 3.7005 - val_loss: 35.9708 - val_root_mean_squared_error: 5.9976
Epoch 58/300
5/5 [==============================] - 5s 1s/step - loss: 13.6562 - root_mean_squared_erro
r: 3.6954 - val_loss: 35.8620 - val_root_mean_squared_error: 5.9885
Epoch 59/300
5/5 [==============================] - 4s 888ms/step - loss: 13.6147 - root_mean_squared_e
rror: 3.6898 - val_loss: 35.7545 - val_root_mean_squared_error: 5.9795
Epoch 60/300
5/5 [==============================] - 3s 840ms/step - loss: 13.5736 - root_mean_squared_e
rror: 3.6842 - val_loss: 35.6315 - val_root_mean_squared_error: 5.9692
Epoch 61/300
5/5 [==============================] - 5s 1s/step - loss: 13.5280 - root_mean_squared_erro
r: 3.6780 - val_loss: 35.5176 - val_root_mean_squared_error: 5.9597
Epoch 62/300
5/5 [==============================] - 3s 837ms/step - loss: 13.4844 - root_mean_squared_e
rror: 3.6721 - val_loss: 35.3934 - val_root_mean_squared_error: 5.9492
Epoch 63/300
5/5 [==============================] - 3s 857ms/step - loss: 13.4323 - root_mean_squared_e
rror: 3.6650 - val_loss: 35.2918 - val_root_mean_squared_error: 5.9407
Epoch 64/300
5/5 [==============================] - 5s 1s/step - loss: 13.3879 - root_mean_squared_erro
r: 3.6589 - val_loss: 35.1998 - val_root_mean_squared_error: 5.9329
Epoch 65/300
5/5 [==============================] - 3s 856ms/step - loss: 13.3333 - root_mean_squared_e
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rror: 3.6515 - val_loss: 35.0548 - val_root_mean_squared_error: 5.9207
Epoch 66/300
5/5 [==============================] - 3s 846ms/step - loss: 13.2821 - root_mean_squared_e
rror: 3.6445 - val_loss: 34.9204 - val_root_mean_squared_error: 5.9093
Epoch 67/300
5/5 [==============================] - 5s 1s/step - loss: 13.2313 - root_mean_squared_erro
r: 3.6375 - val_loss: 34.8013 - val_root_mean_squared_error: 5.8993
Epoch 68/300
5/5 [==============================] - 4s 972ms/step - loss: 13.1830 - root_mean_squared_e
rror: 3.6308 - val_loss: 34.6770 - val_root_mean_squared_error: 5.8887
Epoch 69/300
5/5 [==============================] - 3s 859ms/step - loss: 13.1357 - root_mean_squared_e
rror: 3.6243 - val_loss: 34.5561 - val_root_mean_squared_error: 5.8784
Epoch 70/300
5/5 [==============================] - 5s 1s/step - loss: 13.0876 - root_mean_squared_erro
r: 3.6177 - val_loss: 34.4368 - val_root_mean_squared_error: 5.8683
Epoch 71/300
5/5 [==============================] - 4s 1s/step - loss: 13.0434 - root_mean_squared_erro
r: 3.6116 - val_loss: 34.3059 - val_root_mean_squared_error: 5.8571
Epoch 72/300
5/5 [==============================] - 3s 856ms/step - loss: 12.9912 - root_mean_squared_e
rror: 3.6043 - val_loss: 34.1693 - val_root_mean_squared_error: 5.8455
Epoch 73/300
5/5 [==============================] - 3s 863ms/step - loss: 12.9388 - root_mean_squared_e
rror: 3.5971 - val_loss: 34.0398 - val_root_mean_squared_error: 5.8344
Epoch 74/300
5/5 [==============================] - 5s 1s/step - loss: 12.8912 - root_mean_squared_erro
r: 3.5904 - val_loss: 33.9134 - val_root_mean_squared_error: 5.8235
Epoch 75/300
5/5 [==============================] - 4s 875ms/step - loss: 12.8364 - root_mean_squared_e
rror: 3.5828 - val_loss: 33.7802 - val_root_mean_squared_error: 5.8121
Epoch 76/300
5/5 [==============================] - 4s 873ms/step - loss: 12.7851 - root_mean_squared_e
rror: 3.5756 - val_loss: 33.6419 - val_root_mean_squared_error: 5.8002
Epoch 77/300
5/5 [==============================] - 5s 1s/step - loss: 12.7186 - root_mean_squared_erro
r: 3.5663 - val_loss: 33.3719 - val_root_mean_squared_error: 5.7768
Epoch 78/300
5/5 [==============================] - 3s 868ms/step - loss: 12.6628 - root_mean_squared_e
rror: 3.5585 - val_loss: 33.2439 - val_root_mean_squared_error: 5.7657
Epoch 79/300
5/5 [==============================] - 3s 860ms/step - loss: 12.6092 - root_mean_squared_e
rror: 3.5509 - val_loss: 33.1171 - val_root_mean_squared_error: 5.7547
Epoch 80/300
5/5 [==============================] - 5s 1s/step - loss: 12.5513 - root_mean_squared_erro
r: 3.5428 - val_loss: 32.9729 - val_root_mean_squared_error: 5.7422
Epoch 81/300
5/5 [==============================] - 3s 838ms/step - loss: 12.4944 - root_mean_squared_e
rror: 3.5347 - val_loss: 32.8152 - val_root_mean_squared_error: 5.7285
Epoch 82/300
5/5 [==============================] - 3s 859ms/step - loss: 12.4371 - root_mean_squared_e
rror: 3.5266 - val_loss: 32.6235 - val_root_mean_squared_error: 5.7117
Epoch 83/300
5/5 [==============================] - 5s 1s/step - loss: 12.3733 - root_mean_squared_erro
r: 3.5176 - val_loss: 32.4497 - val_root_mean_squared_error: 5.6965
Epoch 84/300
5/5 [==============================] - 4s 934ms/step - loss: 12.3144 - root_mean_squared_e
rror: 3.5092 - val_loss: 32.2895 - val_root_mean_squared_error: 5.6824
Epoch 85/300
5/5 [==============================] - 4s 903ms/step - loss: 12.2564 - root_mean_squared_e
rror: 3.5009 - val_loss: 32.1269 - val_root_mean_squared_error: 5.6681
Epoch 86/300
5/5 [==============================] - 5s 1s/step - loss: 12.2018 - root_mean_squared_erro
r: 3.4931 - val_loss: 31.9777 - val_root_mean_squared_error: 5.6549
Epoch 87/300
5/5 [==============================] - 4s 926ms/step - loss: 12.1486 - root_mean_squared_e
rror: 3.4855 - val_loss: 31.8177 - val_root_mean_squared_error: 5.6407
Epoch 88/300
5/5 [==============================] - 4s 885ms/step - loss: 12.0901 - root_mean_squared_e
rror: 3.4771 - val_loss: 31.6256 - val_root_mean_squared_error: 5.6237
Epoch 89/300
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Epoch 89/300
5/5 [==============================] - 5s 1s/step - loss: 12.0270 - root_mean_squared_erro
r: 3.4680 - val_loss: 31.4241 - val_root_mean_squared_error: 5.6057
Epoch 90/300
5/5 [==============================] - 4s 873ms/step - loss: 11.9566 - root_mean_squared_e
rror: 3.4578 - val_loss: 31.1839 - val_root_mean_squared_error: 5.5843
Epoch 91/300
5/5 [==============================] - 3s 862ms/step - loss: 11.8813 - root_mean_squared_e
rror: 3.4469 - val_loss: 30.9352 - val_root_mean_squared_error: 5.5619
Epoch 92/300
5/5 [==============================] - 5s 1s/step - loss: 11.8113 - root_mean_squared_erro
r: 3.4368 - val_loss: 30.7160 - val_root_mean_squared_error: 5.5422
Epoch 93/300
5/5 [==============================] - 4s 913ms/step - loss: 11.7473 - root_mean_squared_e
rror: 3.4274 - val_loss: 30.5263 - val_root_mean_squared_error: 5.5251
Epoch 94/300
5/5 [==============================] - 3s 863ms/step - loss: 11.6871 - root_mean_squared_e
rror: 3.4186 - val_loss: 30.3432 - val_root_mean_squared_error: 5.5085
Epoch 95/300
5/5 [==============================] - 4s 878ms/step - loss: 11.6299 - root_mean_squared_e
rror: 3.4103 - val_loss: 30.1274 - val_root_mean_squared_error: 5.4888
Epoch 96/300
5/5 [==============================] - 5s 1s/step - loss: 11.5683 - root_mean_squared_erro
r: 3.4012 - val_loss: 29.9217 - val_root_mean_squared_error: 5.4701
Epoch 97/300
5/5 [==============================] - 3s 847ms/step - loss: 11.5139 - root_mean_squared_e
rror: 3.3932 - val_loss: 29.7510 - val_root_mean_squared_error: 5.4545
Epoch 98/300
5/5 [==============================] - 3s 826ms/step - loss: 11.4644 - root_mean_squared_e
rror: 3.3859 - val_loss: 29.6085 - val_root_mean_squared_error: 5.4414
Epoch 99/300
5/5 [==============================] - 5s 1s/step - loss: 11.4247 - root_mean_squared_erro
r: 3.3800 - val_loss: 29.4706 - val_root_mean_squared_error: 5.4287
Epoch 100/300
5/5 [==============================] - 3s 838ms/step - loss: 11.3844 - root_mean_squared_e
rror: 3.3741 - val_loss: 29.3320 - val_root_mean_squared_error: 5.4159
Epoch 101/300
5/5 [==============================] - 3s 844ms/step - loss: 11.3409 - root_mean_squared_e
rror: 3.3676 - val_loss: 29.2013 - val_root_mean_squared_error: 5.4038
Epoch 102/300
5/5 [==============================] - 5s 1s/step - loss: 11.3034 - root_mean_squared_erro
r: 3.3621 - val_loss: 29.0668 - val_root_mean_squared_error: 5.3914
Epoch 103/300
5/5 [==============================] - 3s 842ms/step - loss: 11.2618 - root_mean_squared_e
rror: 3.3559 - val_loss: 28.9079 - val_root_mean_squared_error: 5.3766
Epoch 104/300
5/5 [==============================] - 3s 848ms/step - loss: 11.2087 - root_mean_squared_e
rror: 3.3479 - val_loss: 28.7139 - val_root_mean_squared_error: 5.3585
Epoch 105/300
5/5 [==============================] - 5s 1s/step - loss: 11.1553 - root_mean_squared_erro
r: 3.3400 - val_loss: 28.5436 - val_root_mean_squared_error: 5.3426
Epoch 106/300
5/5 [==============================] - 3s 856ms/step - loss: 11.1049 - root_mean_squared_e
rror: 3.3324 - val_loss: 28.3403 - val_root_mean_squared_error: 5.3236
Epoch 107/300
5/5 [==============================] - 3s 845ms/step - loss: 11.0512 - root_mean_squared_e
rror: 3.3243 - val_loss: 28.1655 - val_root_mean_squared_error: 5.3071
Epoch 108/300
5/5 [==============================] - 4s 1s/step - loss: 11.0049 - root_mean_squared_erro
r: 3.3174 - val_loss: 28.0067 - val_root_mean_squared_error: 5.2921
Epoch 109/300
5/5 [==============================] - 4s 916ms/step - loss: 10.9599 - root_mean_squared_e
rror: 3.3106 - val_loss: 27.8409 - val_root_mean_squared_error: 5.2765
Epoch 110/300
5/5 [==============================] - 3s 824ms/step - loss: 10.9114 - root_mean_squared_e
rror: 3.3032 - val_loss: 27.6204 - val_root_mean_squared_error: 5.2555
Epoch 111/300
5/5 [==============================] - 3s 825ms/step - loss: 10.8520 - root_mean_squared_e
rror: 3.2942 - val_loss: 27.4266 - val_root_mean_squared_error: 5.2370
Epoch 112/300
5/5 [==============================] - 5s 1s/step - loss: 10.8029 - root_mean_squared_erro
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5/5 [==============================] - 3s 1s/step - loss: 10.8029 - root_mean_squared_erro
r: 3.2868 - val_loss: 27.2404 - val_root_mean_squared_error: 5.2192
Epoch 113/300
5/5 [==============================] - 3s 857ms/step - loss: 10.7476 - root_mean_squared_e
rror: 3.2784 - val_loss: 27.0677 - val_root_mean_squared_error: 5.2027
Epoch 114/300
5/5 [==============================] - 3s 829ms/step - loss: 10.6931 - root_mean_squared_e
rror: 3.2700 - val_loss: 26.8592 - val_root_mean_squared_error: 5.1826
Epoch 115/300
5/5 [==============================] - 5s 1s/step - loss: 10.6326 - root_mean_squared_erro
r: 3.2608 - val_loss: 26.6822 - val_root_mean_squared_error: 5.1655
Epoch 116/300
5/5 [==============================] - 3s 844ms/step - loss: 10.5835 - root_mean_squared_e
rror: 3.2532 - val_loss: 26.5296 - val_root_mean_squared_error: 5.1507
Epoch 117/300
5/5 [==============================] - 3s 844ms/step - loss: 10.5358 - root_mean_squared_e
rror: 3.2459 - val_loss: 26.3334 - val_root_mean_squared_error: 5.1316
Epoch 118/300
5/5 [==============================] - 5s 1s/step - loss: 10.4892 - root_mean_squared_erro
r: 3.2387 - val_loss: 26.1224 - val_root_mean_squared_error: 5.1110
Epoch 119/300
5/5 [==============================] - 3s 837ms/step - loss: 10.4371 - root_mean_squared_e
rror: 3.2306 - val_loss: 25.9314 - val_root_mean_squared_error: 5.0923
Epoch 120/300
5/5 [==============================] - 3s 842ms/step - loss: 10.3870 - root_mean_squared_e
rror: 3.2229 - val_loss: 25.7678 - val_root_mean_squared_error: 5.0762
Epoch 121/300
5/5 [==============================] - 5s 1s/step - loss: 10.3491 - root_mean_squared_erro
r: 3.2170 - val_loss: 25.6239 - val_root_mean_squared_error: 5.0620
Epoch 122/300
5/5 [==============================] - 4s 881ms/step - loss: 10.3085 - root_mean_squared_e
rror: 3.2107 - val_loss: 25.4896 - val_root_mean_squared_error: 5.0487
Epoch 123/300
5/5 [==============================] - 3s 832ms/step - loss: 10.2729 - root_mean_squared_e
rror: 3.2051 - val_loss: 25.3760 - val_root_mean_squared_error: 5.0375
Epoch 124/300
5/5 [==============================] - 4s 1s/step - loss: 10.2451 - root_mean_squared_erro
r: 3.2008 - val_loss: 25.1945 - val_root_mean_squared_error: 5.0194
Epoch 125/300
5/5 [==============================] - 4s 983ms/step - loss: 10.2010 - root_mean_squared_e
rror: 3.1939 - val_loss: 24.9797 - val_root_mean_squared_error: 4.9980
Epoch 126/300
5/5 [==============================] - 3s 826ms/step - loss: 10.1539 - root_mean_squared_e
rror: 3.1865 - val_loss: 24.7940 - val_root_mean_squared_error: 4.9794
Epoch 127/300
5/5 [==============================] - 4s 1s/step - loss: 10.1147 - root_mean_squared_erro
r: 3.1804 - val_loss: 24.5700 - val_root_mean_squared_error: 4.9568
Epoch 128/300
5/5 [==============================] - 4s 1s/step - loss: 10.0668 - root_mean_squared_erro
r: 3.1728 - val_loss: 24.3937 - val_root_mean_squared_error: 4.9390
Epoch 129/300
5/5 [==============================] - 3s 819ms/step - loss: 10.0350 - root_mean_squared_e
rror: 3.1678 - val_loss: 24.2640 - val_root_mean_squared_error: 4.9258
Epoch 130/300
5/5 [==============================] - 3s 823ms/step - loss: 10.0054 - root_mean_squared_e
rror: 3.1631 - val_loss: 24.1700 - val_root_mean_squared_error: 4.9163
Epoch 131/300
5/5 [==============================] - 5s 1s/step - loss: 9.9843 - root_mean_squared_erro
r: 3.1598 - val_loss: 24.1018 - val_root_mean_squared_error: 4.9094
Epoch 132/300
5/5 [==============================] - 3s 826ms/step - loss: 9.9682 - root_mean_squared_er
ror: 3.1573 - val_loss: 24.0347 - val_root_mean_squared_error: 4.9025
Epoch 133/300
5/5 [==============================] - 3s 827ms/step - loss: 9.9475 - root_mean_squared_er
ror: 3.1540 - val_loss: 23.9147 - val_root_mean_squared_error: 4.8903
Epoch 134/300
5/5 [==============================] - 4s 1s/step - loss: 9.9211 - root_mean_squared_erro
r: 3.1498 - val_loss: 23.7844 - val_root_mean_squared_error: 4.8769
Epoch 135/300
5/5 [==============================] - 4s 902ms/step - loss: 9.8931 - root_mean_squared_er
ror: 3.1453 - val_loss: 23.6159 - val_root_mean_squared_error: 4.8596
```

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Epoch 136/300
5/5 [==============================] - 3s 838ms/step - loss: 9.8563 - root_mean_squared_er
ror: 3.1395 - val_loss: 23.4414 - val_root_mean_squared_error: 4.8416
Epoch 137/300
5/5 [==============================] - 4s 1s/step - loss: 9.8214 - root_mean_squared_erro
r: 3.1339 - val_loss: 23.2188 - val_root_mean_squared_error: 4.8186
Epoch 138/300
5/5 [==============================] - 4s 995ms/step - loss: 9.7819 - root_mean_squared_er
ror: 3.1276 - val_loss: 23.0063 - val_root_mean_squared_error: 4.7965
Epoch 139/300
5/5 [==============================] - 3s 850ms/step - loss: 9.7492 - root_mean_squared_er
ror: 3.1224 - val_loss: 22.8471 - val_root_mean_squared_error: 4.7799
Epoch 140/300
5/5 [==============================] - 4s 999ms/step - loss: 9.7197 - root_mean_squared_er
ror: 3.1176 - val_loss: 22.6697 - val_root_mean_squared_error: 4.7613
Epoch 141/300
5/5 [==============================] - 4s 1s/step - loss: 9.6887 - root_mean_squared_erro
r: 3.1127 - val_loss: 22.5645 - val_root_mean_squared_error: 4.7502
Epoch 142/300
5/5 [==============================] - 3s 822ms/step - loss: 9.6664 - root_mean_squared_er
ror: 3.1091 - val_loss: 22.4969 - val_root_mean_squared_error: 4.7431
Epoch 143/300
5/5 [==============================] - 4s 990ms/step - loss: 9.6513 - root_mean_squared_er
ror: 3.1067 - val_loss: 22.4439 - val_root_mean_squared_error: 4.7375
Epoch 144/300
5/5 [==============================] - 4s 1s/step - loss: 9.6340 - root_mean_squared_erro
r: 3.1039 - val_loss: 22.3827 - val_root_mean_squared_error: 4.7310
Epoch 145/300
5/5 [==============================] - 3s 833ms/step - loss: 9.6200 - root_mean_squared_er
ror: 3.1016 - val_loss: 22.3165 - val_root_mean_squared_error: 4.7240
Epoch 146/300
5/5 [==============================] - 4s 1s/step - loss: 9.6045 - root_mean_squared_erro
r: 3.0991 - val_loss: 22.1888 - val_root_mean_squared_error: 4.7105
Epoch 147/300
5/5 [==============================] - 4s 955ms/step - loss: 9.5815 - root_mean_squared_er
ror: 3.0954 - val_loss: 22.1302 - val_root_mean_squared_error: 4.7043
Epoch 148/300
5/5 [==============================] - 4s 918ms/step - loss: 9.5691 - root_mean_squared_er
ror: 3.0934 - val_loss: 22.0915 - val_root_mean_squared_error: 4.7002
Epoch 149/300
5/5 [==============================] - 4s 1s/step - loss: 9.5589 - root_mean_squared_erro
r: 3.0917 - val_loss: 22.0657 - val_root_mean_squared_error: 4.6974
Epoch 150/300
5/5 [==============================] - 3s 835ms/step - loss: 9.5492 - root_mean_squared_er
ror: 3.0902 - val_loss: 22.0379 - val_root_mean_squared_error: 4.6945
Epoch 151/300
5/5 [==============================] - 4s 997ms/step - loss: 9.5370 - root_mean_squared_er
ror: 3.0882 - val_loss: 21.9943 - val_root_mean_squared_error: 4.6898
Epoch 152/300
5/5 [==============================] - 4s 1s/step - loss: 9.5196 - root_mean_squared_erro
r: 3.0854 - val_loss: 21.9258 - val_root_mean_squared_error: 4.6825
Epoch 153/300
5/5 [==============================] - 3s 837ms/step - loss: 9.5101 - root_mean_squared_er
ror: 3.0838 - val_loss: 21.8685 - val_root_mean_squared_error: 4.6764
Epoch 154/300
5/5 [==============================] - 4s 1s/step - loss: 9.4943 - root_mean_squared_erro
r: 3.0813 - val_loss: 21.7757 - val_root_mean_squared_error: 4.6664
Epoch 155/300
5/5 [==============================] - 3s 824ms/step - loss: 9.4887 - root_mean_squared_er
ror: 3.0804 - val_loss: 21.6976 - val_root_mean_squared_error: 4.6581
Epoch 156/300
5/5 [==============================] - 4s 1s/step - loss: 9.4694 - root_mean_squared_erro
r: 3.0772 - val_loss: 21.5483 - val_root_mean_squared_error: 4.6420
Epoch 157/300
5/5 [==============================] - 4s 1s/step - loss: 9.4464 - root_mean_squared_erro
r: 3.0735 - val_loss: 21.4044 - val_root_mean_squared_error: 4.6265
Epoch 158/300
5/5 [==============================] - 3s 830ms/step - loss: 9.4243 - root_mean_squared_er
ror: 3.0699 - val_loss: 21.3042 - val_root_mean_squared_error: 4.6156
Epoch 159/300
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5/5 [==============================] - 4s 979ms/step - loss: 9.4094 - root_mean_squared_er
ror: 3.0675 - val_loss: 21.2032 - val_root_mean_squared_error: 4.6047
Epoch 160/300
5/5 [==============================] - 4s 937ms/step - loss: 9.3881 - root_mean_squared_er
ror: 3.0640 - val_loss: 21.0815 - val_root_mean_squared_error: 4.5915
Epoch 161/300
5/5 [==============================] - 4s 924ms/step - loss: 9.3755 - root_mean_squared_er
ror: 3.0619 - val_loss: 21.0123 - val_root_mean_squared_error: 4.5839
Epoch 162/300
5/5 [==============================] - 4s 990ms/step - loss: 9.3613 - root_mean_squared_er
ror: 3.0596 - val_loss: 20.9657 - val_root_mean_squared_error: 4.5788
Epoch 163/300
5/5 [==============================] - 3s 832ms/step - loss: 9.3501 - root_mean_squared_er
ror: 3.0578 - val_loss: 20.9356 - val_root_mean_squared_error: 4.5755
Epoch 164/300
5/5 [==============================] - 4s 1s/step - loss: 9.3394 - root_mean_squared_erro
r: 3.0560 - val_loss: 20.8792 - val_root_mean_squared_error: 4.5694
Epoch 165/300
5/5 [==============================] - 4s 984ms/step - loss: 9.3256 - root_mean_squared_er
ror: 3.0538 - val_loss: 20.7848 - val_root_mean_squared_error: 4.5590
Epoch 166/300
5/5 [==============================] - 3s 838ms/step - loss: 9.3121 - root_mean_squared_er
ror: 3.0516 - val_loss: 20.7369 - val_root_mean_squared_error: 4.5538
Epoch 167/300
5/5 [==============================] - 4s 1s/step - loss: 9.3028 - root_mean_squared_erro
r: 3.0501 - val_loss: 20.7286 - val_root_mean_squared_error: 4.5529
Epoch 168/300
5/5 [==============================] - 0s 23ms/step - loss: 9.2969 - root_mean_squared_err
or: 3.0491 - val_loss: 20.7482 - val_root_mean_squared_error: 4.5550
Epoch 169/300
5/5 [==============================] - 0s 22ms/step - loss: 9.2924 - root_mean_squared_err
or: 3.0483 - val_loss: 20.7542 - val_root_mean_squared_error: 4.5557
Epoch 170/300
5/5 [==============================] - 4s 980ms/step - loss: 9.2844 - root_mean_squared_er
ror: 3.0470 - val_loss: 20.6809 - val_root_mean_squared_error: 4.5476
Epoch 171/300
5/5 [==============================] - 3s 825ms/step - loss: 9.2728 - root_mean_squared_er
ror: 3.0451 - val_loss: 20.6169 - val_root_mean_squared_error: 4.5406
Epoch 172/300
5/5 [==============================] - 4s 985ms/step - loss: 9.2588 - root_mean_squared_er
ror: 3.0428 - val_loss: 20.5395 - val_root_mean_squared_error: 4.5321
Epoch 173/300
5/5 [==============================] - 4s 1s/step - loss: 9.2452 - root_mean_squared_erro
r: 3.0406 - val_loss: 20.4067 - val_root_mean_squared_error: 4.5174
Epoch 174/300
5/5 [==============================] - 3s 828ms/step - loss: 9.2222 - root_mean_squared_er
ror: 3.0368 - val_loss: 20.2756 - val_root_mean_squared_error: 4.5028
Epoch 175/300
5/5 [==============================] - 4s 875ms/step - loss: 9.2215 - root_mean_squared_er
ror: 3.0367 - val_loss: 20.1051 - val_root_mean_squared_error: 4.4839
Epoch 176/300
5/5 [==============================] - 5s 1s/step - loss: 9.2054 - root_mean_squared_erro
r: 3.0340 - val_loss: 19.9510 - val_root_mean_squared_error: 4.4667
Epoch 177/300
5/5 [==============================] - 3s 832ms/step - loss: 9.1946 - root_mean_squared_er
ror: 3.0323 - val_loss: 19.8568 - val_root_mean_squared_error: 4.4561
Epoch 178/300
5/5 [==============================] - 3s 833ms/step - loss: 9.1841 - root_mean_squared_er
ror: 3.0305 - val_loss: 19.7445 - val_root_mean_squared_error: 4.4435
Epoch 179/300
5/5 [==============================] - 5s 1s/step - loss: 9.1721 - root_mean_squared_erro
r: 3.0286 - val_loss: 19.6978 - val_root_mean_squared_error: 4.4382
Epoch 180/300
5/5 [==============================] - 3s 830ms/step - loss: 9.1651 - root_mean_squared_er
ror: 3.0274 - val_loss: 19.6720 - val_root_mean_squared_error: 4.4353
Epoch 181/300
5/5 [==============================] - 3s 833ms/step - loss: 9.1570 - root_mean_squared_er
ror: 3.0261 - val_loss: 19.6501 - val_root_mean_squared_error: 4.4328
Epoch 182/300
5/5 [==============================] - 4s 1s/step - loss: 9.1503 - root_mean_squared_erro
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r: 3.0249 - val_loss: 19.6485 - val_root_mean_squared_error: 4.4327
Epoch 183/300
5/5 [==============================] - 4s 1s/step - loss: 9.1432 - root_mean_squared_erro
r: 3.0238 - val_loss: 19.5876 - val_root_mean_squared_error: 4.4258
Epoch 184/300
5/5 [==============================] - 3s 825ms/step - loss: 9.1347 - root_mean_squared_er
ror: 3.0224 - val_loss: 19.5090 - val_root_mean_squared_error: 4.4169
Epoch 185/300
5/5 [==============================] - 4s 957ms/step - loss: 9.1263 - root_mean_squared_er
ror: 3.0210 - val_loss: 19.3859 - val_root_mean_squared_error: 4.4029
Epoch 186/300
5/5 [==============================] - 4s 1s/step - loss: 9.1142 - root_mean_squared_erro
r: 3.0190 - val_loss: 19.2614 - val_root_mean_squared_error: 4.3888
Epoch 187/300
5/5 [==============================] - 3s 837ms/step - loss: 9.1031 - root_mean_squared_er
ror: 3.0171 - val_loss: 19.1284 - val_root_mean_squared_error: 4.3736
Epoch 188/300
5/5 [==============================] - 3s 858ms/step - loss: 9.0923 - root_mean_squared_er
ror: 3.0153 - val_loss: 19.0378 - val_root_mean_squared_error: 4.3632
Epoch 189/300
5/5 [==============================] - 5s 1s/step - loss: 9.0850 - root_mean_squared_erro
r: 3.0141 - val_loss: 19.0008 - val_root_mean_squared_error: 4.3590
Epoch 190/300
5/5 [==============================] - 3s 848ms/step - loss: 9.0765 - root_mean_squared_er
ror: 3.0127 - val_loss: 18.9992 - val_root_mean_squared_error: 4.3588
Epoch 191/300
5/5 [==============================] - 3s 841ms/step - loss: 9.0700 - root_mean_squared_er
ror: 3.0116 - val_loss: 18.9900 - val_root_mean_squared_error: 4.3578
Epoch 192/300
5/5 [==============================] - 5s 1s/step - loss: 9.0633 - root_mean_squared_erro
r: 3.0105 - val_loss: 18.9771 - val_root_mean_squared_error: 4.3563
Epoch 193/300
5/5 [==============================] - 0s 28ms/step - loss: 9.0537 - root_mean_squared_err
or: 3.0089 - val_loss: 18.9777 - val_root_mean_squared_error: 4.3563
Epoch 194/300
5/5 [==============================] - 3s 829ms/step - loss: 9.0464 - root_mean_squared_er
ror: 3.0077 - val_loss: 18.9722 - val_root_mean_squared_error: 4.3557
Epoch 195/300
5/5 [==============================] - 3s 819ms/step - loss: 9.0392 - root_mean_squared_er
ror: 3.0065 - val_loss: 18.9379 - val_root_mean_squared_error: 4.3518
Epoch 196/300
5/5 [==============================] - 5s 1s/step - loss: 9.0319 - root_mean_squared_erro
r: 3.0053 - val_loss: 18.8952 - val_root_mean_squared_error: 4.3469
Epoch 197/300
5/5 [==============================] - 3s 835ms/step - loss: 9.0231 - root_mean_squared_er
ror: 3.0039 - val_loss: 18.8057 - val_root_mean_squared_error: 4.3366
Epoch 198/300
5/5 [==============================] - 3s 837ms/step - loss: 9.0159 - root_mean_squared_er
ror: 3.0026 - val_loss: 18.7438 - val_root_mean_squared_error: 4.3294
Epoch 199/300
5/5 [==============================] - 5s 1s/step - loss: 9.0095 - root_mean_squared_erro
r: 3.0016 - val_loss: 18.7093 - val_root_mean_squared_error: 4.3254
Epoch 200/300
5/5 [==============================] - 3s 855ms/step - loss: 9.0026 - root_mean_squared_er
ror: 3.0004 - val_loss: 18.7092 - val_root_mean_squared_error: 4.3254
Epoch 201/300
5/5 [==============================] - 3s 825ms/step - loss: 8.9968 - root_mean_squared_er
ror: 2.9995 - val_loss: 18.7013 - val_root_mean_squared_error: 4.3245
Epoch 202/300
5/5 [==============================] - 4s 1s/step - loss: 8.9909 - root_mean_squared_erro
r: 2.9985 - val_loss: 18.6926 - val_root_mean_squared_error: 4.3235
Epoch 203/300
5/5 [==============================] - 4s 967ms/step - loss: 8.9846 - root_mean_squared_er
ror: 2.9974 - val_loss: 18.6770 - val_root_mean_squared_error: 4.3217
Epoch 204/300
5/5 [==============================] - 0s 26ms/step - loss: 8.9788 - root_mean_squared_err
or: 2.9965 - val_loss: 18.6989 - val_root_mean_squared_error: 4.3242
Epoch 205/300
5/5 [==============================] - 0s 27ms/step - loss: 8.9738 - root_mean_squared_err
or: 2.9956 - val_loss: 18.7027 - val_root_mean_squared_error: 4.3247
```

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Epoch 206/300
5/5 [==============================] - 3s 825ms/step - loss: 8.9688 - root_mean_squared_er
ror: 2.9948 - val_loss: 18.6527 - val_root_mean_squared_error: 4.3189
Epoch 207/300
5/5 [==============================] - 4s 1s/step - loss: 8.9638 - root_mean_squared_erro
r: 2.9940 - val_loss: 18.6464 - val_root_mean_squared_error: 4.3181
Epoch 208/300
5/5 [==============================] - 0s 28ms/step - loss: 8.9585 - root_mean_squared_err
or: 2.9931 - val_loss: 18.6537 - val_root_mean_squared_error: 4.3190
Epoch 209/300
5/5 [==============================] - 0s 38ms/step - loss: 8.9546 - root_mean_squared_err
or: 2.9924 - val_loss: 18.6851 - val_root_mean_squared_error: 4.3226
Epoch 210/300
5/5 [==============================] - 0s 34ms/step - loss: 8.9487 - root_mean_squared_err
or: 2.9914 - val_loss: 18.6725 - val_root_mean_squared_error: 4.3212
Epoch 211/300
5/5 [==============================] - 4s 984ms/step - loss: 8.9450 - root_mean_squared_er
ror: 2.9908 - val_loss: 18.5914 - val_root_mean_squared_error: 4.3118
Epoch 212/300
5/5 [==============================] - 3s 839ms/step - loss: 8.9365 - root_mean_squared_er
ror: 2.9894 - val_loss: 18.5504 - val_root_mean_squared_error: 4.3070
Epoch 213/300
5/5 [==============================] - 3s 837ms/step - loss: 8.9319 - root_mean_squared_er
ror: 2.9886 - val_loss: 18.5301 - val_root_mean_squared_error: 4.3047
Epoch 214/300
5/5 [==============================] - 0s 23ms/step - loss: 8.9261 - root_mean_squared_err
or: 2.9877 - val_loss: 18.5493 - val_root_mean_squared_error: 4.3069
Epoch 215/300
5/5 [==============================] - 0s 22ms/step - loss: 8.9222 - root_mean_squared_err
or: 2.9870 - val_loss: 18.5924 - val_root_mean_squared_error: 4.3119
Epoch 216/300
5/5 [==============================] - 0s 27ms/step - loss: 8.9185 - root_mean_squared_err
or: 2.9864 - val_loss: 18.6275 - val_root_mean_squared_error: 4.3160
Epoch 217/300
5/5 [==============================] - 0s 26ms/step - loss: 8.9151 - root_mean_squared_err
or: 2.9858 - val_loss: 18.6284 - val_root_mean_squared_error: 4.3161
Epoch 218/300
5/5 [==============================] - 0s 27ms/step - loss: 8.9106 - root_mean_squared_err
or: 2.9851 - val_loss: 18.6068 - val_root_mean_squared_error: 4.3136
```

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Default and Short, samples = 34
Epoch 1/300
3/3 [==============================] - 8s 2s/step - loss: 15.0341 - root_mean_squared_erro
r: 3.8774 - val_loss: 37.8474 - val_root_mean_squared_error: 6.1520
Epoch 2/300
3/3 [==============================] - 3s 2s/step - loss: 14.9956 - root_mean_squared_erro
r: 3.8724 - val_loss: 37.7564 - val_root_mean_squared_error: 6.1446
Epoch 3/300
3/3 [==============================] - 5s 2s/step - loss: 14.9660 - root_mean_squared_erro
r: 3.8686 - val_loss: 37.6914 - val_root_mean_squared_error: 6.1393
Epoch 4/300
3/3 [==============================] - 3s 2s/step - loss: 14.9287 - root_mean_squared_erro
r: 3.8638 - val_loss: 37.6257 - val_root_mean_squared_error: 6.1340
Epoch 5/300
3/3 [==============================] - 3s 2s/step - loss: 14.8921 - root_mean_squared_erro
r: 3.8590 - val_loss: 37.5606 - val_root_mean_squared_error: 6.1287
Epoch 6/300
3/3 [==============================] - 5s 2s/step - loss: 14.8600 - root_mean_squared_erro
r: 3.8549 - val_loss: 37.4934 - val_root_mean_squared_error: 6.1232
Epoch 7/300
3/3 [==============================] - 3s 2s/step - loss: 14.8313 - root_mean_squared_erro
r: 3.8511 - val_loss: 37.4271 - val_root_mean_squared_error: 6.1178
Epoch 8/300
3/3 [==============================] - 3s 2s/step - loss: 14.8000 - root_mean_squared_erro
r: 3.8471 - val_loss: 37.3474 - val_root_mean_squared_error: 6.1112
Epoch 9/300
3/3 [==============================] - 3s 2s/step - loss: 14.7681 - root_mean_squared_erro
```

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r: 3.8429 - val_loss: 37.2785 - val_root_mean_squared_error: 6.1056
Epoch 10/300
3/3 [==============================] - 5s 2s/step - loss: 14.7388 - root_mean_squared_erro
r: 3.8391 - val_loss: 37.2080 - val_root_mean_squared_error: 6.0998
Epoch 11/300
3/3 [==============================] - 3s 2s/step - loss: 14.7063 - root_mean_squared_erro
r: 3.8349 - val_loss: 37.1355 - val_root_mean_squared_error: 6.0939
Epoch 12/300
3/3 [==============================] - 3s 2s/step - loss: 14.6748 - root_mean_squared_erro
r: 3.8308 - val_loss: 37.0600 - val_root_mean_squared_error: 6.0877
Epoch 13/300
3/3 [==============================] - 5s 2s/step - loss: 14.6428 - root_mean_squared_erro
r: 3.8266 - val_loss: 36.9827 - val_root_mean_squared_error: 6.0813
Epoch 14/300
3/3 [==============================] - 3s 2s/step - loss: 14.6031 - root_mean_squared_erro
r: 3.8214 - val_loss: 36.9081 - val_root_mean_squared_error: 6.0752
Epoch 15/300
3/3 [==============================] - 3s 2s/step - loss: 14.5698 - root_mean_squared_erro
r: 3.8170 - val_loss: 36.8299 - val_root_mean_squared_error: 6.0688
Epoch 16/300
3/3 [==============================] - 5s 2s/step - loss: 14.5357 - root_mean_squared_erro
r: 3.8126 - val_loss: 36.7515 - val_root_mean_squared_error: 6.0623
Epoch 17/300
3/3 [==============================] - 3s 2s/step - loss: 14.5008 - root_mean_squared_erro
r: 3.8080 - val_loss: 36.6797 - val_root_mean_squared_error: 6.0564
Epoch 18/300
3/3 [==============================] - 3s 2s/step - loss: 14.4682 - root_mean_squared_erro
r: 3.8037 - val_loss: 36.6036 - val_root_mean_squared_error: 6.0501
Epoch 19/300
3/3 [==============================] - 5s 2s/step - loss: 14.4337 - root_mean_squared_erro
r: 3.7992 - val_loss: 36.5257 - val_root_mean_squared_error: 6.0436
Epoch 20/300
3/3 [==============================] - 4s 2s/step - loss: 14.3992 - root_mean_squared_erro
r: 3.7946 - val_loss: 36.4455 - val_root_mean_squared_error: 6.0370
Epoch 21/300
3/3 [==============================] - 3s 2s/step - loss: 14.3651 - root_mean_squared_erro
r: 3.7901 - val_loss: 36.3646 - val_root_mean_squared_error: 6.0303
Epoch 22/300
3/3 [==============================] - 3s 2s/step - loss: 14.3260 - root_mean_squared_erro
r: 3.7850 - val_loss: 36.2824 - val_root_mean_squared_error: 6.0235
Epoch 23/300
3/3 [==============================] - 5s 2s/step - loss: 14.2928 - root_mean_squared_erro
r: 3.7806 - val_loss: 36.1984 - val_root_mean_squared_error: 6.0165
Epoch 24/300
3/3 [==============================] - 3s 2s/step - loss: 14.2576 - root_mean_squared_erro
r: 3.7759 - val_loss: 36.1128 - val_root_mean_squared_error: 6.0094
Epoch 25/300
3/3 [==============================] - 3s 2s/step - loss: 14.2217 - root_mean_squared_erro
r: 3.7712 - val_loss: 36.0291 - val_root_mean_squared_error: 6.0024
Epoch 26/300
3/3 [==============================] - 5s 2s/step - loss: 14.1871 - root_mean_squared_erro
r: 3.7666 - val_loss: 35.9410 - val_root_mean_squared_error: 5.9951
Epoch 27/300
3/3 [==============================] - 3s 2s/step - loss: 14.1526 - root_mean_squared_erro
r: 3.7620 - val_loss: 35.8502 - val_root_mean_squared_error: 5.9875
Epoch 28/300
3/3 [==============================] - 3s 2s/step - loss: 14.1160 - root_mean_squared_erro
r: 3.7571 - val_loss: 35.7581 - val_root_mean_squared_error: 5.9798
Epoch 29/300
3/3 [==============================] - 4s 2s/step - loss: 14.0792 - root_mean_squared_erro
r: 3.7522 - val_loss: 35.6671 - val_root_mean_squared_error: 5.9722
Epoch 30/300
3/3 [==============================] - 4s 2s/step - loss: 14.0443 - root_mean_squared_erro
r: 3.7476 - val_loss: 35.5738 - val_root_mean_squared_error: 5.9644
Epoch 31/300
3/3 [==============================] - 3s 2s/step - loss: 14.0084 - root_mean_squared_erro
r: 3.7428 - val_loss: 35.4794 - val_root_mean_squared_error: 5.9565
Epoch 32/300
3/3 [==============================] - 3s 2s/step - loss: 13.9720 - root_mean_squared_erro
r: 3.7379 - val_loss: 35.3850 - val_root_mean_squared_error: 5.9485
Epoch 33/300
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Epoch 33/300
3/3 [==============================] - 4s 2s/step - loss: 13.9327 - root_mean_squared_erro
r: 3.7326 - val_loss: 35.2891 - val_root_mean_squared_error: 5.9405
Epoch 34/300
3/3 [==============================] - 3s 2s/step - loss: 13.8980 - root_mean_squared_erro
r: 3.7280 - val_loss: 35.1893 - val_root_mean_squared_error: 5.9321
Epoch 35/300
3/3 [==============================] - 3s 2s/step - loss: 13.8605 - root_mean_squared_erro
r: 3.7230 - val_loss: 35.0876 - val_root_mean_squared_error: 5.9235
Epoch 36/300
3/3 [==============================] - 5s 2s/step - loss: 13.8224 - root_mean_squared_erro
r: 3.7178 - val_loss: 34.9863 - val_root_mean_squared_error: 5.9149
Epoch 37/300
3/3 [==============================] - 3s 2s/step - loss: 13.7850 - root_mean_squared_erro
r: 3.7128 - val_loss: 34.8839 - val_root_mean_squared_error: 5.9063
Epoch 38/300
3/3 [==============================] - 3s 2s/step - loss: 13.7470 - root_mean_squared_erro
r: 3.7077 - val_loss: 34.7801 - val_root_mean_squared_error: 5.8975
Epoch 39/300
3/3 [==============================] - 5s 2s/step - loss: 13.7071 - root_mean_squared_erro
r: 3.7023 - val_loss: 34.6767 - val_root_mean_squared_error: 5.8887
Epoch 40/300
3/3 [==============================] - 3s 2s/step - loss: 13.6684 - root_mean_squared_erro
r: 3.6971 - val_loss: 34.5697 - val_root_mean_squared_error: 5.8796
Epoch 41/300
3/3 [==============================] - 3s 2s/step - loss: 13.6306 - root_mean_squared_erro
r: 3.6920 - val_loss: 34.4597 - val_root_mean_squared_error: 5.8702
Epoch 42/300
3/3 [==============================] - 5s 2s/step - loss: 13.5885 - root_mean_squared_erro
r: 3.6863 - val_loss: 34.3495 - val_root_mean_squared_error: 5.8608
Epoch 43/300
3/3 [==============================] - 3s 2s/step - loss: 13.5498 - root_mean_squared_erro
r: 3.6810 - val_loss: 34.2369 - val_root_mean_squared_error: 5.8512
Epoch 44/300
3/3 [==============================] - 3s 2s/step - loss: 13.5062 - root_mean_squared_erro
r: 3.6751 - val_loss: 34.1245 - val_root_mean_squared_error: 5.8416
Epoch 45/300
3/3 [==============================] - 4s 2s/step - loss: 13.4679 - root_mean_squared_erro
r: 3.6699 - val_loss: 34.0081 - val_root_mean_squared_error: 5.8316
Epoch 46/300
3/3 [==============================] - 5s 2s/step - loss: 13.4267 - root_mean_squared_erro
r: 3.6642 - val_loss: 33.8892 - val_root_mean_squared_error: 5.8214
Epoch 47/300
3/3 [==============================] - 3s 2s/step - loss: 13.3834 - root_mean_squared_erro
r: 3.6583 - val_loss: 33.7697 - val_root_mean_squared_error: 5.8112
Epoch 48/300
3/3 [==============================] - 3s 2s/step - loss: 13.3441 - root_mean_squared_erro
r: 3.6530 - val_loss: 33.6476 - val_root_mean_squared_error: 5.8007
Epoch 49/300
3/3 [==============================] - 5s 2s/step - loss: 13.2980 - root_mean_squared_erro
r: 3.6466 - val_loss: 33.5272 - val_root_mean_squared_error: 5.7903
Epoch 50/300
3/3 [==============================] - 3s 2s/step - loss: 13.2559 - root_mean_squared_erro
r: 3.6409 - val_loss: 33.4061 - val_root_mean_squared_error: 5.7798
Epoch 51/300
3/3 [==============================] - 3s 2s/step - loss: 13.2187 - root_mean_squared_erro
r: 3.6358 - val_loss: 33.2842 - val_root_mean_squared_error: 5.7692
Epoch 52/300
3/3 [==============================] - 5s 2s/step - loss: 13.1697 - root_mean_squared_erro
r: 3.6290 - val_loss: 33.1625 - val_root_mean_squared_error: 5.7587
Epoch 53/300
3/3 [==============================] - 4s 2s/step - loss: 13.1255 - root_mean_squared_erro
r: 3.6229 - val_loss: 33.0424 - val_root_mean_squared_error: 5.7483
Epoch 54/300
3/3 [==============================] - 3s 2s/step - loss: 13.0854 - root_mean_squared_erro
r: 3.6174 - val_loss: 32.9188 - val_root_mean_squared_error: 5.7375
Epoch 55/300
3/3 [==============================] - 4s 2s/step - loss: 13.0399 - root_mean_squared_erro
r: 3.6111 - val_loss: 32.7989 - val_root_mean_squared_error: 5.7270
Epoch 56/300
3/3 [==============================] - 4s 2s/step - loss: 12.9941 - root_mean_squared_erro
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r: 3.6047 - val_loss: 32.6763 - val_root_mean_squared_error: 5.7163
Epoch 57/300
3/3 [==============================] - 3s 2s/step - loss: 12.9495 - root_mean_squared_erro
r: 3.5985 - val_loss: 32.5530 - val_root_mean_squared_error: 5.7055
Epoch 58/300
3/3 [==============================] - 4s 2s/step - loss: 12.9051 - root_mean_squared_erro
r: 3.5924 - val_loss: 32.4311 - val_root_mean_squared_error: 5.6948
Epoch 59/300
3/3 [==============================] - 4s 2s/step - loss: 12.8602 - root_mean_squared_erro
r: 3.5861 - val_loss: 32.3043 - val_root_mean_squared_error: 5.6837
Epoch 60/300
3/3 [==============================] - 3s 2s/step - loss: 12.8028 - root_mean_squared_erro
r: 3.5781 - val_loss: 32.1755 - val_root_mean_squared_error: 5.6723
Epoch 61/300
3/3 [==============================] - 3s 2s/step - loss: 12.7578 - root_mean_squared_erro
r: 3.5718 - val_loss: 32.0441 - val_root_mean_squared_error: 5.6608
Epoch 62/300
3/3 [==============================] - 5s 2s/step - loss: 12.7117 - root_mean_squared_erro
r: 3.5653 - val_loss: 31.9110 - val_root_mean_squared_error: 5.6490
Epoch 63/300
3/3 [==============================] - 3s 2s/step - loss: 12.6567 - root_mean_squared_erro
r: 3.5576 - val_loss: 31.7778 - val_root_mean_squared_error: 5.6372
Epoch 64/300
3/3 [==============================] - 3s 2s/step - loss: 12.5881 - root_mean_squared_erro
r: 3.5480 - val_loss: 31.6449 - val_root_mean_squared_error: 5.6254
Epoch 65/300
3/3 [==============================] - 5s 2s/step - loss: 12.5446 - root_mean_squared_erro
r: 3.5418 - val_loss: 31.5101 - val_root_mean_squared_error: 5.6134
Epoch 66/300
3/3 [==============================] - 3s 2s/step - loss: 12.4989 - root_mean_squared_erro
r: 3.5354 - val_loss: 31.3758 - val_root_mean_squared_error: 5.6014
Epoch 67/300
3/3 [==============================] - 3s 2s/step - loss: 12.4529 - root_mean_squared_erro
r: 3.5289 - val_loss: 31.2429 - val_root_mean_squared_error: 5.5895
Epoch 68/300
3/3 [==============================] - 4s 2s/step - loss: 12.4125 - root_mean_squared_erro
r: 3.5231 - val_loss: 31.1064 - val_root_mean_squared_error: 5.5773
Epoch 69/300
3/3 [==============================] - 4s 2s/step - loss: 12.3602 - root_mean_squared_erro
r: 3.5157 - val_loss: 30.9781 - val_root_mean_squared_error: 5.5658
Epoch 70/300
3/3 [==============================] - 3s 2s/step - loss: 12.3072 - root_mean_squared_erro
r: 3.5082 - val_loss: 30.8481 - val_root_mean_squared_error: 5.5541
Epoch 71/300
3/3 [==============================] - 4s 2s/step - loss: 12.2667 - root_mean_squared_erro
r: 3.5024 - val_loss: 30.7151 - val_root_mean_squared_error: 5.5421
Epoch 72/300
3/3 [==============================] - 4s 2s/step - loss: 12.2235 - root_mean_squared_erro
r: 3.4962 - val_loss: 30.5833 - val_root_mean_squared_error: 5.5302
Epoch 73/300
3/3 [==============================] - 3s 2s/step - loss: 12.1806 - root_mean_squared_erro
r: 3.4901 - val_loss: 30.4547 - val_root_mean_squared_error: 5.5186
Epoch 74/300
3/3 [==============================] - 3s 2s/step - loss: 12.1301 - root_mean_squared_erro
r: 3.4828 - val_loss: 30.3220 - val_root_mean_squared_error: 5.5065
Epoch 75/300
3/3 [==============================] - 5s 2s/step - loss: 12.0888 - root_mean_squared_erro
r: 3.4769 - val_loss: 30.1941 - val_root_mean_squared_error: 5.4949
Epoch 76/300
3/3 [==============================] - 3s 2s/step - loss: 12.0442 - root_mean_squared_erro
r: 3.4705 - val_loss: 30.0662 - val_root_mean_squared_error: 5.4833
Epoch 77/300
3/3 [==============================] - 3s 2s/step - loss: 12.0040 - root_mean_squared_erro
r: 3.4647 - val_loss: 29.9365 - val_root_mean_squared_error: 5.4714
Epoch 78/300
3/3 [==============================] - 4s 2s/step - loss: 11.9574 - root_mean_squared_erro
r: 3.4579 - val_loss: 29.8120 - val_root_mean_squared_error: 5.4600
Epoch 79/300
3/3 [==============================] - 4s 2s/step - loss: 11.9214 - root_mean_squared_erro
r: 3.4527 - val_loss: 29.6826 - val_root_mean_squared_error: 5.4482
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Epoch 80/300
3/3 [==============================] - 3s 2s/step - loss: 11.8826 - root_mean_squared_erro
r: 3.4471 - val_loss: 29.5494 - val_root_mean_squared_error: 5.4359
Epoch 81/300
3/3 [==============================] - 4s 2s/step - loss: 11.8384 - root_mean_squared_erro
r: 3.4407 - val_loss: 29.4229 - val_root_mean_squared_error: 5.4243
Epoch 82/300
3/3 [==============================] - 4s 2s/step - loss: 11.7988 - root_mean_squared_erro
r: 3.4349 - val_loss: 29.2944 - val_root_mean_squared_error: 5.4124
Epoch 83/300
3/3 [==============================] - 3s 2s/step - loss: 11.7608 - root_mean_squared_erro
r: 3.4294 - val_loss: 29.1622 - val_root_mean_squared_error: 5.4002
Epoch 84/300
3/3 [==============================] - 3s 2s/step - loss: 11.7148 - root_mean_squared_erro
r: 3.4227 - val_loss: 29.0379 - val_root_mean_squared_error: 5.3887
Epoch 85/300
3/3 [==============================] - 5s 2s/step - loss: 11.6728 - root_mean_squared_erro
r: 3.4165 - val_loss: 28.9139 - val_root_mean_squared_error: 5.3772
Epoch 86/300
3/3 [==============================] - 3s 2s/step - loss: 11.6318 - root_mean_squared_erro
r: 3.4105 - val_loss: 28.7894 - val_root_mean_squared_error: 5.3656
Epoch 87/300
3/3 [==============================] - 3s 2s/step - loss: 11.5924 - root_mean_squared_erro
r: 3.4048 - val_loss: 28.6627 - val_root_mean_squared_error: 5.3538
Epoch 88/300
3/3 [==============================] - 5s 2s/step - loss: 11.5523 - root_mean_squared_erro
r: 3.3989 - val_loss: 28.5354 - val_root_mean_squared_error: 5.3419
Epoch 89/300
3/3 [==============================] - 3s 2s/step - loss: 11.5089 - root_mean_squared_erro
r: 3.3925 - val_loss: 28.4118 - val_root_mean_squared_error: 5.3303
Epoch 90/300
3/3 [==============================] - 3s 2s/step - loss: 11.4710 - root_mean_squared_erro
r: 3.3869 - val_loss: 28.2847 - val_root_mean_squared_error: 5.3183
Epoch 91/300
3/3 [==============================] - 4s 2s/step - loss: 11.4312 - root_mean_squared_erro
r: 3.3810 - val_loss: 28.1550 - val_root_mean_squared_error: 5.3061
Epoch 92/300
3/3 [==============================] - 4s 2s/step - loss: 11.3919 - root_mean_squared_erro
r: 3.3752 - val_loss: 28.0252 - val_root_mean_squared_error: 5.2939
Epoch 93/300
3/3 [==============================] - 3s 2s/step - loss: 11.3479 - root_mean_squared_erro
r: 3.3687 - val_loss: 27.8972 - val_root_mean_squared_error: 5.2818
Epoch 94/300
3/3 [==============================] - 4s 2s/step - loss: 11.3070 - root_mean_squared_erro
r: 3.3626 - val_loss: 27.7658 - val_root_mean_squared_error: 5.2693
Epoch 95/300
3/3 [==============================] - 4s 2s/step - loss: 11.2622 - root_mean_squared_erro
r: 3.3559 - val_loss: 27.6366 - val_root_mean_squared_error: 5.2571
Epoch 96/300
3/3 [==============================] - 3s 2s/step - loss: 11.2226 - root_mean_squared_erro
r: 3.3500 - val_loss: 27.5043 - val_root_mean_squared_error: 5.2445
Epoch 97/300
3/3 [==============================] - 3s 2s/step - loss: 11.1769 - root_mean_squared_erro
r: 3.3432 - val_loss: 27.3770 - val_root_mean_squared_error: 5.2323
Epoch 98/300
3/3 [==============================] - 5s 2s/step - loss: 11.1349 - root_mean_squared_erro
r: 3.3369 - val_loss: 27.2483 - val_root_mean_squared_error: 5.2200
Epoch 99/300
3/3 [==============================] - 3s 2s/step - loss: 11.0954 - root_mean_squared_erro
r: 3.3310 - val_loss: 27.1151 - val_root_mean_squared_error: 5.2072
Epoch 100/300
3/3 [==============================] - 3s 2s/step - loss: 11.0481 - root_mean_squared_erro
r: 3.3239 - val_loss: 26.9869 - val_root_mean_squared_error: 5.1949
Epoch 101/300
3/3 [==============================] - 4s 2s/step - loss: 11.0047 - root_mean_squared_erro
r: 3.3173 - val_loss: 26.8591 - val_root_mean_squared_error: 5.1826
Epoch 102/300
3/3 [==============================] - 4s 2s/step - loss: 10.9623 - root_mean_squared_erro
r: 3.3109 - val_loss: 26.7321 - val_root_mean_squared_error: 5.1703
Epoch 103/300
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3/3 [==============================] - 3s 2s/step - loss: 10.9213 - root_mean_squared_erro
r: 3.3047 - val_loss: 26.6017 - val_root_mean_squared_error: 5.1577
Epoch 104/300
3/3 [==============================] - 4s 2s/step - loss: 10.8781 - root_mean_squared_erro
r: 3.2982 - val_loss: 26.4750 - val_root_mean_squared_error: 5.1454
Epoch 105/300
3/3 [==============================] - 4s 2s/step - loss: 10.8383 - root_mean_squared_erro
r: 3.2922 - val_loss: 26.3475 - val_root_mean_squared_error: 5.1330
Epoch 106/300
3/3 [==============================] - 3s 2s/step - loss: 10.7913 - root_mean_squared_erro
r: 3.2850 - val_loss: 26.2241 - val_root_mean_squared_error: 5.1209
Epoch 107/300
3/3 [==============================] - 4s 2s/step - loss: 10.7523 - root_mean_squared_erro
r: 3.2791 - val_loss: 26.0933 - val_root_mean_squared_error: 5.1082
Epoch 108/300
3/3 [==============================] - 5s 2s/step - loss: 10.7043 - root_mean_squared_erro
r: 3.2717 - val_loss: 25.9717 - val_root_mean_squared_error: 5.0962
Epoch 109/300
3/3 [==============================] - 3s 2s/step - loss: 10.6672 - root_mean_squared_erro
r: 3.2661 - val_loss: 25.8425 - val_root_mean_squared_error: 5.0836
Epoch 110/300
3/3 [==============================] - 3s 2s/step - loss: 10.6261 - root_mean_squared_erro
r: 3.2598 - val_loss: 25.7128 - val_root_mean_squared_error: 5.0708
Epoch 111/300
3/3 [==============================] - 5s 2s/step - loss: 10.5778 - root_mean_squared_erro
r: 3.2524 - val_loss: 25.5898 - val_root_mean_squared_error: 5.0586
Epoch 112/300
3/3 [==============================] - 3s 2s/step - loss: 10.5418 - root_mean_squared_erro
r: 3.2468 - val_loss: 25.4616 - val_root_mean_squared_error: 5.0459
Epoch 113/300
3/3 [==============================] - 3s 2s/step - loss: 10.4979 - root_mean_squared_erro
r: 3.2401 - val_loss: 25.3355 - val_root_mean_squared_error: 5.0334
Epoch 114/300
3/3 [==============================] - 4s 2s/step - loss: 10.4612 - root_mean_squared_erro
r: 3.2344 - val_loss: 25.2054 - val_root_mean_squared_error: 5.0205
Epoch 115/300
3/3 [==============================] - 4s 2s/step - loss: 10.4187 - root_mean_squared_erro
r: 3.2278 - val_loss: 25.0786 - val_root_mean_squared_error: 5.0079
Epoch 116/300
3/3 [==============================] - 3s 2s/step - loss: 10.3766 - root_mean_squared_erro
r: 3.2213 - val_loss: 24.9525 - val_root_mean_squared_error: 4.9952
Epoch 117/300
3/3 [==============================] - 4s 2s/step - loss: 10.3352 - root_mean_squared_erro
r: 3.2148 - val_loss: 24.8306 - val_root_mean_squared_error: 4.9830
Epoch 118/300
3/3 [==============================] - 4s 2s/step - loss: 10.2932 - root_mean_squared_erro
r: 3.2083 - val_loss: 24.7112 - val_root_mean_squared_error: 4.9710
Epoch 119/300
3/3 [==============================] - 3s 2s/step - loss: 10.2564 - root_mean_squared_erro
r: 3.2026 - val_loss: 24.5887 - val_root_mean_squared_error: 4.9587
Epoch 120/300
3/3 [==============================] - 3s 2s/step - loss: 10.2159 - root_mean_squared_erro
r: 3.1962 - val_loss: 24.4685 - val_root_mean_squared_error: 4.9466
Epoch 121/300
3/3 [==============================] - 5s 2s/step - loss: 10.1796 - root_mean_squared_erro
r: 3.1906 - val_loss: 24.3459 - val_root_mean_squared_error: 4.9342
Epoch 122/300
3/3 [==============================] - 3s 2s/step - loss: 10.1394 - root_mean_squared_erro
r: 3.1842 - val_loss: 24.2287 - val_root_mean_squared_error: 4.9223
Epoch 123/300
3/3 [==============================] - 3s 2s/step - loss: 10.1029 - root_mean_squared_erro
r: 3.1785 - val_loss: 24.1096 - val_root_mean_squared_error: 4.9102
Epoch 124/300
3/3 [==============================] - 4s 2s/step - loss: 10.0651 - root_mean_squared_erro
r: 3.1726 - val_loss: 23.9939 - val_root_mean_squared_error: 4.8984
Epoch 125/300
3/3 [==============================] - 4s 2s/step - loss: 10.0289 - root_mean_squared_erro
r: 3.1668 - val_loss: 23.8778 - val_root_mean_squared_error: 4.8865
Epoch 126/300
3/3 [==============================] - 3s 2s/step - loss: 9.9938 - root_mean_squared_erro
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r: 3.1613 - val_loss: 23.7609 - val_root_mean_squared_error: 4.8745
Epoch 127/300
3/3 [==============================] - 4s 2s/step - loss: 9.9563 - root_mean_squared_erro
r: 3.1554 - val_loss: 23.6493 - val_root_mean_squared_error: 4.8631
Epoch 128/300
3/3 [==============================] - 4s 2s/step - loss: 9.9200 - root_mean_squared_erro
r: 3.1496 - val_loss: 23.5418 - val_root_mean_squared_error: 4.8520
Epoch 129/300
3/3 [==============================] - 3s 2s/step - loss: 9.8847 - root_mean_squared_erro
r: 3.1440 - val_loss: 23.4334 - val_root_mean_squared_error: 4.8408
Epoch 130/300
3/3 [==============================] - 4s 2s/step - loss: 9.8535 - root_mean_squared_erro
r: 3.1390 - val_loss: 23.3204 - val_root_mean_squared_error: 4.8291
Epoch 131/300
3/3 [==============================] - 4s 2s/step - loss: 9.8167 - root_mean_squared_erro
r: 3.1332 - val_loss: 23.2148 - val_root_mean_squared_error: 4.8182
Epoch 132/300
3/3 [==============================] - 3s 2s/step - loss: 9.7837 - root_mean_squared_erro
r: 3.1279 - val_loss: 23.1099 - val_root_mean_squared_error: 4.8073
Epoch 133/300
3/3 [==============================] - 3s 2s/step - loss: 9.7517 - root_mean_squared_erro
r: 3.1228 - val_loss: 23.0032 - val_root_mean_squared_error: 4.7962
Epoch 134/300
3/3 [==============================] - 4s 2s/step - loss: 9.7185 - root_mean_squared_erro
r: 3.1175 - val_loss: 22.9003 - val_root_mean_squared_error: 4.7854
Epoch 135/300
3/3 [==============================] - 4s 2s/step - loss: 9.6871 - root_mean_squared_erro
r: 3.1124 - val_loss: 22.7961 - val_root_mean_squared_error: 4.7745
Epoch 136/300
3/3 [==============================] - 3s 2s/step - loss: 9.6573 - root_mean_squared_erro
r: 3.1076 - val_loss: 22.6931 - val_root_mean_squared_error: 4.7637
Epoch 137/300
3/3 [==============================] - 4s 2s/step - loss: 9.6248 - root_mean_squared_erro
r: 3.1024 - val_loss: 22.5934 - val_root_mean_squared_error: 4.7533
Epoch 138/300
3/3 [==============================] - 4s 2s/step - loss: 9.5963 - root_mean_squared_erro
r: 3.0978 - val_loss: 22.4907 - val_root_mean_squared_error: 4.7424
Epoch 139/300
3/3 [==============================] - 3s 2s/step - loss: 9.5697 - root_mean_squared_erro
r: 3.0935 - val_loss: 22.3850 - val_root_mean_squared_error: 4.7313
Epoch 140/300
3/3 [==============================] - 4s 2s/step - loss: 9.5342 - root_mean_squared_erro
r: 3.0878 - val_loss: 22.2903 - val_root_mean_squared_error: 4.7213
Epoch 141/300
3/3 [==============================] - 4s 2s/step - loss: 9.5090 - root_mean_squared_erro
r: 3.0837 - val_loss: 22.1932 - val_root_mean_squared_error: 4.7110
Epoch 142/300
3/3 [==============================] - 3s 2s/step - loss: 9.4777 - root_mean_squared_erro
r: 3.0786 - val_loss: 22.1053 - val_root_mean_squared_error: 4.7016
Epoch 143/300
3/3 [==============================] - 4s 2s/step - loss: 9.4530 - root_mean_squared_erro
r: 3.0746 - val_loss: 22.0089 - val_root_mean_squared_error: 4.6914
Epoch 144/300
3/3 [==============================] - 5s 2s/step - loss: 9.4258 - root_mean_squared_erro
r: 3.0702 - val_loss: 21.9145 - val_root_mean_squared_error: 4.6813
Epoch 145/300
3/3 [==============================] - 3s 2s/step - loss: 9.4022 - root_mean_squared_erro
r: 3.0663 - val_loss: 21.8166 - val_root_mean_squared_error: 4.6708
Epoch 146/300
3/3 [==============================] - 3s 2s/step - loss: 9.3716 - root_mean_squared_erro
r: 3.0613 - val_loss: 21.7246 - val_root_mean_squared_error: 4.6610
Epoch 147/300
3/3 [==============================] - 4s 2s/step - loss: 9.3436 - root_mean_squared_erro
r: 3.0567 - val_loss: 21.6398 - val_root_mean_squared_error: 4.6519
Epoch 148/300
3/3 [==============================] - 4s 2s/step - loss: 9.3206 - root_mean_squared_erro
r: 3.0530 - val_loss: 21.5478 - val_root_mean_squared_error: 4.6420
Epoch 149/300
3/3 [==============================] - 4s 2s/step - loss: 9.2945 - root_mean_squared_erro
r: 3.0487 - val_loss: 21.4600 - val_root_mean_squared_error: 4.6325
```

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Epoch 150/300
3/3 [==============================] - 4s 2s/step - loss: 9.2676 - root_mean_squared_erro
r: 3.0443 - val_loss: 21.3776 - val_root_mean_squared_error: 4.6236
Epoch 151/300
3/3 [==============================] - 4s 2s/step - loss: 9.2442 - root_mean_squared_erro
r: 3.0404 - val_loss: 21.2902 - val_root_mean_squared_error: 4.6141
Epoch 152/300
3/3 [==============================] - 3s 2s/step - loss: 9.2198 - root_mean_squared_erro
r: 3.0364 - val_loss: 21.2051 - val_root_mean_squared_error: 4.6049
Epoch 153/300
3/3 [==============================] - 4s 2s/step - loss: 9.1988 - root_mean_squared_erro
r: 3.0330 - val_loss: 21.1155 - val_root_mean_squared_error: 4.5952
Epoch 154/300
3/3 [==============================] - 4s 2s/step - loss: 9.1712 - root_mean_squared_erro
r: 3.0284 - val_loss: 21.0341 - val_root_mean_squared_error: 4.5863
Epoch 155/300
3/3 [==============================] - 3s 2s/step - loss: 9.1495 - root_mean_squared_erro
r: 3.0248 - val_loss: 20.9496 - val_root_mean_squared_error: 4.5771
Epoch 156/300
3/3 [==============================] - 4s 2s/step - loss: 9.1259 - root_mean_squared_erro
r: 3.0209 - val_loss: 20.8679 - val_root_mean_squared_error: 4.5681
Epoch 157/300
3/3 [==============================] - 4s 2s/step - loss: 9.1060 - root_mean_squared_erro
r: 3.0176 - val_loss: 20.7818 - val_root_mean_squared_error: 4.5587
Epoch 158/300
3/3 [==============================] - 4s 2s/step - loss: 9.0823 - root_mean_squared_erro
r: 3.0137 - val_loss: 20.6972 - val_root_mean_squared_error: 4.5494
Epoch 159/300
3/3 [==============================] - 3s 2s/step - loss: 9.0602 - root_mean_squared_erro
r: 3.0100 - val_loss: 20.6153 - val_root_mean_squared_error: 4.5404
Epoch 160/300
3/3 [==============================] - 4s 2s/step - loss: 9.0393 - root_mean_squared_erro
r: 3.0065 - val_loss: 20.5323 - val_root_mean_squared_error: 4.5313
Epoch 161/300
3/3 [==============================] - 4s 2s/step - loss: 9.0140 - root_mean_squared_erro
r: 3.0023 - val_loss: 20.4688 - val_root_mean_squared_error: 4.5242
Epoch 162/300
3/3 [==============================] - 3s 2s/step - loss: 8.9954 - root_mean_squared_erro
r: 2.9992 - val_loss: 20.3948 - val_root_mean_squared_error: 4.5161
Epoch 163/300
3/3 [==============================] - 4s 2s/step - loss: 8.9740 - root_mean_squared_erro
r: 2.9957 - val_loss: 20.3237 - val_root_mean_squared_error: 4.5082
Epoch 164/300
3/3 [==============================] - 4s 2s/step - loss: 8.9550 - root_mean_squared_erro
r: 2.9925 - val_loss: 20.2515 - val_root_mean_squared_error: 4.5002
Epoch 165/300
3/3 [==============================] - 3s 2s/step - loss: 8.9364 - root_mean_squared_erro
r: 2.9894 - val_loss: 20.1774 - val_root_mean_squared_error: 4.4919
Epoch 166/300
3/3 [==============================] - 4s 2s/step - loss: 8.9166 - root_mean_squared_erro
r: 2.9861 - val_loss: 20.1065 - val_root_mean_squared_error: 4.4840
Epoch 167/300
3/3 [==============================] - 4s 2s/step - loss: 8.8983 - root_mean_squared_erro
r: 2.9830 - val_loss: 20.0353 - val_root_mean_squared_error: 4.4761
Epoch 168/300
3/3 [==============================] - 3s 2s/step - loss: 8.8768 - root_mean_squared_erro
r: 2.9794 - val_loss: 19.9710 - val_root_mean_squared_error: 4.4689
Epoch 169/300
3/3 [==============================] - 3s 2s/step - loss: 8.8596 - root_mean_squared_erro
r: 2.9765 - val_loss: 19.9051 - val_root_mean_squared_error: 4.4615
Epoch 170/300
3/3 [==============================] - 5s 2s/step - loss: 8.8396 - root_mean_squared_erro
r: 2.9731 - val_loss: 19.8470 - val_root_mean_squared_error: 4.4550
Epoch 171/300
3/3 [==============================] - 3s 2s/step - loss: 8.8258 - root_mean_squared_erro
r: 2.9708 - val_loss: 19.7743 - val_root_mean_squared_error: 4.4468
Epoch 172/300
3/3 [==============================] - 3s 2s/step - loss: 8.8035 - root_mean_squared_erro
r: 2.9671 - val_loss: 19.7181 - val_root_mean_squared_error: 4.4405
Epoch 173/300
3/3 [==============================] - 4s 2s/step - loss: 8.7875 - root_mean_squared_erro
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3/3 [==============================] - 4s 2s/step - loss: 8.7875 - root_mean_squared_erro
r: 2.9644 - val_loss: 19.6586 - val_root_mean_squared_error: 4.4338
Epoch 174/300
3/3 [==============================] - 4s 2s/step - loss: 8.7706 - root_mean_squared_erro
r: 2.9615 - val_loss: 19.5962 - val_root_mean_squared_error: 4.4268
Epoch 175/300
3/3 [==============================] - 3s 2s/step - loss: 8.7538 - root_mean_squared_erro
r: 2.9587 - val_loss: 19.5373 - val_root_mean_squared_error: 4.4201
Epoch 176/300
3/3 [==============================] - 4s 2s/step - loss: 8.7368 - root_mean_squared_erro
r: 2.9558 - val_loss: 19.4759 - val_root_mean_squared_error: 4.4131
Epoch 177/300
3/3 [==============================] - 4s 2s/step - loss: 8.7203 - root_mean_squared_erro
r: 2.9530 - val_loss: 19.4190 - val_root_mean_squared_error: 4.4067
Epoch 178/300
3/3 [==============================] - 3s 2s/step - loss: 8.7062 - root_mean_squared_erro
r: 2.9506 - val_loss: 19.3543 - val_root_mean_squared_error: 4.3994
Epoch 179/300
3/3 [==============================] - 4s 2s/step - loss: 8.6887 - root_mean_squared_erro
r: 2.9477 - val_loss: 19.3009 - val_root_mean_squared_error: 4.3933
Epoch 180/300
3/3 [==============================] - 4s 2s/step - loss: 8.6759 - root_mean_squared_erro
r: 2.9455 - val_loss: 19.2371 - val_root_mean_squared_error: 4.3860
Epoch 181/300
3/3 [==============================] - 3s 2s/step - loss: 8.6569 - root_mean_squared_erro
r: 2.9423 - val_loss: 19.1898 - val_root_mean_squared_error: 4.3806
Epoch 182/300
3/3 [==============================] - 3s 2s/step - loss: 8.6430 - root_mean_squared_erro
r: 2.9399 - val_loss: 19.1351 - val_root_mean_squared_error: 4.3744
Epoch 183/300
3/3 [==============================] - 4s 2s/step - loss: 8.6271 - root_mean_squared_erro
r: 2.9372 - val_loss: 19.0900 - val_root_mean_squared_error: 4.3692
Epoch 184/300
3/3 [==============================] - 4s 2s/step - loss: 8.6131 - root_mean_squared_erro
r: 2.9348 - val_loss: 19.0388 - val_root_mean_squared_error: 4.3633
Epoch 185/300
3/3 [==============================] - 3s 2s/step - loss: 8.5990 - root_mean_squared_erro
r: 2.9324 - val_loss: 18.9908 - val_root_mean_squared_error: 4.3578
Epoch 186/300
3/3 [==============================] - 4s 2s/step - loss: 8.5853 - root_mean_squared_erro
r: 2.9301 - val_loss: 18.9397 - val_root_mean_squared_error: 4.3520
Epoch 187/300
3/3 [==============================] - 4s 2s/step - loss: 8.5708 - root_mean_squared_erro
r: 2.9276 - val_loss: 18.8928 - val_root_mean_squared_error: 4.3466
Epoch 188/300
3/3 [==============================] - 3s 2s/step - loss: 8.5586 - root_mean_squared_erro
r: 2.9255 - val_loss: 18.8391 - val_root_mean_squared_error: 4.3404
Epoch 189/300
3/3 [==============================] - 4s 2s/step - loss: 8.5468 - root_mean_squared_erro
r: 2.9235 - val_loss: 18.7822 - val_root_mean_squared_error: 4.3338
Epoch 190/300
3/3 [==============================] - 4s 2s/step - loss: 8.5304 - root_mean_squared_erro
r: 2.9207 - val_loss: 18.7428 - val_root_mean_squared_error: 4.3293
Epoch 191/300
3/3 [==============================] - 3s 2s/step - loss: 8.5180 - root_mean_squared_erro
r: 2.9186 - val_loss: 18.7000 - val_root_mean_squared_error: 4.3243
Epoch 192/300
3/3 [==============================] - 4s 2s/step - loss: 8.5052 - root_mean_squared_erro
r: 2.9164 - val_loss: 18.6559 - val_root_mean_squared_error: 4.3192
Epoch 193/300
3/3 [==============================] - 4s 2s/step - loss: 8.4920 - root_mean_squared_erro
r: 2.9141 - val_loss: 18.6208 - val_root_mean_squared_error: 4.3152
Epoch 194/300
3/3 [==============================] - 3s 2s/step - loss: 8.4819 - root_mean_squared_erro
r: 2.9124 - val_loss: 18.5713 - val_root_mean_squared_error: 4.3094
Epoch 195/300
3/3 [==============================] - 4s 2s/step - loss: 8.4678 - root_mean_squared_erro
r: 2.9099 - val_loss: 18.5341 - val_root_mean_squared_error: 4.3051
Epoch 196/300
3/3 [==============================] - 5s 2s/step - loss: 8.4556 - root_mean_squared_erro
r: 2.9079 - val_loss: 18.4993 - val_root_mean_squared_error: 4.3011
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r: 2.9079 - val_loss: 18.4995 - val_root_mean_squared_error: 4.3011
Epoch 197/300
3/3 [==============================] - 4s 2s/step - loss: 8.4449 - root_mean_squared_erro
r: 2.9060 - val_loss: 18.4565 - val_root_mean_squared_error: 4.2961
Epoch 198/300
3/3 [==============================] - 4s 2s/step - loss: 8.4319 - root_mean_squared_erro
r: 2.9038 - val_loss: 18.4219 - val_root_mean_squared_error: 4.2921
Epoch 199/300
3/3 [==============================] - 4s 2s/step - loss: 8.4212 - root_mean_squared_erro
r: 2.9019 - val_loss: 18.3791 - val_root_mean_squared_error: 4.2871
Epoch 200/300
3/3 [==============================] - 5s 2s/step - loss: 8.4094 - root_mean_squared_erro
r: 2.8999 - val_loss: 18.3400 - val_root_mean_squared_error: 4.2825
Epoch 201/300
3/3 [==============================] - 5s 2s/step - loss: 8.3972 - root_mean_squared_erro
r: 2.8978 - val_loss: 18.3057 - val_root_mean_squared_error: 4.2785
Epoch 202/300
3/3 [==============================] - 4s 2s/step - loss: 8.3858 - root_mean_squared_erro
r: 2.8958 - val_loss: 18.2778 - val_root_mean_squared_error: 4.2752
Epoch 203/300
3/3 [==============================] - 5s 2s/step - loss: 8.3752 - root_mean_squared_erro
r: 2.8940 - val_loss: 18.2443 - val_root_mean_squared_error: 4.2713
Epoch 204/300
3/3 [==============================] - 4s 2s/step - loss: 8.3638 - root_mean_squared_erro
r: 2.8920 - val_loss: 18.2195 - val_root_mean_squared_error: 4.2684
Epoch 205/300
3/3 [==============================] - 4s 2s/step - loss: 8.3539 - root_mean_squared_erro
r: 2.8903 - val_loss: 18.1847 - val_root_mean_squared_error: 4.2644
Epoch 206/300
3/3 [==============================] - 4s 2s/step - loss: 8.3433 - root_mean_squared_erro
r: 2.8885 - val_loss: 18.1534 - val_root_mean_squared_error: 4.2607
Epoch 207/300
3/3 [==============================] - 5s 2s/step - loss: 8.3324 - root_mean_squared_erro
r: 2.8866 - val_loss: 18.1219 - val_root_mean_squared_error: 4.2570
Epoch 208/300
3/3 [==============================] - 4s 2s/step - loss: 8.3232 - root_mean_squared_erro
r: 2.8850 - val_loss: 18.0851 - val_root_mean_squared_error: 4.2527
Epoch 209/300
3/3 [==============================] - 4s 2s/step - loss: 8.3121 - root_mean_squared_erro
r: 2.8831 - val_loss: 18.0560 - val_root_mean_squared_error: 4.2492
Epoch 210/300
3/3 [==============================] - 5s 3s/step - loss: 8.3020 - root_mean_squared_erro
r: 2.8813 - val_loss: 18.0272 - val_root_mean_squared_error: 4.2458
Epoch 211/300
3/3 [==============================] - 4s 2s/step - loss: 8.2925 - root_mean_squared_erro
r: 2.8797 - val_loss: 17.9942 - val_root_mean_squared_error: 4.2420
Epoch 212/300
3/3 [==============================] - 3s 2s/step - loss: 8.2828 - root_mean_squared_erro
r: 2.8780 - val_loss: 17.9602 - val_root_mean_squared_error: 4.2380
Epoch 213/300
3/3 [==============================] - 5s 2s/step - loss: 8.2720 - root_mean_squared_erro
r: 2.8761 - val_loss: 17.9408 - val_root_mean_squared_error: 4.2357
Epoch 214/300
3/3 [==============================] - 3s 2s/step - loss: 8.2630 - root_mean_squared_erro
r: 2.8745 - val_loss: 17.9127 - val_root_mean_squared_error: 4.2323
Epoch 215/300
3/3 [==============================] - 3s 2s/step - loss: 8.2526 - root_mean_squared_erro
r: 2.8727 - val_loss: 17.8847 - val_root_mean_squared_error: 4.2290
Epoch 216/300
3/3 [==============================] - 5s 2s/step - loss: 8.2447 - root_mean_squared_erro
r: 2.8714 - val_loss: 17.8480 - val_root_mean_squared_error: 4.2247
Epoch 217/300
3/3 [==============================] - 4s 2s/step - loss: 8.2339 - root_mean_squared_erro
r: 2.8695 - val_loss: 17.8223 - val_root_mean_squared_error: 4.2216
Epoch 218/300
3/3 [==============================] - 3s 2s/step - loss: 8.2245 - root_mean_squared_erro
r: 2.8678 - val_loss: 17.8014 - val_root_mean_squared_error: 4.2192
Epoch 219/300
3/3 [==============================] - 5s 2s/step - loss: 8.2157 - root_mean_squared_erro
r: 2.8663 - val_loss: 17.7713 - val_root_mean_squared_error: 4.2156
Epoch 220/300
```

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Epoch 220/300
3/3 [==============================] - 4s 2s/step - loss: 8.2067 - root_mean_squared_erro
r: 2.8647 - val_loss: 17.7462 - val_root_mean_squared_error: 4.2126
Epoch 221/300
3/3 [==============================] - 3s 2s/step - loss: 8.1971 - root_mean_squared_erro
r: 2.8631 - val_loss: 17.7297 - val_root_mean_squared_error: 4.2107
Epoch 222/300
3/3 [==============================] - 4s 2s/step - loss: 8.1880 - root_mean_squared_erro
r: 2.8615 - val_loss: 17.7101 - val_root_mean_squared_error: 4.2083
Epoch 223/300
3/3 [==============================] - 4s 2s/step - loss: 8.1796 - root_mean_squared_erro
r: 2.8600 - val_loss: 17.6848 - val_root_mean_squared_error: 4.2053
Epoch 224/300
3/3 [==============================] - 3s 2s/step - loss: 8.1709 - root_mean_squared_erro
r: 2.8585 - val_loss: 17.6640 - val_root_mean_squared_error: 4.2029
Epoch 225/300
3/3 [==============================] - 3s 2s/step - loss: 8.1620 - root_mean_squared_erro
r: 2.8569 - val_loss: 17.6430 - val_root_mean_squared_error: 4.2004
Epoch 226/300
3/3 [==============================] - 5s 2s/step - loss: 8.1529 - root_mean_squared_erro
r: 2.8553 - val_loss: 17.6233 - val_root_mean_squared_error: 4.1980
Epoch 227/300
3/3 [==============================] - 3s 2s/step - loss: 8.1446 - root_mean_squared_erro
r: 2.8539 - val_loss: 17.6040 - val_root_mean_squared_error: 4.1957
Epoch 228/300
3/3 [==============================] - 3s 2s/step - loss: 8.1362 - root_mean_squared_erro
r: 2.8524 - val_loss: 17.5890 - val_root_mean_squared_error: 4.1939
Epoch 229/300
3/3 [==============================] - 5s 2s/step - loss: 8.1263 - root_mean_squared_erro
r: 2.8507 - val_loss: 17.5814 - val_root_mean_squared_error: 4.1930
Epoch 230/300
3/3 [==============================] - 3s 2s/step - loss: 8.1183 - root_mean_squared_erro
r: 2.8493 - val_loss: 17.5665 - val_root_mean_squared_error: 4.1912
Epoch 231/300
3/3 [==============================] - 3s 2s/step - loss: 8.1095 - root_mean_squared_erro
r: 2.8477 - val_loss: 17.5530 - val_root_mean_squared_error: 4.1896
Epoch 232/300
3/3 [==============================] - 0s 37ms/step - loss: 8.0985 - root_mean_squared_err
or: 2.8458 - val_loss: 17.5576 - val_root_mean_squared_error: 4.1902
Epoch 233/300
3/3 [==============================] - 5s 2s/step - loss: 8.0907 - root_mean_squared_erro
r: 2.8444 - val_loss: 17.5459 - val_root_mean_squared_error: 4.1888
Epoch 234/300
3/3 [==============================] - 0s 60ms/step - loss: 8.0817 - root_mean_squared_err
or: 2.8428 - val_loss: 17.5514 - val_root_mean_squared_error: 4.1894
Epoch 235/300
3/3 [==============================] - 0s 42ms/step - loss: 8.0724 - root_mean_squared_err
or: 2.8412 - val_loss: 17.5572 - val_root_mean_squared_error: 4.1901
Epoch 236/300
3/3 [==============================] - 0s 46ms/step - loss: 8.0640 - root_mean_squared_err
or: 2.8397 - val_loss: 17.5540 - val_root_mean_squared_error: 4.1898
Epoch 237/300
3/3 [==============================] - 0s 40ms/step - loss: 8.0560 - root_mean_squared_err
or: 2.8383 - val_loss: 17.5626 - val_root_mean_squared_error: 4.1908
Epoch 238/300
3/3 [==============================] - 0s 41ms/step - loss: 8.0477 - root_mean_squared_err
or: 2.8368 - val_loss: 17.5531 - val_root_mean_squared_error: 4.1896
```

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Default and Short, samples = 45
Epoch 1/300
3/3 [==============================] - 7s 2s/step - loss: 16.7285 - root_mean_squared_erro
r: 4.0900 - val_loss: 39.8534 - val_root_mean_squared_error: 6.3130
Epoch 2/300
3/3 [==============================] - 3s 2s/step - loss: 16.6681 - root_mean_squared_erro
r: 4.0827 - val_loss: 39.6831 - val_root_mean_squared_error: 6.2995
Epoch 3/300
3/3 [==============================] - 5s 2s/step - loss: 16.6231 - root_mean_squared_erro
r: 4.0771 - val_loss: 39.5656 - val_root_mean_squared_error: 6.2901
```

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Epoch 4/300
3/3 [==============================] - 4s 2s/step - loss: 16.5794 - root_mean_squared_erro
r: 4.0718 - val_loss: 39.4828 - val_root_mean_squared_error: 6.2835
Epoch 5/300
3/3 [==============================] - 3s 2s/step - loss: 16.5369 - root_mean_squared_erro
r: 4.0666 - val_loss: 39.4071 - val_root_mean_squared_error: 6.2775
Epoch 6/300
3/3 [==============================] - 4s 2s/step - loss: 16.4972 - root_mean_squared_erro
r: 4.0617 - val_loss: 39.3404 - val_root_mean_squared_error: 6.2722
Epoch 7/300
3/3 [==============================] - 4s 2s/step - loss: 16.4569 - root_mean_squared_erro
r: 4.0567 - val_loss: 39.1715 - val_root_mean_squared_error: 6.2587
Epoch 8/300
3/3 [==============================] - 3s 2s/step - loss: 16.4182 - root_mean_squared_erro
r: 4.0519 - val_loss: 39.1011 - val_root_mean_squared_error: 6.2531
Epoch 9/300
3/3 [==============================] - 3s 2s/step - loss: 16.3790 - root_mean_squared_erro
r: 4.0471 - val_loss: 39.0297 - val_root_mean_squared_error: 6.2474
Epoch 10/300
3/3 [==============================] - 5s 2s/step - loss: 16.3436 - root_mean_squared_erro
r: 4.0427 - val_loss: 38.9566 - val_root_mean_squared_error: 6.2415
Epoch 11/300
3/3 [==============================] - 3s 2s/step - loss: 16.3055 - root_mean_squared_erro
r: 4.0380 - val_loss: 38.8836 - val_root_mean_squared_error: 6.2357
Epoch 12/300
3/3 [==============================] - 3s 2s/step - loss: 16.2707 - root_mean_squared_erro
r: 4.0337 - val_loss: 38.8061 - val_root_mean_squared_error: 6.2295
Epoch 13/300
3/3 [==============================] - 5s 2s/step - loss: 16.2346 - root_mean_squared_erro
r: 4.0292 - val_loss: 38.7248 - val_root_mean_squared_error: 6.2229
Epoch 14/300
3/3 [==============================] - 3s 2s/step - loss: 16.1987 - root_mean_squared_erro
r: 4.0248 - val_loss: 38.6284 - val_root_mean_squared_error: 6.2152
Epoch 15/300
3/3 [==============================] - 3s 2s/step - loss: 16.1631 - root_mean_squared_erro
r: 4.0203 - val_loss: 38.5306 - val_root_mean_squared_error: 6.2073
Epoch 16/300
3/3 [==============================] - 4s 2s/step - loss: 16.1285 - root_mean_squared_erro
r: 4.0160 - val_loss: 38.4414 - val_root_mean_squared_error: 6.2001
Epoch 17/300
3/3 [==============================] - 4s 2s/step - loss: 16.0931 - root_mean_squared_erro
r: 4.0116 - val_loss: 38.3583 - val_root_mean_squared_error: 6.1934
Epoch 18/300
3/3 [==============================] - 3s 2s/step - loss: 16.0552 - root_mean_squared_erro
r: 4.0069 - val_loss: 38.2718 - val_root_mean_squared_error: 6.1864
Epoch 19/300
3/3 [==============================] - 4s 2s/step - loss: 16.0224 - root_mean_squared_erro
r: 4.0028 - val_loss: 38.1847 - val_root_mean_squared_error: 6.1794
Epoch 20/300
3/3 [==============================] - 4s 2s/step - loss: 15.9846 - root_mean_squared_erro
r: 3.9981 - val_loss: 38.1135 - val_root_mean_squared_error: 6.1736
Epoch 21/300
3/3 [==============================] - 3s 2s/step - loss: 15.9476 - root_mean_squared_erro
r: 3.9934 - val_loss: 38.0436 - val_root_mean_squared_error: 6.1679
Epoch 22/300
3/3 [==============================] - 3s 2s/step - loss: 15.9107 - root_mean_squared_erro
r: 3.9888 - val_loss: 37.9747 - val_root_mean_squared_error: 6.1624
Epoch 23/300
3/3 [==============================] - 4s 2s/step - loss: 15.8776 - root_mean_squared_erro
r: 3.9847 - val_loss: 37.9052 - val_root_mean_squared_error: 6.1567
Epoch 24/300
3/3 [==============================] - 4s 2s/step - loss: 15.8478 - root_mean_squared_erro
r: 3.9809 - val_loss: 37.8343 - val_root_mean_squared_error: 6.1510
Epoch 25/300
3/3 [==============================] - 3s 2s/step - loss: 15.8158 - root_mean_squared_erro
r: 3.9769 - val_loss: 37.7635 - val_root_mean_squared_error: 6.1452
Epoch 26/300
3/3 [==============================] - 4s 2s/step - loss: 15.7835 - root_mean_squared_erro
r: 3.9728 - val_loss: 37.6924 - val_root_mean_squared_error: 6.1394
Epoch 27/300
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3/3 [==============================] - 4s 2s/step - loss: 15.7501 - root_mean_squared_erro
r: 3.9686 - val_loss: 37.6210 - val_root_mean_squared_error: 6.1336
Epoch 28/300
3/3 [==============================] - 4s 2s/step - loss: 15.7208 - root_mean_squared_erro
r: 3.9649 - val_loss: 37.5456 - val_root_mean_squared_error: 6.1274
Epoch 29/300
3/3 [==============================] - 4s 2s/step - loss: 15.6854 - root_mean_squared_erro
r: 3.9605 - val_loss: 37.4722 - val_root_mean_squared_error: 6.1215
Epoch 30/300
3/3 [==============================] - 4s 2s/step - loss: 15.6512 - root_mean_squared_erro
r: 3.9562 - val_loss: 37.4006 - val_root_mean_squared_error: 6.1156
Epoch 31/300
3/3 [==============================] - 4s 2s/step - loss: 15.6202 - root_mean_squared_erro
r: 3.9522 - val_loss: 37.3283 - val_root_mean_squared_error: 6.1097
Epoch 32/300
3/3 [==============================] - 4s 2s/step - loss: 15.5873 - root_mean_squared_erro
r: 3.9481 - val_loss: 37.2553 - val_root_mean_squared_error: 6.1037
Epoch 33/300
3/3 [==============================] - 4s 2s/step - loss: 15.5593 - root_mean_squared_erro
r: 3.9445 - val_loss: 37.1807 - val_root_mean_squared_error: 6.0976
Epoch 34/300
3/3 [==============================] - 4s 2s/step - loss: 15.5265 - root_mean_squared_erro
r: 3.9404 - val_loss: 37.1102 - val_root_mean_squared_error: 6.0918
Epoch 35/300
3/3 [==============================] - 4s 2s/step - loss: 15.4962 - root_mean_squared_erro
r: 3.9365 - val_loss: 37.0420 - val_root_mean_squared_error: 6.0862
Epoch 36/300
3/3 [==============================] - 3s 2s/step - loss: 15.4675 - root_mean_squared_erro
r: 3.9329 - val_loss: 36.9761 - val_root_mean_squared_error: 6.0808
Epoch 37/300
3/3 [==============================] - 4s 2s/step - loss: 15.4387 - root_mean_squared_erro
r: 3.9292 - val_loss: 36.9120 - val_root_mean_squared_error: 6.0755
Epoch 38/300
3/3 [==============================] - 4s 2s/step - loss: 15.4085 - root_mean_squared_erro
r: 3.9254 - val_loss: 36.8470 - val_root_mean_squared_error: 6.0702
Epoch 39/300
3/3 [==============================] - 3s 2s/step - loss: 15.3806 - root_mean_squared_erro
r: 3.9218 - val_loss: 36.7776 - val_root_mean_squared_error: 6.0645
Epoch 40/300
3/3 [==============================] - 3s 2s/step - loss: 15.3504 - root_mean_squared_erro
r: 3.9180 - val_loss: 36.7070 - val_root_mean_squared_error: 6.0586
Epoch 41/300
3/3 [==============================] - 5s 2s/step - loss: 15.3172 - root_mean_squared_erro
r: 3.9137 - val_loss: 36.6361 - val_root_mean_squared_error: 6.0528
Epoch 42/300
3/3 [==============================] - 4s 2s/step - loss: 15.2880 - root_mean_squared_erro
r: 3.9100 - val_loss: 36.5655 - val_root_mean_squared_error: 6.0469
Epoch 43/300
3/3 [==============================] - 3s 2s/step - loss: 15.2558 - root_mean_squared_erro
r: 3.9059 - val_loss: 36.4997 - val_root_mean_squared_error: 6.0415
Epoch 44/300
3/3 [==============================] - 4s 2s/step - loss: 15.2261 - root_mean_squared_erro
r: 3.9021 - val_loss: 36.4340 - val_root_mean_squared_error: 6.0361
Epoch 45/300
3/3 [==============================] - 4s 2s/step - loss: 15.1955 - root_mean_squared_erro
r: 3.8981 - val_loss: 36.3694 - val_root_mean_squared_error: 6.0307
Epoch 46/300
3/3 [==============================] - 3s 2s/step - loss: 15.1648 - root_mean_squared_erro
r: 3.8942 - val_loss: 36.3033 - val_root_mean_squared_error: 6.0252
Epoch 47/300
3/3 [==============================] - 3s 2s/step - loss: 15.1349 - root_mean_squared_erro
r: 3.8904 - val_loss: 36.2353 - val_root_mean_squared_error: 6.0196
Epoch 48/300
3/3 [==============================] - 5s 2s/step - loss: 15.1031 - root_mean_squared_erro
r: 3.8863 - val_loss: 36.1651 - val_root_mean_squared_error: 6.0137
Epoch 49/300
3/3 [==============================] - 3s 2s/step - loss: 15.0681 - root_mean_squared_erro
r: 3.8818 - val_loss: 36.0937 - val_root_mean_squared_error: 6.0078
Epoch 50/300
3/3 [==============================] - 3s 2s/step - loss: 15.0354 - root_mean_squared_erro
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r: 3.8775 - val_loss: 36.0166 - val_root_mean_squared_error: 6.0014
Epoch 51/300
3/3 [==============================] - 5s 2s/step - loss: 14.9979 - root_mean_squared_erro
r: 3.8727 - val_loss: 35.9370 - val_root_mean_squared_error: 5.9947
Epoch 52/300
3/3 [==============================] - 3s 2s/step - loss: 14.9617 - root_mean_squared_erro
r: 3.8680 - val_loss: 35.8526 - val_root_mean_squared_error: 5.9877
Epoch 53/300
3/3 [==============================] - 3s 2s/step - loss: 14.9280 - root_mean_squared_erro
r: 3.8637 - val_loss: 35.7693 - val_root_mean_squared_error: 5.9807
Epoch 54/300
3/3 [==============================] - 4s 2s/step - loss: 14.8915 - root_mean_squared_erro
r: 3.8590 - val_loss: 35.6893 - val_root_mean_squared_error: 5.9741
Epoch 55/300
3/3 [==============================] - 4s 2s/step - loss: 14.8578 - root_mean_squared_erro
r: 3.8546 - val_loss: 35.6096 - val_root_mean_squared_error: 5.9674
Epoch 56/300
3/3 [==============================] - 3s 2s/step - loss: 14.8244 - root_mean_squared_erro
r: 3.8503 - val_loss: 35.5323 - val_root_mean_squared_error: 5.9609
Epoch 57/300
3/3 [==============================] - 3s 2s/step - loss: 14.7911 - root_mean_squared_erro
r: 3.8459 - val_loss: 35.4556 - val_root_mean_squared_error: 5.9545
Epoch 58/300
3/3 [==============================] - 5s 2s/step - loss: 14.7587 - root_mean_squared_erro
r: 3.8417 - val_loss: 35.3787 - val_root_mean_squared_error: 5.9480
Epoch 59/300
3/3 [==============================] - 3s 2s/step - loss: 14.7235 - root_mean_squared_erro
r: 3.8371 - val_loss: 35.3024 - val_root_mean_squared_error: 5.9416
Epoch 60/300
3/3 [==============================] - 3s 2s/step - loss: 14.6912 - root_mean_squared_erro
r: 3.8329 - val_loss: 35.2222 - val_root_mean_squared_error: 5.9348
Epoch 61/300
3/3 [==============================] - 5s 2s/step - loss: 14.6590 - root_mean_squared_erro
r: 3.8287 - val_loss: 35.1373 - val_root_mean_squared_error: 5.9277
Epoch 62/300
3/3 [==============================] - 3s 2s/step - loss: 14.6243 - root_mean_squared_erro
r: 3.8242 - val_loss: 35.0536 - val_root_mean_squared_error: 5.9206
Epoch 63/300
3/3 [==============================] - 3s 2s/step - loss: 14.5913 - root_mean_squared_erro
r: 3.8199 - val_loss: 34.9706 - val_root_mean_squared_error: 5.9136
Epoch 64/300
3/3 [==============================] - 4s 2s/step - loss: 14.5566 - root_mean_squared_erro
r: 3.8153 - val_loss: 34.8890 - val_root_mean_squared_error: 5.9067
Epoch 65/300
3/3 [==============================] - 4s 2s/step - loss: 14.5242 - root_mean_squared_erro
r: 3.8111 - val_loss: 34.8049 - val_root_mean_squared_error: 5.8996
Epoch 66/300
3/3 [==============================] - 3s 2s/step - loss: 14.4896 - root_mean_squared_erro
r: 3.8065 - val_loss: 34.7238 - val_root_mean_squared_error: 5.8927
Epoch 67/300
3/3 [==============================] - 4s 2s/step - loss: 14.4570 - root_mean_squared_erro
r: 3.8022 - val_loss: 34.6403 - val_root_mean_squared_error: 5.8856
Epoch 68/300
3/3 [==============================] - 4s 2s/step - loss: 14.4213 - root_mean_squared_erro
r: 3.7975 - val_loss: 34.5579 - val_root_mean_squared_error: 5.8786
Epoch 69/300
3/3 [==============================] - 3s 2s/step - loss: 14.3894 - root_mean_squared_erro
r: 3.7933 - val_loss: 34.4763 - val_root_mean_squared_error: 5.8717
Epoch 70/300
3/3 [==============================] - 4s 2s/step - loss: 14.3532 - root_mean_squared_erro
r: 3.7886 - val_loss: 34.3938 - val_root_mean_squared_error: 5.8646
Epoch 71/300
3/3 [==============================] - 5s 2s/step - loss: 14.3205 - root_mean_squared_erro
r: 3.7842 - val_loss: 34.3062 - val_root_mean_squared_error: 5.8572
Epoch 72/300
3/3 [==============================] - 3s 2s/step - loss: 14.2856 - root_mean_squared_erro
r: 3.7796 - val_loss: 34.2177 - val_root_mean_squared_error: 5.8496
Epoch 73/300
3/3 [==============================] - 3s 2s/step - loss: 14.2494 - root_mean_squared_erro
r: 3.7748 - val_loss: 34.1312 - val_root_mean_squared_error: 5.8422
Epoch 74/300
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Epoch 74/300
3/3 [==============================] - 4s 2s/step - loss: 14.2139 - root_mean_squared_erro
r: 3.7701 - val_loss: 34.0461 - val_root_mean_squared_error: 5.8349
Epoch 75/300
3/3 [==============================] - 4s 2s/step - loss: 14.1796 - root_mean_squared_erro
r: 3.7656 - val_loss: 33.9598 - val_root_mean_squared_error: 5.8275
Epoch 76/300
3/3 [==============================] - 3s 2s/step - loss: 14.1459 - root_mean_squared_erro
r: 3.7611 - val_loss: 33.8722 - val_root_mean_squared_error: 5.8200
Epoch 77/300
3/3 [==============================] - 4s 2s/step - loss: 14.1086 - root_mean_squared_erro
r: 3.7561 - val_loss: 33.7896 - val_root_mean_squared_error: 5.8129
Epoch 78/300
3/3 [==============================] - 4s 2s/step - loss: 14.0757 - root_mean_squared_erro
r: 3.7518 - val_loss: 33.7055 - val_root_mean_squared_error: 5.8056
Epoch 79/300
3/3 [==============================] - 3s 2s/step - loss: 14.0420 - root_mean_squared_erro
r: 3.7473 - val_loss: 33.6187 - val_root_mean_squared_error: 5.7982
Epoch 80/300
3/3 [==============================] - 4s 2s/step - loss: 14.0065 - root_mean_squared_erro
r: 3.7425 - val_loss: 33.5310 - val_root_mean_squared_error: 5.7906
Epoch 81/300
3/3 [==============================] - 4s 2s/step - loss: 13.9730 - root_mean_squared_erro
r: 3.7380 - val_loss: 33.4430 - val_root_mean_squared_error: 5.7830
Epoch 82/300
3/3 [==============================] - 4s 2s/step - loss: 13.9371 - root_mean_squared_erro
r: 3.7332 - val_loss: 33.3583 - val_root_mean_squared_error: 5.7757
Epoch 83/300
3/3 [==============================] - 4s 2s/step - loss: 13.9012 - root_mean_squared_erro
r: 3.7284 - val_loss: 33.2702 - val_root_mean_squared_error: 5.7680
Epoch 84/300
3/3 [==============================] - 4s 2s/step - loss: 13.8655 - root_mean_squared_erro
r: 3.7236 - val_loss: 33.1816 - val_root_mean_squared_error: 5.7603
Epoch 85/300
3/3 [==============================] - 4s 2s/step - loss: 13.8282 - root_mean_squared_erro
r: 3.7186 - val_loss: 33.0945 - val_root_mean_squared_error: 5.7528
Epoch 86/300
3/3 [==============================] - 3s 2s/step - loss: 13.7902 - root_mean_squared_erro
r: 3.7135 - val_loss: 33.0064 - val_root_mean_squared_error: 5.7451
Epoch 87/300
3/3 [==============================] - 4s 2s/step - loss: 13.7542 - root_mean_squared_erro
r: 3.7087 - val_loss: 32.9166 - val_root_mean_squared_error: 5.7373
Epoch 88/300
3/3 [==============================] - 4s 2s/step - loss: 13.7149 - root_mean_squared_erro
r: 3.7034 - val_loss: 32.8240 - val_root_mean_squared_error: 5.7292
Epoch 89/300
3/3 [==============================] - 4s 2s/step - loss: 13.6772 - root_mean_squared_erro
r: 3.6983 - val_loss: 32.7316 - val_root_mean_squared_error: 5.7212
Epoch 90/300
3/3 [==============================] - 4s 2s/step - loss: 13.6356 - root_mean_squared_erro
r: 3.6926 - val_loss: 32.6434 - val_root_mean_squared_error: 5.7134
Epoch 91/300
3/3 [==============================] - 3s 2s/step - loss: 13.5974 - root_mean_squared_erro
r: 3.6875 - val_loss: 32.5473 - val_root_mean_squared_error: 5.7050
Epoch 92/300
3/3 [==============================] - 4s 2s/step - loss: 13.5575 - root_mean_squared_erro
r: 3.6821 - val_loss: 32.4496 - val_root_mean_squared_error: 5.6965
Epoch 93/300
3/3 [==============================] - 4s 2s/step - loss: 13.5178 - root_mean_squared_erro
r: 3.6767 - val_loss: 32.3485 - val_root_mean_squared_error: 5.6876
Epoch 94/300
3/3 [==============================] - 3s 2s/step - loss: 13.4774 - root_mean_squared_erro
r: 3.6712 - val_loss: 32.2498 - val_root_mean_squared_error: 5.6789
Epoch 95/300
3/3 [==============================] - 4s 2s/step - loss: 13.4375 - root_mean_squared_erro
r: 3.6657 - val_loss: 32.1572 - val_root_mean_squared_error: 5.6707
Epoch 96/300
3/3 [==============================] - 4s 2s/step - loss: 13.3994 - root_mean_squared_erro
r: 3.6605 - val_loss: 32.0633 - val_root_mean_squared_error: 5.6625
Epoch 97/300
3/3 [==============================] - 3s 2s/step - loss: 13.3632 - root_mean_squared_erro
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3/3 [==============================] - 3s 2s/step - loss: 13.3052 - root_mean_squared_erro
r: 3.6556 - val_loss: 31.9657 - val_root_mean_squared_error: 5.6538
Epoch 98/300
3/3 [==============================] - 3s 2s/step - loss: 13.3237 - root_mean_squared_erro
r: 3.6502 - val_loss: 31.8730 - val_root_mean_squared_error: 5.6456
Epoch 99/300
3/3 [==============================] - 5s 2s/step - loss: 13.2838 - root_mean_squared_erro
r: 3.6447 - val_loss: 31.7778 - val_root_mean_squared_error: 5.6372
Epoch 100/300
3/3 [==============================] - 4s 2s/step - loss: 13.2471 - root_mean_squared_erro
r: 3.6397 - val_loss: 31.6806 - val_root_mean_squared_error: 5.6286
Epoch 101/300
3/3 [==============================] - 3s 2s/step - loss: 13.2099 - root_mean_squared_erro
r: 3.6345 - val_loss: 31.5871 - val_root_mean_squared_error: 5.6202
Epoch 102/300
3/3 [==============================] - 4s 2s/step - loss: 13.1727 - root_mean_squared_erro
r: 3.6294 - val_loss: 31.4964 - val_root_mean_squared_error: 5.6122
Epoch 103/300
3/3 [==============================] - 4s 2s/step - loss: 13.1335 - root_mean_squared_erro
r: 3.6240 - val_loss: 31.4078 - val_root_mean_squared_error: 5.6043
Epoch 104/300
3/3 [==============================] - 3s 2s/step - loss: 13.0954 - root_mean_squared_erro
r: 3.6188 - val_loss: 31.3169 - val_root_mean_squared_error: 5.5961
Epoch 105/300
3/3 [==============================] - 3s 2s/step - loss: 13.0574 - root_mean_squared_erro
r: 3.6135 - val_loss: 31.2219 - val_root_mean_squared_error: 5.5877
Epoch 106/300
3/3 [==============================] - 5s 2s/step - loss: 13.0184 - root_mean_squared_erro
r: 3.6081 - val_loss: 31.1206 - val_root_mean_squared_error: 5.5786
Epoch 107/300
3/3 [==============================] - 3s 2s/step - loss: 12.9773 - root_mean_squared_erro
r: 3.6024 - val_loss: 31.0215 - val_root_mean_squared_error: 5.5697
Epoch 108/300
3/3 [==============================] - 3s 2s/step - loss: 12.9377 - root_mean_squared_erro
r: 3.5969 - val_loss: 30.9236 - val_root_mean_squared_error: 5.5609
Epoch 109/300
3/3 [==============================] - 5s 2s/step - loss: 12.8991 - root_mean_squared_erro
r: 3.5915 - val_loss: 30.8220 - val_root_mean_squared_error: 5.5518
Epoch 110/300
3/3 [==============================] - 3s 2s/step - loss: 12.8602 - root_mean_squared_erro
r: 3.5861 - val_loss: 30.7229 - val_root_mean_squared_error: 5.5428
Epoch 111/300
3/3 [==============================] - 3s 2s/step - loss: 12.8209 - root_mean_squared_erro
r: 3.5806 - val_loss: 30.6290 - val_root_mean_squared_error: 5.5344
Epoch 112/300
3/3 [==============================] - 5s 2s/step - loss: 12.7810 - root_mean_squared_erro
r: 3.5751 - val_loss: 30.5362 - val_root_mean_squared_error: 5.5260
Epoch 113/300
3/3 [==============================] - 4s 2s/step - loss: 12.7414 - root_mean_squared_erro
r: 3.5695 - val_loss: 30.4380 - val_root_mean_squared_error: 5.5171
Epoch 114/300
3/3 [==============================] - 3s 2s/step - loss: 12.7020 - root_mean_squared_erro
r: 3.5640 - val_loss: 30.3407 - val_root_mean_squared_error: 5.5082
Epoch 115/300
3/3 [==============================] - 4s 2s/step - loss: 12.6647 - root_mean_squared_erro
r: 3.5588 - val_loss: 30.2448 - val_root_mean_squared_error: 5.4995
Epoch 116/300
3/3 [==============================] - 5s 2s/step - loss: 12.6235 - root_mean_squared_erro
r: 3.5530 - val_loss: 30.1482 - val_root_mean_squared_error: 5.4907
Epoch 117/300
3/3 [==============================] - 3s 2s/step - loss: 12.5874 - root_mean_squared_erro
r: 3.5479 - val_loss: 30.0431 - val_root_mean_squared_error: 5.4812
Epoch 118/300
3/3 [==============================] - 3s 2s/step - loss: 12.5475 - root_mean_squared_erro
r: 3.5422 - val_loss: 29.9440 - val_root_mean_squared_error: 5.4721
Epoch 119/300
3/3 [==============================] - 5s 2s/step - loss: 12.5098 - root_mean_squared_erro
r: 3.5369 - val_loss: 29.8419 - val_root_mean_squared_error: 5.4628
Epoch 120/300
3/3 [==============================] - 3s 2s/step - loss: 12.4713 - root_mean_squared_erro
r: 3.5315 - val_loss: 29.7423 - val_root_mean_squared_error: 5.4537
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r: 3.5515 - val_loss: 29.7425 - val_root_mean_squared_error: 5.4537
Epoch 121/300
3/3 [==============================] - 3s 2s/step - loss: 12.4320 - root_mean_squared_erro
r: 3.5259 - val_loss: 29.6475 - val_root_mean_squared_error: 5.4450
Epoch 122/300
3/3 [==============================] - 4s 2s/step - loss: 12.3944 - root_mean_squared_erro
r: 3.5206 - val_loss: 29.5505 - val_root_mean_squared_error: 5.4360
Epoch 123/300
3/3 [==============================] - 4s 2s/step - loss: 12.3564 - root_mean_squared_erro
r: 3.5152 - val_loss: 29.4590 - val_root_mean_squared_error: 5.4276
Epoch 124/300
3/3 [==============================] - 3s 2s/step - loss: 12.3171 - root_mean_squared_erro
r: 3.5096 - val_loss: 29.3680 - val_root_mean_squared_error: 5.4192
Epoch 125/300
3/3 [==============================] - 4s 2s/step - loss: 12.2788 - root_mean_squared_erro
r: 3.5041 - val_loss: 29.2716 - val_root_mean_squared_error: 5.4103
Epoch 126/300
3/3 [==============================] - 4s 2s/step - loss: 12.2383 - root_mean_squared_erro
r: 3.4983 - val_loss: 29.1814 - val_root_mean_squared_error: 5.4020
Epoch 127/300
3/3 [==============================] - 3s 2s/step - loss: 12.1987 - root_mean_squared_erro
r: 3.4927 - val_loss: 29.0861 - val_root_mean_squared_error: 5.3932
Epoch 128/300
3/3 [==============================] - 4s 2s/step - loss: 12.1589 - root_mean_squared_erro
r: 3.4870 - val_loss: 28.9866 - val_root_mean_squared_error: 5.3839
Epoch 129/300
3/3 [==============================] - 3s 2s/step - loss: 12.1211 - root_mean_squared_erro
r: 3.4815 - val_loss: 28.8880 - val_root_mean_squared_error: 5.3748
Epoch 130/300
3/3 [==============================] - 4s 2s/step - loss: 12.0824 - root_mean_squared_erro
r: 3.4760 - val_loss: 28.7942 - val_root_mean_squared_error: 5.3660
Epoch 131/300
3/3 [==============================] - 4s 2s/step - loss: 12.0444 - root_mean_squared_erro
r: 3.4705 - val_loss: 28.6974 - val_root_mean_squared_error: 5.3570
Epoch 132/300
3/3 [==============================] - 4s 2s/step - loss: 12.0064 - root_mean_squared_erro
r: 3.4650 - val_loss: 28.6083 - val_root_mean_squared_error: 5.3487
Epoch 133/300
3/3 [==============================] - 4s 2s/step - loss: 11.9699 - root_mean_squared_erro
r: 3.4598 - val_loss: 28.5120 - val_root_mean_squared_error: 5.3397
Epoch 134/300
3/3 [==============================] - 3s 2s/step - loss: 11.9321 - root_mean_squared_erro
r: 3.4543 - val_loss: 28.4105 - val_root_mean_squared_error: 5.3302
Epoch 135/300
3/3 [==============================] - 4s 2s/step - loss: 11.8963 - root_mean_squared_erro
r: 3.4491 - val_loss: 28.3057 - val_root_mean_squared_error: 5.3203
Epoch 136/300
3/3 [==============================] - 3s 2s/step - loss: 11.8556 - root_mean_squared_erro
r: 3.4432 - val_loss: 28.2115 - val_root_mean_squared_error: 5.3114
Epoch 137/300
3/3 [==============================] - 4s 2s/step - loss: 11.8152 - root_mean_squared_erro
r: 3.4373 - val_loss: 28.1128 - val_root_mean_squared_error: 5.3022
Epoch 138/300
3/3 [==============================] - 4s 2s/step - loss: 11.7791 - root_mean_squared_erro
r: 3.4321 - val_loss: 28.0017 - val_root_mean_squared_error: 5.2917
Epoch 139/300
3/3 [==============================] - 3s 2s/step - loss: 11.7403 - root_mean_squared_erro
r: 3.4264 - val_loss: 27.8908 - val_root_mean_squared_error: 5.2812
Epoch 140/300
3/3 [==============================] - 4s 2s/step - loss: 11.6996 - root_mean_squared_erro
r: 3.4205 - val_loss: 27.7878 - val_root_mean_squared_error: 5.2714
Epoch 141/300
3/3 [==============================] - 4s 2s/step - loss: 11.6600 - root_mean_squared_erro
r: 3.4147 - val_loss: 27.6870 - val_root_mean_squared_error: 5.2618
Epoch 142/300
3/3 [==============================] - 3s 2s/step - loss: 11.6198 - root_mean_squared_erro
r: 3.4088 - val_loss: 27.5773 - val_root_mean_squared_error: 5.2514
Epoch 143/300
3/3 [==============================] - 4s 2s/step - loss: 11.5848 - root_mean_squared_erro
r: 3.4036 - val_loss: 27.4677 - val_root_mean_squared_error: 5.2410
Epoch 144/300
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3/3 [==============================] - 4s 2s/step - loss: 11.5454 - root_mean_squared_erro
r: 3.3979 - val_loss: 27.3643 - val_root_mean_squared_error: 5.2311
Epoch 145/300
3/3 [==============================] - 4s 2s/step - loss: 11.5072 - root_mean_squared_erro
r: 3.3922 - val_loss: 27.2723 - val_root_mean_squared_error: 5.2223
Epoch 146/300
3/3 [==============================] - 3s 2s/step - loss: 11.4722 - root_mean_squared_erro
r: 3.3871 - val_loss: 27.1882 - val_root_mean_squared_error: 5.2142
Epoch 147/300
3/3 [==============================] - 5s 2s/step - loss: 11.4400 - root_mean_squared_erro
r: 3.3823 - val_loss: 27.1093 - val_root_mean_squared_error: 5.2067
Epoch 148/300
3/3 [==============================] - 4s 2s/step - loss: 11.4049 - root_mean_squared_erro
r: 3.3771 - val_loss: 27.0294 - val_root_mean_squared_error: 5.1990
Epoch 149/300
3/3 [==============================] - 3s 2s/step - loss: 11.3716 - root_mean_squared_erro
r: 3.3722 - val_loss: 26.9410 - val_root_mean_squared_error: 5.1905
Epoch 150/300
3/3 [==============================] - 4s 2s/step - loss: 11.3346 - root_mean_squared_erro
r: 3.3667 - val_loss: 26.8655 - val_root_mean_squared_error: 5.1832
Epoch 151/300
3/3 [==============================] - 4s 2s/step - loss: 11.3006 - root_mean_squared_erro
r: 3.3616 - val_loss: 26.7650 - val_root_mean_squared_error: 5.1735
Epoch 152/300
3/3 [==============================] - 3s 2s/step - loss: 11.2664 - root_mean_squared_erro
r: 3.3566 - val_loss: 26.6685 - val_root_mean_squared_error: 5.1642
Epoch 153/300
3/3 [==============================] - 4s 2s/step - loss: 11.2212 - root_mean_squared_erro
r: 3.3498 - val_loss: 26.5786 - val_root_mean_squared_error: 5.1554
Epoch 154/300
3/3 [==============================] - 4s 2s/step - loss: 11.1856 - root_mean_squared_erro
r: 3.3445 - val_loss: 26.4820 - val_root_mean_squared_error: 5.1461
Epoch 155/300
3/3 [==============================] - 3s 2s/step - loss: 11.1512 - root_mean_squared_erro
r: 3.3393 - val_loss: 26.3891 - val_root_mean_squared_error: 5.1370
Epoch 156/300
3/3 [==============================] - 3s 2s/step - loss: 11.1114 - root_mean_squared_erro
r: 3.3334 - val_loss: 26.2963 - val_root_mean_squared_error: 5.1280
Epoch 157/300
3/3 [==============================] - 5s 2s/step - loss: 11.0769 - root_mean_squared_erro
r: 3.3282 - val_loss: 26.2435 - val_root_mean_squared_error: 5.1228
Epoch 158/300
3/3 [==============================] - 3s 2s/step - loss: 11.0380 - root_mean_squared_erro
r: 3.3223 - val_loss: 26.1503 - val_root_mean_squared_error: 5.1137
Epoch 159/300
3/3 [==============================] - 3s 2s/step - loss: 11.0046 - root_mean_squared_erro
r: 3.3173 - val_loss: 26.0513 - val_root_mean_squared_error: 5.1040
Epoch 160/300
3/3 [==============================] - 5s 2s/step - loss: 10.9673 - root_mean_squared_erro
r: 3.3117 - val_loss: 25.9547 - val_root_mean_squared_error: 5.0946
Epoch 161/300
3/3 [==============================] - 4s 2s/step - loss: 10.9320 - root_mean_squared_erro
r: 3.3064 - val_loss: 25.8555 - val_root_mean_squared_error: 5.0848
Epoch 162/300
3/3 [==============================] - 3s 2s/step - loss: 10.8939 - root_mean_squared_erro
r: 3.3006 - val_loss: 25.7603 - val_root_mean_squared_error: 5.0755
Epoch 163/300
3/3 [==============================] - 3s 2s/step - loss: 10.8593 - root_mean_squared_erro
r: 3.2953 - val_loss: 25.6670 - val_root_mean_squared_error: 5.0663
Epoch 164/300
3/3 [==============================] - 5s 2s/step - loss: 10.8235 - root_mean_squared_erro
r: 3.2899 - val_loss: 25.5660 - val_root_mean_squared_error: 5.0563
Epoch 165/300
3/3 [==============================] - 3s 2s/step - loss: 10.7909 - root_mean_squared_erro
r: 3.2850 - val_loss: 25.4627 - val_root_mean_squared_error: 5.0461
Epoch 166/300
3/3 [==============================] - 3s 2s/step - loss: 10.7546 - root_mean_squared_erro
r: 3.2794 - val_loss: 25.3715 - val_root_mean_squared_error: 5.0370
Epoch 167/300
3/3 [==============================] - 5s 2s/step - loss: 10.7209 - root_mean_squared_erro
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r: 3.2743 - val_loss: 25.2761 - val_root_mean_squared_error: 5.0275
Epoch 168/300
3/3 [==============================] - 4s 2s/step - loss: 10.6879 - root_mean_squared_erro
r: 3.2692 - val_loss: 25.1833 - val_root_mean_squared_error: 5.0183
Epoch 169/300
3/3 [==============================] - 3s 2s/step - loss: 10.6553 - root_mean_squared_erro
r: 3.2642 - val_loss: 25.0929 - val_root_mean_squared_error: 5.0093
Epoch 170/300
3/3 [==============================] - 4s 2s/step - loss: 10.6218 - root_mean_squared_erro
r: 3.2591 - val_loss: 25.0064 - val_root_mean_squared_error: 5.0006
Epoch 171/300
3/3 [==============================] - 4s 2s/step - loss: 10.5909 - root_mean_squared_erro
r: 3.2544 - val_loss: 24.9200 - val_root_mean_squared_error: 4.9920
Epoch 172/300
3/3 [==============================] - 3s 2s/step - loss: 10.5586 - root_mean_squared_erro
r: 3.2494 - val_loss: 24.8339 - val_root_mean_squared_error: 4.9834
Epoch 173/300
3/3 [==============================] - 4s 2s/step - loss: 10.5284 - root_mean_squared_erro
r: 3.2447 - val_loss: 24.7565 - val_root_mean_squared_error: 4.9756
Epoch 174/300
3/3 [==============================] - 4s 2s/step - loss: 10.4980 - root_mean_squared_erro
r: 3.2401 - val_loss: 24.6770 - val_root_mean_squared_error: 4.9676
Epoch 175/300
3/3 [==============================] - 3s 2s/step - loss: 10.4691 - root_mean_squared_erro
r: 3.2356 - val_loss: 24.5839 - val_root_mean_squared_error: 4.9582
Epoch 176/300
3/3 [==============================] - 4s 2s/step - loss: 10.4381 - root_mean_squared_erro
r: 3.2308 - val_loss: 24.4927 - val_root_mean_squared_error: 4.9490
Epoch 177/300
3/3 [==============================] - 5s 2s/step - loss: 10.4086 - root_mean_squared_erro
r: 3.2262 - val_loss: 24.3990 - val_root_mean_squared_error: 4.9395
Epoch 178/300
3/3 [==============================] - 3s 2s/step - loss: 10.3773 - root_mean_squared_erro
r: 3.2214 - val_loss: 24.3033 - val_root_mean_squared_error: 4.9298
Epoch 179/300
3/3 [==============================] - 3s 2s/step - loss: 10.3484 - root_mean_squared_erro
r: 3.2169 - val_loss: 24.2024 - val_root_mean_squared_error: 4.9196
Epoch 180/300
3/3 [==============================] - 4s 2s/step - loss: 10.3173 - root_mean_squared_erro
r: 3.2121 - val_loss: 24.1124 - val_root_mean_squared_error: 4.9104
Epoch 181/300
3/3 [==============================] - 4s 2s/step - loss: 10.2875 - root_mean_squared_erro
r: 3.2074 - val_loss: 24.0287 - val_root_mean_squared_error: 4.9019
Epoch 182/300
3/3 [==============================] - 3s 2s/step - loss: 10.2586 - root_mean_squared_erro
r: 3.2029 - val_loss: 23.9374 - val_root_mean_squared_error: 4.8926
Epoch 183/300
3/3 [==============================] - 4s 2s/step - loss: 10.2302 - root_mean_squared_erro
r: 3.1985 - val_loss: 23.8405 - val_root_mean_squared_error: 4.8827
Epoch 184/300
3/3 [==============================] - 4s 2s/step - loss: 10.2025 - root_mean_squared_erro
r: 3.1941 - val_loss: 23.7368 - val_root_mean_squared_error: 4.8720
Epoch 185/300
3/3 [==============================] - 3s 2s/step - loss: 10.1701 - root_mean_squared_erro
r: 3.1891 - val_loss: 23.6373 - val_root_mean_squared_error: 4.8618
Epoch 186/300
3/3 [==============================] - 4s 2s/step - loss: 10.1409 - root_mean_squared_erro
r: 3.1845 - val_loss: 23.5416 - val_root_mean_squared_error: 4.8520
Epoch 187/300
3/3 [==============================] - 4s 2s/step - loss: 10.1115 - root_mean_squared_erro
r: 3.1799 - val_loss: 23.4468 - val_root_mean_squared_error: 4.8422
Epoch 188/300
3/3 [==============================] - 3s 2s/step - loss: 10.0820 - root_mean_squared_erro
r: 3.1752 - val_loss: 23.3419 - val_root_mean_squared_error: 4.8313
Epoch 189/300
3/3 [==============================] - 4s 2s/step - loss: 10.0517 - root_mean_squared_erro
r: 3.1704 - val_loss: 23.2288 - val_root_mean_squared_error: 4.8196
Epoch 190/300
3/3 [==============================] - 4s 2s/step - loss: 10.0195 - root_mean_squared_erro
r: 3.1654 - val_loss: 23.1193 - val_root_mean_squared_error: 4.8083
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Epoch 191/300
3/3 [==============================] - 4s 2s/step - loss: 9.9918 - root_mean_squared_erro
r: 3.1610 - val_loss: 23.0122 - val_root_mean_squared_error: 4.7971
Epoch 192/300
3/3 [==============================] - 4s 2s/step - loss: 9.9588 - root_mean_squared_erro
r: 3.1558 - val_loss: 22.9216 - val_root_mean_squared_error: 4.7877
Epoch 193/300
3/3 [==============================] - 4s 2s/step - loss: 9.9332 - root_mean_squared_erro
r: 3.1517 - val_loss: 22.8280 - val_root_mean_squared_error: 4.7779
Epoch 194/300
3/3 [==============================] - 4s 2s/step - loss: 9.9056 - root_mean_squared_erro
r: 3.1473 - val_loss: 22.7381 - val_root_mean_squared_error: 4.7684
Epoch 195/300
3/3 [==============================] - 4s 2s/step - loss: 9.8804 - root_mean_squared_erro
r: 3.1433 - val_loss: 22.6530 - val_root_mean_squared_error: 4.7595
Epoch 196/300
3/3 [==============================] - 4s 2s/step - loss: 9.8559 - root_mean_squared_erro
r: 3.1394 - val_loss: 22.5678 - val_root_mean_squared_error: 4.7506
Epoch 197/300
3/3 [==============================] - 3s 2s/step - loss: 9.8287 - root_mean_squared_erro
r: 3.1351 - val_loss: 22.4855 - val_root_mean_squared_error: 4.7419
Epoch 198/300
3/3 [==============================] - 4s 2s/step - loss: 9.8058 - root_mean_squared_erro
r: 3.1314 - val_loss: 22.4067 - val_root_mean_squared_error: 4.7336
Epoch 199/300
3/3 [==============================] - 4s 2s/step - loss: 9.7818 - root_mean_squared_erro
r: 3.1276 - val_loss: 22.3266 - val_root_mean_squared_error: 4.7251
Epoch 200/300
3/3 [==============================] - 3s 2s/step - loss: 9.7585 - root_mean_squared_erro
r: 3.1239 - val_loss: 22.2398 - val_root_mean_squared_error: 4.7159
Epoch 201/300
3/3 [==============================] - 4s 2s/step - loss: 9.7334 - root_mean_squared_erro
r: 3.1198 - val_loss: 22.1479 - val_root_mean_squared_error: 4.7062
Epoch 202/300
3/3 [==============================] - 4s 2s/step - loss: 9.7095 - root_mean_squared_erro
r: 3.1160 - val_loss: 22.0538 - val_root_mean_squared_error: 4.6961
Epoch 203/300
3/3 [==============================] - 3s 2s/step - loss: 9.6851 - root_mean_squared_erro
r: 3.1121 - val_loss: 21.9659 - val_root_mean_squared_error: 4.6868
Epoch 204/300
3/3 [==============================] - 3s 2s/step - loss: 9.6607 - root_mean_squared_erro
r: 3.1082 - val_loss: 21.8847 - val_root_mean_squared_error: 4.6781
Epoch 205/300
3/3 [==============================] - 5s 2s/step - loss: 9.6362 - root_mean_squared_erro
r: 3.1042 - val_loss: 21.8066 - val_root_mean_squared_error: 4.6698
Epoch 206/300
3/3 [==============================] - 3s 2s/step - loss: 9.6113 - root_mean_squared_erro
r: 3.1002 - val_loss: 21.7303 - val_root_mean_squared_error: 4.6616
Epoch 207/300
3/3 [==============================] - 3s 2s/step - loss: 9.5914 - root_mean_squared_erro
r: 3.0970 - val_loss: 21.6394 - val_root_mean_squared_error: 4.6518
Epoch 208/300
3/3 [==============================] - 5s 2s/step - loss: 9.5672 - root_mean_squared_erro
r: 3.0931 - val_loss: 21.5541 - val_root_mean_squared_error: 4.6426
Epoch 209/300
3/3 [==============================] - 4s 2s/step - loss: 9.5430 - root_mean_squared_erro
r: 3.0892 - val_loss: 21.4673 - val_root_mean_squared_error: 4.6333
Epoch 210/300
3/3 [==============================] - 3s 2s/step - loss: 9.5195 - root_mean_squared_erro
r: 3.0854 - val_loss: 21.3872 - val_root_mean_squared_error: 4.6246
Epoch 211/300
3/3 [==============================] - 3s 2s/step - loss: 9.4989 - root_mean_squared_erro
r: 3.0820 - val_loss: 21.3073 - val_root_mean_squared_error: 4.6160
Epoch 212/300
3/3 [==============================] - 5s 2s/step - loss: 9.4803 - root_mean_squared_erro
r: 3.0790 - val_loss: 21.2309 - val_root_mean_squared_error: 4.6077
Epoch 213/300
3/3 [==============================] - 3s 2s/step - loss: 9.4576 - root_mean_squared_erro
r: 3.0753 - val_loss: 21.1680 - val_root_mean_squared_error: 4.6009
Epoch 214/300
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3/3 [==============================] - 3s 2s/step - loss: 9.4376 - root_mean_squared_erro
r: 3.0721 - val_loss: 21.1009 - val_root_mean_squared_error: 4.5936
Epoch 215/300
3/3 [==============================] - 5s 2s/step - loss: 9.4175 - root_mean_squared_erro
r: 3.0688 - val_loss: 21.0317 - val_root_mean_squared_error: 4.5860
Epoch 216/300
3/3 [==============================] - 3s 2s/step - loss: 9.3997 - root_mean_squared_erro
r: 3.0659 - val_loss: 20.9690 - val_root_mean_squared_error: 4.5792
Epoch 217/300
3/3 [==============================] - 3s 2s/step - loss: 9.3813 - root_mean_squared_erro
r: 3.0629 - val_loss: 20.9152 - val_root_mean_squared_error: 4.5733
Epoch 218/300
3/3 [==============================] - 5s 2s/step - loss: 9.3628 - root_mean_squared_erro
r: 3.0599 - val_loss: 20.8605 - val_root_mean_squared_error: 4.5673
Epoch 219/300
3/3 [==============================] - 3s 2s/step - loss: 9.3446 - root_mean_squared_erro
r: 3.0569 - val_loss: 20.7879 - val_root_mean_squared_error: 4.5594
Epoch 220/300
3/3 [==============================] - 3s 2s/step - loss: 9.3253 - root_mean_squared_erro
r: 3.0537 - val_loss: 20.7074 - val_root_mean_squared_error: 4.5505
Epoch 221/300
3/3 [==============================] - 4s 2s/step - loss: 9.3056 - root_mean_squared_erro
r: 3.0505 - val_loss: 20.6244 - val_root_mean_squared_error: 4.5414
Epoch 222/300
3/3 [==============================] - 5s 2s/step - loss: 9.2864 - root_mean_squared_erro
r: 3.0474 - val_loss: 20.5440 - val_root_mean_squared_error: 4.5325
Epoch 223/300
3/3 [==============================] - 4s 2s/step - loss: 9.2684 - root_mean_squared_erro
r: 3.0444 - val_loss: 20.4686 - val_root_mean_squared_error: 4.5242
Epoch 224/300
3/3 [==============================] - 4s 2s/step - loss: 9.2497 - root_mean_squared_erro
r: 3.0413 - val_loss: 20.3964 - val_root_mean_squared_error: 4.5162
Epoch 225/300
3/3 [==============================] - 5s 2s/step - loss: 9.2310 - root_mean_squared_erro
r: 3.0383 - val_loss: 20.3348 - val_root_mean_squared_error: 4.5094
Epoch 226/300
3/3 [==============================] - 4s 2s/step - loss: 9.2151 - root_mean_squared_erro
r: 3.0356 - val_loss: 20.2645 - val_root_mean_squared_error: 4.5016
Epoch 227/300
3/3 [==============================] - 3s 2s/step - loss: 9.1974 - root_mean_squared_erro
r: 3.0327 - val_loss: 20.1937 - val_root_mean_squared_error: 4.4937
Epoch 228/300
3/3 [==============================] - 4s 2s/step - loss: 9.1816 - root_mean_squared_erro
r: 3.0301 - val_loss: 20.1291 - val_root_mean_squared_error: 4.4865
Epoch 229/300
3/3 [==============================] - 4s 2s/step - loss: 9.1626 - root_mean_squared_erro
r: 3.0270 - val_loss: 20.0744 - val_root_mean_squared_error: 4.4804
Epoch 230/300
3/3 [==============================] - 3s 2s/step - loss: 9.1480 - root_mean_squared_erro
r: 3.0246 - val_loss: 20.0097 - val_root_mean_squared_error: 4.4732
Epoch 231/300
3/3 [==============================] - 4s 2s/step - loss: 9.1309 - root_mean_squared_erro
r: 3.0217 - val_loss: 19.9466 - val_root_mean_squared_error: 4.4662
Epoch 232/300
3/3 [==============================] - 4s 2s/step - loss: 9.1160 - root_mean_squared_erro
r: 3.0193 - val_loss: 19.8936 - val_root_mean_squared_error: 4.4602
Epoch 233/300
3/3 [==============================] - 3s 2s/step - loss: 9.1004 - root_mean_squared_erro
r: 3.0167 - val_loss: 19.8426 - val_root_mean_squared_error: 4.4545
Epoch 234/300
3/3 [==============================] - 4s 2s/step - loss: 9.0848 - root_mean_squared_erro
r: 3.0141 - val_loss: 19.7936 - val_root_mean_squared_error: 4.4490
Epoch 235/300
3/3 [==============================] - 3s 2s/step - loss: 9.0708 - root_mean_squared_erro
r: 3.0118 - val_loss: 19.7361 - val_root_mean_squared_error: 4.4425
Epoch 236/300
3/3 [==============================] - 4s 2s/step - loss: 9.0552 - root_mean_squared_erro
r: 3.0092 - val_loss: 19.6707 - val_root_mean_squared_error: 4.4352
Epoch 237/300
3/3 [==============================] - 4s 2s/step - loss: 9.0414 - root_mean_squared_erro
r: 3.0069 - val_loss: 19.6108 - val_root_mean_squared_error: 4.4284
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r: 3.0069 - val_loss: 19.6108 - val_root_mean_squared_error: 4.4284
Epoch 238/300
3/3 [==============================] - 4s 2s/step - loss: 9.0252 - root_mean_squared_erro
r: 3.0042 - val_loss: 19.5581 - val_root_mean_squared_error: 4.4225
Epoch 239/300
3/3 [==============================] - 4s 2s/step - loss: 9.0105 - root_mean_squared_erro
r: 3.0017 - val_loss: 19.4989 - val_root_mean_squared_error: 4.4158
Epoch 240/300
3/3 [==============================] - 4s 2s/step - loss: 8.9964 - root_mean_squared_erro
r: 2.9994 - val_loss: 19.4372 - val_root_mean_squared_error: 4.4088
Epoch 241/300
3/3 [==============================] - 4s 2s/step - loss: 8.9829 - root_mean_squared_erro
r: 2.9971 - val_loss: 19.3838 - val_root_mean_squared_error: 4.4027
Epoch 242/300
3/3 [==============================] - 3s 2s/step - loss: 8.9673 - root_mean_squared_erro
r: 2.9945 - val_loss: 19.3370 - val_root_mean_squared_error: 4.3974
Epoch 243/300
3/3 [==============================] - 4s 2s/step - loss: 8.9572 - root_mean_squared_erro
r: 2.9929 - val_loss: 19.2754 - val_root_mean_squared_error: 4.3904
Epoch 244/300
3/3 [==============================] - 4s 2s/step - loss: 8.9399 - root_mean_squared_erro
r: 2.9900 - val_loss: 19.2317 - val_root_mean_squared_error: 4.3854
Epoch 245/300
3/3 [==============================] - 3s 2s/step - loss: 8.9257 - root_mean_squared_erro
r: 2.9876 - val_loss: 19.1797 - val_root_mean_squared_error: 4.3795
Epoch 246/300
3/3 [==============================] - 4s 2s/step - loss: 8.9135 - root_mean_squared_erro
r: 2.9856 - val_loss: 19.1185 - val_root_mean_squared_error: 4.3725
Epoch 247/300
3/3 [==============================] - 4s 2s/step - loss: 8.8971 - root_mean_squared_erro
r: 2.9828 - val_loss: 19.0584 - val_root_mean_squared_error: 4.3656
Epoch 248/300
3/3 [==============================] - 3s 2s/step - loss: 8.8824 - root_mean_squared_erro
r: 2.9803 - val_loss: 18.9914 - val_root_mean_squared_error: 4.3579
Epoch 249/300
3/3 [==============================] - 4s 2s/step - loss: 8.8682 - root_mean_squared_erro
r: 2.9780 - val_loss: 18.9205 - val_root_mean_squared_error: 4.3498
Epoch 250/300
3/3 [==============================] - 4s 2s/step - loss: 8.8532 - root_mean_squared_erro
r: 2.9754 - val_loss: 18.8475 - val_root_mean_squared_error: 4.3414
Epoch 251/300
3/3 [==============================] - 3s 2s/step - loss: 8.8400 - root_mean_squared_erro
r: 2.9732 - val_loss: 18.7736 - val_root_mean_squared_error: 4.3329
Epoch 252/300
3/3 [==============================] - 3s 2s/step - loss: 8.8249 - root_mean_squared_erro
r: 2.9707 - val_loss: 18.7176 - val_root_mean_squared_error: 4.3264
Epoch 253/300
3/3 [==============================] - 5s 2s/step - loss: 8.8141 - root_mean_squared_erro
r: 2.9688 - val_loss: 18.6638 - val_root_mean_squared_error: 4.3202
Epoch 254/300
3/3 [==============================] - 4s 2s/step - loss: 8.7991 - root_mean_squared_erro
r: 2.9663 - val_loss: 18.6138 - val_root_mean_squared_error: 4.3144
Epoch 255/300
3/3 [==============================] - 3s 2s/step - loss: 8.7855 - root_mean_squared_erro
r: 2.9640 - val_loss: 18.5648 - val_root_mean_squared_error: 4.3087
Epoch 256/300
3/3 [==============================] - 4s 2s/step - loss: 8.7735 - root_mean_squared_erro
r: 2.9620 - val_loss: 18.5037 - val_root_mean_squared_error: 4.3016
Epoch 257/300
3/3 [==============================] - 4s 2s/step - loss: 8.7595 - root_mean_squared_erro
r: 2.9596 - val_loss: 18.4365 - val_root_mean_squared_error: 4.2938
Epoch 258/300
3/3 [==============================] - 3s 2s/step - loss: 8.7486 - root_mean_squared_erro
r: 2.9578 - val_loss: 18.3701 - val_root_mean_squared_error: 4.2860
Epoch 259/300
3/3 [==============================] - 3s 2s/step - loss: 8.7357 - root_mean_squared_erro
r: 2.9556 - val_loss: 18.3305 - val_root_mean_squared_error: 4.2814
Epoch 260/300
3/3 [==============================] - 5s 2s/step - loss: 8.7247 - root_mean_squared_erro
r: 2.9538 - val_loss: 18.2934 - val_root_mean_squared_error: 4.2771
Epoch 261/300
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Epoch 261/300
3/3 [==============================] - 3s 2s/step - loss: 8.7135 - root_mean_squared_erro
r: 2.9519 - val_loss: 18.2443 - val_root_mean_squared_error: 4.2713
Epoch 262/300
3/3 [==============================] - 3s 2s/step - loss: 8.7023 - root_mean_squared_erro
r: 2.9500 - val_loss: 18.2001 - val_root_mean_squared_error: 4.2662
Epoch 263/300
3/3 [==============================] - 5s 2s/step - loss: 8.6916 - root_mean_squared_erro
r: 2.9482 - val_loss: 18.1603 - val_root_mean_squared_error: 4.2615
Epoch 264/300
3/3 [==============================] - 4s 2s/step - loss: 8.6805 - root_mean_squared_erro
r: 2.9463 - val_loss: 18.1127 - val_root_mean_squared_error: 4.2559
Epoch 265/300
3/3 [==============================] - 4s 2s/step - loss: 8.6690 - root_mean_squared_erro
r: 2.9443 - val_loss: 18.0584 - val_root_mean_squared_error: 4.2495
Epoch 266/300
3/3 [==============================] - 4s 2s/step - loss: 8.6585 - root_mean_squared_erro
r: 2.9425 - val_loss: 17.9889 - val_root_mean_squared_error: 4.2413
Epoch 267/300
3/3 [==============================] - 4s 2s/step - loss: 8.6478 - root_mean_squared_erro
r: 2.9407 - val_loss: 17.9365 - val_root_mean_squared_error: 4.2351
Epoch 268/300
3/3 [==============================] - 3s 2s/step - loss: 8.6365 - root_mean_squared_erro
r: 2.9388 - val_loss: 17.8993 - val_root_mean_squared_error: 4.2308
Epoch 269/300
3/3 [==============================] - 4s 2s/step - loss: 8.6272 - root_mean_squared_erro
r: 2.9372 - val_loss: 17.8568 - val_root_mean_squared_error: 4.2257
Epoch 270/300
3/3 [==============================] - 4s 2s/step - loss: 8.6170 - root_mean_squared_erro
r: 2.9355 - val_loss: 17.8174 - val_root_mean_squared_error: 4.2211
Epoch 271/300
3/3 [==============================] - 3s 2s/step - loss: 8.6076 - root_mean_squared_erro
r: 2.9339 - val_loss: 17.7823 - val_root_mean_squared_error: 4.2169
Epoch 272/300
3/3 [==============================] - 4s 2s/step - loss: 8.5987 - root_mean_squared_erro
r: 2.9324 - val_loss: 17.7541 - val_root_mean_squared_error: 4.2136
Epoch 273/300
3/3 [==============================] - 4s 2s/step - loss: 8.5890 - root_mean_squared_erro
r: 2.9307 - val_loss: 17.7238 - val_root_mean_squared_error: 4.2100
Epoch 274/300
3/3 [==============================] - 4s 2s/step - loss: 8.5807 - root_mean_squared_erro
r: 2.9293 - val_loss: 17.6917 - val_root_mean_squared_error: 4.2062
Epoch 275/300
3/3 [==============================] - 3s 2s/step - loss: 8.5712 - root_mean_squared_erro
r: 2.9277 - val_loss: 17.6647 - val_root_mean_squared_error: 4.2029
Epoch 276/300
3/3 [==============================] - 4s 2s/step - loss: 8.5612 - root_mean_squared_erro
r: 2.9259 - val_loss: 17.6304 - val_root_mean_squared_error: 4.1989
Epoch 277/300
3/3 [==============================] - 4s 2s/step - loss: 8.5520 - root_mean_squared_erro
r: 2.9244 - val_loss: 17.5838 - val_root_mean_squared_error: 4.1933
Epoch 278/300
3/3 [==============================] - 3s 2s/step - loss: 8.5422 - root_mean_squared_erro
r: 2.9227 - val_loss: 17.5342 - val_root_mean_squared_error: 4.1874
Epoch 279/300
3/3 [==============================] - 4s 2s/step - loss: 8.5334 - root_mean_squared_erro
r: 2.9212 - val_loss: 17.4815 - val_root_mean_squared_error: 4.1811
Epoch 280/300
3/3 [==============================] - 3s 2s/step - loss: 8.5223 - root_mean_squared_erro
r: 2.9193 - val_loss: 17.4309 - val_root_mean_squared_error: 4.1750
Epoch 281/300
3/3 [==============================] - 4s 2s/step - loss: 8.5135 - root_mean_squared_erro
r: 2.9178 - val_loss: 17.3686 - val_root_mean_squared_error: 4.1676
Epoch 282/300
3/3 [==============================] - 4s 2s/step - loss: 8.5039 - root_mean_squared_erro
r: 2.9161 - val_loss: 17.3033 - val_root_mean_squared_error: 4.1597
Epoch 283/300
3/3 [==============================] - 3s 2s/step - loss: 8.4941 - root_mean_squared_erro
r: 2.9145 - val_loss: 17.2486 - val_root_mean_squared_error: 4.1531
Epoch 284/300
3/3 [==============================] - 4s 2s/step - loss: 8.4834 - root_mean_squared_erro
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r: 2.9126 - val_loss: 17.1933 - val_root_mean_squared_error: 4.1465
Epoch 285/300
3/3 [==============================] - 4s 2s/step - loss: 8.4754 - root_mean_squared_erro
r: 2.9113 - val_loss: 17.1220 - val_root_mean_squared_error: 4.1379
Epoch 286/300
3/3 [==============================] - 3s 2s/step - loss: 8.4651 - root_mean_squared_erro
r: 2.9095 - val_loss: 17.0544 - val_root_mean_squared_error: 4.1297
Epoch 287/300
3/3 [==============================] - 4s 2s/step - loss: 8.4549 - root_mean_squared_erro
r: 2.9077 - val_loss: 17.0015 - val_root_mean_squared_error: 4.1233
Epoch 288/300
3/3 [==============================] - 4s 2s/step - loss: 8.4475 - root_mean_squared_erro
r: 2.9065 - val_loss: 16.9407 - val_root_mean_squared_error: 4.1159
Epoch 289/300
3/3 [==============================] - 4s 2s/step - loss: 8.4403 - root_mean_squared_erro
r: 2.9052 - val_loss: 16.8930 - val_root_mean_squared_error: 4.1101
Epoch 290/300
3/3 [==============================] - 3s 2s/step - loss: 8.4321 - root_mean_squared_erro
r: 2.9038 - val_loss: 16.8536 - val_root_mean_squared_error: 4.1053
Epoch 291/300
3/3 [==============================] - 4s 2s/step - loss: 8.4251 - root_mean_squared_erro
r: 2.9026 - val_loss: 16.8335 - val_root_mean_squared_error: 4.1029
Epoch 292/300
3/3 [==============================] - 4s 2s/step - loss: 8.4157 - root_mean_squared_erro
r: 2.9010 - val_loss: 16.8307 - val_root_mean_squared_error: 4.1025
Epoch 293/300
3/3 [==============================] - 3s 2s/step - loss: 8.4087 - root_mean_squared_erro
r: 2.8998 - val_loss: 16.8164 - val_root_mean_squared_error: 4.1008
Epoch 294/300
3/3 [==============================] - 4s 2s/step - loss: 8.4011 - root_mean_squared_erro
r: 2.8985 - val_loss: 16.8131 - val_root_mean_squared_error: 4.1004
Epoch 295/300
3/3 [==============================] - 0s 60ms/step - loss: 8.3929 - root_mean_squared_err
or: 2.8971 - val_loss: 16.8265 - val_root_mean_squared_error: 4.1020
Epoch 296/300
3/3 [==============================] - 0s 62ms/step - loss: 8.3864 - root_mean_squared_err
or: 2.8959 - val_loss: 16.8417 - val_root_mean_squared_error: 4.1039
Epoch 297/300
3/3 [==============================] - 0s 80ms/step - loss: 8.3802 - root_mean_squared_err
or: 2.8949 - val_loss: 16.8580 - val_root_mean_squared_error: 4.1058
Epoch 298/300
3/3 [==============================] - 0s 71ms/step - loss: 8.3738 - root_mean_squared_err
or: 2.8937 - val_loss: 16.8798 - val_root_mean_squared_error: 4.1085
Epoch 299/300
3/3 [==============================] - 0s 79ms/step - loss: 8.3690 - root_mean_squared_err
or: 2.8929 - val_loss: 16.9085 - val_root_mean_squared_error: 4.1120



Default and Short, samples = 60
Epoch 1/300
2/2 [==============================] - 7s 4s/step - loss: 15.7855 - root_mean_squared_erro
r: 3.9731 - val_loss: 37.4800 - val_root_mean_squared_error: 6.1221
Epoch 2/300
2/2 [==============================] - 4s 4s/step - loss: 15.7667 - root_mean_squared_erro
r: 3.9707 - val_loss: 37.4442 - val_root_mean_squared_error: 6.1192
Epoch 3/300
2/2 [==============================] - 5s 5s/step - loss: 15.7433 - root_mean_squared_erro
r: 3.9678 - val_loss: 37.4104 - val_root_mean_squared_error: 6.1164
Epoch 4/300
2/2 [==============================] - 3s 3s/step - loss: 15.7264 - root_mean_squared_erro
r: 3.9656 - val_loss: 37.3758 - val_root_mean_squared_error: 6.1136
Epoch 5/300
2/2 [==============================] - 4s 3s/step - loss: 15.7104 - root_mean_squared_erro
r: 3.9636 - val_loss: 37.3415 - val_root_mean_squared_error: 6.1108
Epoch 6/300
2/2 [==============================] - 5s 5s/step - loss: 15.6933 - root_mean_squared_erro
r: 3.9615 - val_loss: 37.3082 - val_root_mean_squared_error: 6.1080
Epoch 7/300
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2/2 [==============================] - 3s 3s/step - loss: 15.6774 - root_mean_squared_erro
r: 3.9595 - val_loss: 37.2745 - val_root_mean_squared_error: 6.1053
Epoch 8/300
2/2 [==============================] - 4s 3s/step - loss: 15.6548 - root_mean_squared_erro
r: 3.9566 - val_loss: 37.2415 - val_root_mean_squared_error: 6.1026
Epoch 9/300
2/2 [==============================] - 4s 4s/step - loss: 15.6385 - root_mean_squared_erro
r: 3.9546 - val_loss: 37.2084 - val_root_mean_squared_error: 6.0999
Epoch 10/300
2/2 [==============================] - 4s 4s/step - loss: 15.6224 - root_mean_squared_erro
r: 3.9525 - val_loss: 37.1749 - val_root_mean_squared_error: 6.0971
Epoch 11/300
2/2 [==============================] - 3s 3s/step - loss: 15.6046 - root_mean_squared_erro
r: 3.9503 - val_loss: 37.1419 - val_root_mean_squared_error: 6.0944
Epoch 12/300
2/2 [==============================] - 4s 4s/step - loss: 15.5880 - root_mean_squared_erro
r: 3.9482 - val_loss: 37.1087 - val_root_mean_squared_error: 6.0917
Epoch 13/300
2/2 [==============================] - 4s 4s/step - loss: 15.5725 - root_mean_squared_erro
r: 3.9462 - val_loss: 37.0753 - val_root_mean_squared_error: 6.0889
Epoch 14/300
2/2 [==============================] - 4s 4s/step - loss: 15.5549 - root_mean_squared_erro
r: 3.9440 - val_loss: 37.0423 - val_root_mean_squared_error: 6.0862
Epoch 15/300
2/2 [==============================] - 4s 3s/step - loss: 15.5456 - root_mean_squared_erro
r: 3.9428 - val_loss: 37.0089 - val_root_mean_squared_error: 6.0835
Epoch 16/300
2/2 [==============================] - 4s 4s/step - loss: 15.5295 - root_mean_squared_erro
r: 3.9407 - val_loss: 36.9748 - val_root_mean_squared_error: 6.0807
Epoch 17/300
2/2 [==============================] - 4s 4s/step - loss: 15.5119 - root_mean_squared_erro
r: 3.9385 - val_loss: 36.9407 - val_root_mean_squared_error: 6.0779
Epoch 18/300
2/2 [==============================] - 3s 3s/step - loss: 15.4951 - root_mean_squared_erro
r: 3.9364 - val_loss: 36.9067 - val_root_mean_squared_error: 6.0751
Epoch 19/300
2/2 [==============================] - 4s 4s/step - loss: 15.4785 - root_mean_squared_erro
r: 3.9343 - val_loss: 36.8722 - val_root_mean_squared_error: 6.0722
Epoch 20/300
2/2 [==============================] - 4s 3s/step - loss: 15.4611 - root_mean_squared_erro
r: 3.9321 - val_loss: 36.8381 - val_root_mean_squared_error: 6.0694
Epoch 21/300
2/2 [==============================] - 4s 4s/step - loss: 15.4451 - root_mean_squared_erro
r: 3.9300 - val_loss: 36.8035 - val_root_mean_squared_error: 6.0666
Epoch 22/300
2/2 [==============================] - 4s 4s/step - loss: 15.4271 - root_mean_squared_erro
r: 3.9277 - val_loss: 36.7689 - val_root_mean_squared_error: 6.0637
Epoch 23/300
2/2 [==============================] - 3s 3s/step - loss: 15.4101 - root_mean_squared_erro
r: 3.9256 - val_loss: 36.7338 - val_root_mean_squared_error: 6.0608
Epoch 24/300
2/2 [==============================] - 4s 4s/step - loss: 15.3926 - root_mean_squared_erro
r: 3.9233 - val_loss: 36.6981 - val_root_mean_squared_error: 6.0579
Epoch 25/300
2/2 [==============================] - 4s 4s/step - loss: 15.3749 - root_mean_squared_erro
r: 3.9211 - val_loss: 36.6627 - val_root_mean_squared_error: 6.0550
Epoch 26/300
2/2 [==============================] - 3s 3s/step - loss: 15.3565 - root_mean_squared_erro
r: 3.9187 - val_loss: 36.6268 - val_root_mean_squared_error: 6.0520
Epoch 27/300
2/2 [==============================] - 3s 3s/step - loss: 15.3383 - root_mean_squared_erro
r: 3.9164 - val_loss: 36.5914 - val_root_mean_squared_error: 6.0491
Epoch 28/300
2/2 [==============================] - 5s 5s/step - loss: 15.3209 - root_mean_squared_erro
r: 3.9142 - val_loss: 36.5555 - val_root_mean_squared_error: 6.0461
Epoch 29/300
2/2 [==============================] - 4s 4s/step - loss: 15.3034 - root_mean_squared_erro
r: 3.9120 - val_loss: 36.5190 - val_root_mean_squared_error: 6.0431
Epoch 30/300
2/2 [==============================] - 3s 3s/step - loss: 15.2862 - root_mean_squared_erro
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r: 3.9098 - val_loss: 36.4831 - val_root_mean_squared_error: 6.0401
Epoch 31/300
2/2 [==============================] - 4s 4s/step - loss: 15.2675 - root_mean_squared_erro
r: 3.9074 - val_loss: 36.4479 - val_root_mean_squared_error: 6.0372
Epoch 32/300
2/2 [==============================] - 4s 4s/step - loss: 15.2512 - root_mean_squared_erro
r: 3.9053 - val_loss: 36.4117 - val_root_mean_squared_error: 6.0342
Epoch 33/300
2/2 [==============================] - 3s 3s/step - loss: 15.2331 - root_mean_squared_erro
r: 3.9030 - val_loss: 36.3760 - val_root_mean_squared_error: 6.0312
Epoch 34/300
2/2 [==============================] - 3s 3s/step - loss: 15.2172 - root_mean_squared_erro
r: 3.9009 - val_loss: 36.3394 - val_root_mean_squared_error: 6.0282
Epoch 35/300
2/2 [==============================] - 5s 5s/step - loss: 15.1994 - root_mean_squared_erro
r: 3.8986 - val_loss: 36.3024 - val_root_mean_squared_error: 6.0251
Epoch 36/300
2/2 [==============================] - 3s 3s/step - loss: 15.1828 - root_mean_squared_erro
r: 3.8965 - val_loss: 36.2648 - val_root_mean_squared_error: 6.0220
Epoch 37/300
2/2 [==============================] - 3s 3s/step - loss: 15.1654 - root_mean_squared_erro
r: 3.8943 - val_loss: 36.2273 - val_root_mean_squared_error: 6.0189
Epoch 38/300
2/2 [==============================] - 4s 4s/step - loss: 15.1492 - root_mean_squared_erro
r: 3.8922 - val_loss: 36.1895 - val_root_mean_squared_error: 6.0158
Epoch 39/300
2/2 [==============================] - 4s 4s/step - loss: 15.1329 - root_mean_squared_erro
r: 3.8901 - val_loss: 36.1514 - val_root_mean_squared_error: 6.0126
Epoch 40/300
2/2 [==============================] - 3s 3s/step - loss: 15.1157 - root_mean_squared_erro
r: 3.8879 - val_loss: 36.1136 - val_root_mean_squared_error: 6.0095
Epoch 41/300
2/2 [==============================] - 4s 4s/step - loss: 15.0993 - root_mean_squared_erro
r: 3.8858 - val_loss: 36.0751 - val_root_mean_squared_error: 6.0063
Epoch 42/300
2/2 [==============================] - 4s 4s/step - loss: 15.0831 - root_mean_squared_erro
r: 3.8837 - val_loss: 36.0367 - val_root_mean_squared_error: 6.0031
Epoch 43/300
2/2 [==============================] - 3s 3s/step - loss: 15.0658 - root_mean_squared_erro
r: 3.8815 - val_loss: 35.9992 - val_root_mean_squared_error: 5.9999
Epoch 44/300
2/2 [==============================] - 4s 4s/step - loss: 15.0495 - root_mean_squared_erro
r: 3.8794 - val_loss: 35.9607 - val_root_mean_squared_error: 5.9967
Epoch 45/300
2/2 [==============================] - 4s 4s/step - loss: 15.0334 - root_mean_squared_erro
r: 3.8773 - val_loss: 35.9217 - val_root_mean_squared_error: 5.9935
Epoch 46/300
2/2 [==============================] - 4s 4s/step - loss: 15.0166 - root_mean_squared_erro
r: 3.8751 - val_loss: 35.8832 - val_root_mean_squared_error: 5.9903
Epoch 47/300
2/2 [==============================] - 4s 4s/step - loss: 15.0005 - root_mean_squared_erro
r: 3.8730 - val_loss: 35.8448 - val_root_mean_squared_error: 5.9871
Epoch 48/300
2/2 [==============================] - 4s 4s/step - loss: 14.9853 - root_mean_squared_erro
r: 3.8711 - val_loss: 35.8060 - val_root_mean_squared_error: 5.9838
Epoch 49/300
2/2 [==============================] - 4s 4s/step - loss: 14.9691 - root_mean_squared_erro
r: 3.8690 - val_loss: 35.7676 - val_root_mean_squared_error: 5.9806
Epoch 50/300
2/2 [==============================] - 3s 3s/step - loss: 14.9530 - root_mean_squared_erro
r: 3.8669 - val_loss: 35.7294 - val_root_mean_squared_error: 5.9774
Epoch 51/300
2/2 [==============================] - 4s 4s/step - loss: 14.9373 - root_mean_squared_erro
r: 3.8649 - val_loss: 35.6912 - val_root_mean_squared_error: 5.9742
Epoch 52/300
2/2 [==============================] - 3s 3s/step - loss: 14.9211 - root_mean_squared_erro
r: 3.8628 - val_loss: 35.6538 - val_root_mean_squared_error: 5.9711
Epoch 53/300
2/2 [==============================] - 4s 4s/step - loss: 14.9052 - root_mean_squared_erro
r: 3.8607 - val_loss: 35.6160 - val_root_mean_squared_error: 5.9679
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Epoch 54/300
2/2 [==============================] - 4s 4s/step - loss: 14.8900 - root_mean_squared_erro
r: 3.8588 - val_loss: 35.5778 - val_root_mean_squared_error: 5.9647
Epoch 55/300
2/2 [==============================] - 3s 3s/step - loss: 14.8745 - root_mean_squared_erro
r: 3.8567 - val_loss: 35.5391 - val_root_mean_squared_error: 5.9615
Epoch 56/300
2/2 [==============================] - 4s 4s/step - loss: 14.8587 - root_mean_squared_erro
r: 3.8547 - val_loss: 35.5007 - val_root_mean_squared_error: 5.9582
Epoch 57/300
2/2 [==============================] - 4s 4s/step - loss: 14.8436 - root_mean_squared_erro
r: 3.8527 - val_loss: 35.4620 - val_root_mean_squared_error: 5.9550
Epoch 58/300
2/2 [==============================] - 3s 3s/step - loss: 14.8278 - root_mean_squared_erro
r: 3.8507 - val_loss: 35.4232 - val_root_mean_squared_error: 5.9517
Epoch 59/300
2/2 [==============================] - 3s 3s/step - loss: 14.8135 - root_mean_squared_erro
r: 3.8488 - val_loss: 35.3844 - val_root_mean_squared_error: 5.9485
Epoch 60/300
2/2 [==============================] - 5s 5s/step - loss: 14.7973 - root_mean_squared_erro
r: 3.8467 - val_loss: 35.3462 - val_root_mean_squared_error: 5.9453
Epoch 61/300
2/2 [==============================] - 4s 3s/step - loss: 14.7837 - root_mean_squared_erro
r: 3.8450 - val_loss: 35.3065 - val_root_mean_squared_error: 5.9419
Epoch 62/300
2/2 [==============================] - 3s 3s/step - loss: 14.7669 - root_mean_squared_erro
r: 3.8428 - val_loss: 35.2677 - val_root_mean_squared_error: 5.9387
Epoch 63/300
2/2 [==============================] - 4s 4s/step - loss: 14.7523 - root_mean_squared_erro
r: 3.8409 - val_loss: 35.2277 - val_root_mean_squared_error: 5.9353
Epoch 64/300
2/2 [==============================] - 5s 5s/step - loss: 14.7382 - root_mean_squared_erro
r: 3.8390 - val_loss: 35.1869 - val_root_mean_squared_error: 5.9319
Epoch 65/300
2/2 [==============================] - 4s 3s/step - loss: 14.7217 - root_mean_squared_erro
r: 3.8369 - val_loss: 35.1473 - val_root_mean_squared_error: 5.9285
Epoch 66/300
2/2 [==============================] - 4s 4s/step - loss: 14.7065 - root_mean_squared_erro
r: 3.8349 - val_loss: 35.1076 - val_root_mean_squared_error: 5.9252
Epoch 67/300
2/2 [==============================] - 5s 5s/step - loss: 14.6907 - root_mean_squared_erro
r: 3.8328 - val_loss: 35.0682 - val_root_mean_squared_error: 5.9218
Epoch 68/300
2/2 [==============================] - 3s 3s/step - loss: 14.6772 - root_mean_squared_erro
r: 3.8311 - val_loss: 35.0273 - val_root_mean_squared_error: 5.9184
Epoch 69/300
2/2 [==============================] - 4s 3s/step - loss: 14.6594 - root_mean_squared_erro
r: 3.8288 - val_loss: 34.9881 - val_root_mean_squared_error: 5.9151
Epoch 70/300
2/2 [==============================] - 4s 4s/step - loss: 14.6437 - root_mean_squared_erro
r: 3.8267 - val_loss: 34.9485 - val_root_mean_squared_error: 5.9117
Epoch 71/300
2/2 [==============================] - 4s 4s/step - loss: 14.6282 - root_mean_squared_erro
r: 3.8247 - val_loss: 34.9082 - val_root_mean_squared_error: 5.9083
Epoch 72/300
2/2 [==============================] - 3s 3s/step - loss: 14.6123 - root_mean_squared_erro
r: 3.8226 - val_loss: 34.8676 - val_root_mean_squared_error: 5.9049
Epoch 73/300
2/2 [==============================] - 4s 4s/step - loss: 14.5967 - root_mean_squared_erro
r: 3.8206 - val_loss: 34.8267 - val_root_mean_squared_error: 5.9014
Epoch 74/300
2/2 [==============================] - 4s 4s/step - loss: 14.5818 - root_mean_squared_erro
r: 3.8186 - val_loss: 34.7848 - val_root_mean_squared_error: 5.8979
Epoch 75/300
2/2 [==============================] - 3s 3s/step - loss: 14.5666 - root_mean_squared_erro
r: 3.8166 - val_loss: 34.7429 - val_root_mean_squared_error: 5.8943
Epoch 76/300
2/2 [==============================] - 4s 4s/step - loss: 14.5505 - root_mean_squared_erro
r: 3.8145 - val_loss: 34.7013 - val_root_mean_squared_error: 5.8908
Epoch 77/300
2/2 [==============================] - 3s 3s/step - loss: 14.5347 - root_mean_squared_erro
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2/2 [==============================] - 3s 3s/step - loss: 14.5347 - root_mean_squared_erro
r: 3.8124 - val_loss: 34.6601 - val_root_mean_squared_error: 5.8873
Epoch 78/300
2/2 [==============================] - 4s 4s/step - loss: 14.5190 - root_mean_squared_erro
r: 3.8104 - val_loss: 34.6187 - val_root_mean_squared_error: 5.8838
Epoch 79/300
2/2 [==============================] - 4s 4s/step - loss: 14.5040 - root_mean_squared_erro
r: 3.8084 - val_loss: 34.5770 - val_root_mean_squared_error: 5.8802
Epoch 80/300
2/2 [==============================] - 3s 3s/step - loss: 14.4873 - root_mean_squared_erro
r: 3.8062 - val_loss: 34.5358 - val_root_mean_squared_error: 5.8767
Epoch 81/300
2/2 [==============================] - 4s 4s/step - loss: 14.4726 - root_mean_squared_erro
r: 3.8043 - val_loss: 34.4939 - val_root_mean_squared_error: 5.8731
Epoch 82/300
2/2 [==============================] - 4s 4s/step - loss: 14.4562 - root_mean_squared_erro
r: 3.8021 - val_loss: 34.4524 - val_root_mean_squared_error: 5.8696
Epoch 83/300
2/2 [==============================] - 3s 3s/step - loss: 14.4397 - root_mean_squared_erro
r: 3.8000 - val_loss: 34.4112 - val_root_mean_squared_error: 5.8661
Epoch 84/300
2/2 [==============================] - 3s 3s/step - loss: 14.4247 - root_mean_squared_erro
r: 3.7980 - val_loss: 34.3694 - val_root_mean_squared_error: 5.8625
Epoch 85/300
2/2 [==============================] - 5s 5s/step - loss: 14.4078 - root_mean_squared_erro
r: 3.7958 - val_loss: 34.3281 - val_root_mean_squared_error: 5.8590
Epoch 86/300
2/2 [==============================] - 4s 3s/step - loss: 14.3915 - root_mean_squared_erro
r: 3.7936 - val_loss: 34.2869 - val_root_mean_squared_error: 5.8555
Epoch 87/300
2/2 [==============================] - 3s 3s/step - loss: 14.3757 - root_mean_squared_erro
r: 3.7915 - val_loss: 34.2449 - val_root_mean_squared_error: 5.8519
Epoch 88/300
2/2 [==============================] - 3s 3s/step - loss: 14.3597 - root_mean_squared_erro
r: 3.7894 - val_loss: 34.2021 - val_root_mean_squared_error: 5.8483
Epoch 89/300
2/2 [==============================] - 5s 5s/step - loss: 14.3439 - root_mean_squared_erro
r: 3.7873 - val_loss: 34.1589 - val_root_mean_squared_error: 5.8446
Epoch 90/300
2/2 [==============================] - 3s 3s/step - loss: 14.3273 - root_mean_squared_erro
r: 3.7851 - val_loss: 34.1158 - val_root_mean_squared_error: 5.8409
Epoch 91/300
2/2 [==============================] - 3s 3s/step - loss: 14.3116 - root_mean_squared_erro
r: 3.7831 - val_loss: 34.0721 - val_root_mean_squared_error: 5.8371
Epoch 92/300
2/2 [==============================] - 5s 5s/step - loss: 14.2952 - root_mean_squared_erro
r: 3.7809 - val_loss: 34.0285 - val_root_mean_squared_error: 5.8334
Epoch 93/300
2/2 [==============================] - 4s 3s/step - loss: 14.2792 - root_mean_squared_erro
r: 3.7788 - val_loss: 33.9848 - val_root_mean_squared_error: 5.8297
Epoch 94/300
2/2 [==============================] - 4s 3s/step - loss: 14.2623 - root_mean_squared_erro
r: 3.7765 - val_loss: 33.9417 - val_root_mean_squared_error: 5.8259
Epoch 95/300
2/2 [==============================] - 4s 4s/step - loss: 14.2463 - root_mean_squared_erro
r: 3.7744 - val_loss: 33.8976 - val_root_mean_squared_error: 5.8222
Epoch 96/300
2/2 [==============================] - 4s 4s/step - loss: 14.2302 - root_mean_squared_erro
r: 3.7723 - val_loss: 33.8535 - val_root_mean_squared_error: 5.8184
Epoch 97/300
2/2 [==============================] - 4s 4s/step - loss: 14.2140 - root_mean_squared_erro
r: 3.7701 - val_loss: 33.8096 - val_root_mean_squared_error: 5.8146
Epoch 98/300
2/2 [==============================] - 4s 4s/step - loss: 14.1969 - root_mean_squared_erro
r: 3.7679 - val_loss: 33.7661 - val_root_mean_squared_error: 5.8109
Epoch 99/300
2/2 [==============================] - 4s 4s/step - loss: 14.1812 - root_mean_squared_erro
r: 3.7658 - val_loss: 33.7222 - val_root_mean_squared_error: 5.8071
Epoch 100/300
2/2 [==============================] - 3s 3s/step - loss: 14.1631 - root_mean_squared_erro
r: 3.7634 - val_loss: 33.6791 - val_root_mean_squared_error: 5.8034
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r: 3.7654 - val_loss: 33.6791 - val_root_mean_squared_error: 5.8034
Epoch 101/300
2/2 [==============================] - 4s 4s/step - loss: 14.1482 - root_mean_squared_erro
r: 3.7614 - val_loss: 33.6342 - val_root_mean_squared_error: 5.7995
Epoch 102/300
2/2 [==============================] - 3s 3s/step - loss: 14.1321 - root_mean_squared_erro
r: 3.7593 - val_loss: 33.5889 - val_root_mean_squared_error: 5.7956
Epoch 103/300
2/2 [==============================] - 4s 4s/step - loss: 14.1165 - root_mean_squared_erro
r: 3.7572 - val_loss: 33.5438 - val_root_mean_squared_error: 5.7917
Epoch 104/300
2/2 [==============================] - 4s 4s/step - loss: 14.0971 - root_mean_squared_erro
r: 3.7546 - val_loss: 33.5005 - val_root_mean_squared_error: 5.7880
Epoch 105/300
2/2 [==============================] - 3s 3s/step - loss: 14.0814 - root_mean_squared_erro
r: 3.7525 - val_loss: 33.4560 - val_root_mean_squared_error: 5.7841
Epoch 106/300
2/2 [==============================] - 4s 4s/step - loss: 14.0651 - root_mean_squared_erro
r: 3.7503 - val_loss: 33.4115 - val_root_mean_squared_error: 5.7803
Epoch 107/300
2/2 [==============================] - 4s 4s/step - loss: 14.0481 - root_mean_squared_erro
r: 3.7481 - val_loss: 33.3667 - val_root_mean_squared_error: 5.7764
Epoch 108/300
2/2 [==============================] - 4s 4s/step - loss: 14.0308 - root_mean_squared_erro
r: 3.7458 - val_loss: 33.3219 - val_root_mean_squared_error: 5.7725
Epoch 109/300
2/2 [==============================] - 3s 3s/step - loss: 14.0146 - root_mean_squared_erro
r: 3.7436 - val_loss: 33.2767 - val_root_mean_squared_error: 5.7686
Epoch 110/300
2/2 [==============================] - 5s 5s/step - loss: 13.9985 - root_mean_squared_erro
r: 3.7415 - val_loss: 33.2308 - val_root_mean_squared_error: 5.7646
Epoch 111/300
2/2 [==============================] - 4s 4s/step - loss: 13.9822 - root_mean_squared_erro
r: 3.7393 - val_loss: 33.1852 - val_root_mean_squared_error: 5.7607
Epoch 112/300
2/2 [==============================] - 3s 3s/step - loss: 13.9631 - root_mean_squared_erro
r: 3.7367 - val_loss: 33.1409 - val_root_mean_squared_error: 5.7568
Epoch 113/300
2/2 [==============================] - 4s 4s/step - loss: 13.9471 - root_mean_squared_erro
r: 3.7346 - val_loss: 33.0955 - val_root_mean_squared_error: 5.7529
Epoch 114/300
2/2 [==============================] - 4s 4s/step - loss: 13.9311 - root_mean_squared_erro
r: 3.7324 - val_loss: 33.0493 - val_root_mean_squared_error: 5.7488
Epoch 115/300
2/2 [==============================] - 3s 3s/step - loss: 13.9132 - root_mean_squared_erro
r: 3.7300 - val_loss: 33.0026 - val_root_mean_squared_error: 5.7448
Epoch 116/300
2/2 [==============================] - 3s 3s/step - loss: 13.8974 - root_mean_squared_erro
r: 3.7279 - val_loss: 32.9557 - val_root_mean_squared_error: 5.7407
Epoch 117/300
2/2 [==============================] - 5s 5s/step - loss: 13.8793 - root_mean_squared_erro
r: 3.7255 - val_loss: 32.9097 - val_root_mean_squared_error: 5.7367
Epoch 118/300
2/2 [==============================] - 3s 3s/step - loss: 13.8635 - root_mean_squared_erro
r: 3.7234 - val_loss: 32.8631 - val_root_mean_squared_error: 5.7326
Epoch 119/300
2/2 [==============================] - 3s 3s/step - loss: 13.8471 - root_mean_squared_erro
r: 3.7212 - val_loss: 32.8169 - val_root_mean_squared_error: 5.7286
Epoch 120/300
2/2 [==============================] - 4s 4s/step - loss: 13.8292 - root_mean_squared_erro
r: 3.7188 - val_loss: 32.7717 - val_root_mean_squared_error: 5.7247
Epoch 121/300
2/2 [==============================] - 4s 4s/step - loss: 13.8129 - root_mean_squared_erro
r: 3.7166 - val_loss: 32.7263 - val_root_mean_squared_error: 5.7207
Epoch 122/300
2/2 [==============================] - 4s 3s/step - loss: 13.7946 - root_mean_squared_erro
r: 3.7141 - val_loss: 32.6819 - val_root_mean_squared_error: 5.7168
Epoch 123/300
2/2 [==============================] - 4s 4s/step - loss: 13.7801 - root_mean_squared_erro
r: 3.7122 - val_loss: 32.6356 - val_root_mean_squared_error: 5.7128
Epoch 124/300
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Epoch 124/300
2/2 [==============================] - 4s 4s/step - loss: 13.7622 - root_mean_squared_erro
r: 3.7097 - val_loss: 32.5900 - val_root_mean_squared_error: 5.7088
Epoch 125/300
2/2 [==============================] - 4s 4s/step - loss: 13.7455 - root_mean_squared_erro
r: 3.7075 - val_loss: 32.5441 - val_root_mean_squared_error: 5.7047
Epoch 126/300
2/2 [==============================] - 4s 4s/step - loss: 13.7276 - root_mean_squared_erro
r: 3.7051 - val_loss: 32.4988 - val_root_mean_squared_error: 5.7008
Epoch 127/300
2/2 [==============================] - 4s 4s/step - loss: 13.7105 - root_mean_squared_erro
r: 3.7028 - val_loss: 32.4531 - val_root_mean_squared_error: 5.6968
Epoch 128/300
2/2 [==============================] - 4s 4s/step - loss: 13.6953 - root_mean_squared_erro
r: 3.7007 - val_loss: 32.4059 - val_root_mean_squared_error: 5.6926
Epoch 129/300
2/2 [==============================] - 4s 4s/step - loss: 13.6772 - root_mean_squared_erro
r: 3.6983 - val_loss: 32.3593 - val_root_mean_squared_error: 5.6885
Epoch 130/300
2/2 [==============================] - 4s 4s/step - loss: 13.6615 - root_mean_squared_erro
r: 3.6961 - val_loss: 32.3121 - val_root_mean_squared_error: 5.6844
Epoch 131/300
2/2 [==============================] - 4s 4s/step - loss: 13.6431 - root_mean_squared_erro
r: 3.6937 - val_loss: 32.2665 - val_root_mean_squared_error: 5.6804
Epoch 132/300
2/2 [==============================] - 3s 3s/step - loss: 13.6255 - root_mean_squared_erro
r: 3.6913 - val_loss: 32.2206 - val_root_mean_squared_error: 5.6763
Epoch 133/300
2/2 [==============================] - 4s 4s/step - loss: 13.6084 - root_mean_squared_erro
r: 3.6890 - val_loss: 32.1745 - val_root_mean_squared_error: 5.6723
Epoch 134/300
2/2 [==============================] - 3s 3s/step - loss: 13.5915 - root_mean_squared_erro
r: 3.6867 - val_loss: 32.1276 - val_root_mean_squared_error: 5.6681
Epoch 135/300
2/2 [==============================] - 4s 4s/step - loss: 13.5738 - root_mean_squared_erro
r: 3.6843 - val_loss: 32.0807 - val_root_mean_squared_error: 5.6640
Epoch 136/300
2/2 [==============================] - 4s 4s/step - loss: 13.5568 - root_mean_squared_erro
r: 3.6820 - val_loss: 32.0331 - val_root_mean_squared_error: 5.6598
Epoch 137/300
2/2 [==============================] - 3s 3s/step - loss: 13.5382 - root_mean_squared_erro
r: 3.6794 - val_loss: 31.9860 - val_root_mean_squared_error: 5.6556
Epoch 138/300
2/2 [==============================] - 4s 4s/step - loss: 13.5226 - root_mean_squared_erro
r: 3.6773 - val_loss: 31.9375 - val_root_mean_squared_error: 5.6513
Epoch 139/300
2/2 [==============================] - 4s 4s/step - loss: 13.5042 - root_mean_squared_erro
r: 3.6748 - val_loss: 31.8897 - val_root_mean_squared_error: 5.6471
Epoch 140/300
2/2 [==============================] - 3s 3s/step - loss: 13.4886 - root_mean_squared_erro
r: 3.6727 - val_loss: 31.8406 - val_root_mean_squared_error: 5.6427
Epoch 141/300
2/2 [==============================] - 3s 3s/step - loss: 13.4699 - root_mean_squared_erro
r: 3.6701 - val_loss: 31.7930 - val_root_mean_squared_error: 5.6385
Epoch 142/300
2/2 [==============================] - 5s 5s/step - loss: 13.4514 - root_mean_squared_erro
r: 3.6676 - val_loss: 31.7461 - val_root_mean_squared_error: 5.6344
Epoch 143/300
2/2 [==============================] - 3s 3s/step - loss: 13.4352 - root_mean_squared_erro
r: 3.6654 - val_loss: 31.6985 - val_root_mean_squared_error: 5.6301
Epoch 144/300
2/2 [==============================] - 3s 3s/step - loss: 13.4169 - root_mean_squared_erro
r: 3.6629 - val_loss: 31.6512 - val_root_mean_squared_error: 5.6259
Epoch 145/300
2/2 [==============================] - 4s 3s/step - loss: 13.3975 - root_mean_squared_erro
r: 3.6603 - val_loss: 31.6043 - val_root_mean_squared_error: 5.6218
Epoch 146/300
2/2 [==============================] - 5s 5s/step - loss: 13.3820 - root_mean_squared_erro
r: 3.6581 - val_loss: 31.5547 - val_root_mean_squared_error: 5.6174
Epoch 147/300
2/2 [==============================] - 3s 3s/step - loss: 13.3619 - root_mean_squared_erro
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r: 3.6554 - val_loss: 31.5063 - val_root_mean_squared_error: 5.6130
Epoch 148/300
2/2 [==============================] - 3s 3s/step - loss: 13.3464 - root_mean_squared_erro
r: 3.6533 - val_loss: 31.4559 - val_root_mean_squared_error: 5.6086
Epoch 149/300
2/2 [==============================] - 5s 5s/step - loss: 13.3254 - root_mean_squared_erro
r: 3.6504 - val_loss: 31.4073 - val_root_mean_squared_error: 5.6042
Epoch 150/300
2/2 [==============================] - 3s 3s/step - loss: 13.3082 - root_mean_squared_erro
r: 3.6480 - val_loss: 31.3576 - val_root_mean_squared_error: 5.5998
Epoch 151/300
2/2 [==============================] - 3s 3s/step - loss: 13.2904 - root_mean_squared_erro
r: 3.6456 - val_loss: 31.3066 - val_root_mean_squared_error: 5.5952
Epoch 152/300
2/2 [==============================] - 4s 4s/step - loss: 13.2702 - root_mean_squared_erro
r: 3.6428 - val_loss: 31.2570 - val_root_mean_squared_error: 5.5908
Epoch 153/300
2/2 [==============================] - 4s 4s/step - loss: 13.2525 - root_mean_squared_erro
r: 3.6404 - val_loss: 31.2057 - val_root_mean_squared_error: 5.5862
Epoch 154/300
2/2 [==============================] - 3s 3s/step - loss: 13.2338 - root_mean_squared_erro
r: 3.6378 - val_loss: 31.1545 - val_root_mean_squared_error: 5.5816
Epoch 155/300
2/2 [==============================] - 4s 4s/step - loss: 13.2159 - root_mean_squared_erro
r: 3.6354 - val_loss: 31.1029 - val_root_mean_squared_error: 5.5770
Epoch 156/300
2/2 [==============================] - 4s 4s/step - loss: 13.1966 - root_mean_squared_erro
r: 3.6327 - val_loss: 31.0519 - val_root_mean_squared_error: 5.5724
Epoch 157/300
2/2 [==============================] - 3s 3s/step - loss: 13.1773 - root_mean_squared_erro
r: 3.6300 - val_loss: 31.0010 - val_root_mean_squared_error: 5.5679
Epoch 158/300
2/2 [==============================] - 4s 4s/step - loss: 13.1597 - root_mean_squared_erro
r: 3.6276 - val_loss: 30.9492 - val_root_mean_squared_error: 5.5632
Epoch 159/300
2/2 [==============================] - 4s 4s/step - loss: 13.1406 - root_mean_squared_erro
r: 3.6250 - val_loss: 30.8977 - val_root_mean_squared_error: 5.5586
Epoch 160/300
2/2 [==============================] - 4s 4s/step - loss: 13.1227 - root_mean_squared_erro
r: 3.6225 - val_loss: 30.8456 - val_root_mean_squared_error: 5.5539
Epoch 161/300
2/2 [==============================] - 4s 4s/step - loss: 13.1031 - root_mean_squared_erro
r: 3.6198 - val_loss: 30.7947 - val_root_mean_squared_error: 5.5493
Epoch 162/300
2/2 [==============================] - 4s 4s/step - loss: 13.0838 - root_mean_squared_erro
r: 3.6172 - val_loss: 30.7439 - val_root_mean_squared_error: 5.5447
Epoch 163/300
2/2 [==============================] - 3s 3s/step - loss: 13.0652 - root_mean_squared_erro
r: 3.6146 - val_loss: 30.6925 - val_root_mean_squared_error: 5.5401
Epoch 164/300
2/2 [==============================] - 4s 4s/step - loss: 13.0440 - root_mean_squared_erro
r: 3.6117 - val_loss: 30.6423 - val_root_mean_squared_error: 5.5355
Epoch 165/300
2/2 [==============================] - 4s 4s/step - loss: 13.0266 - root_mean_squared_erro
r: 3.6092 - val_loss: 30.5897 - val_root_mean_squared_error: 5.5308
Epoch 166/300
2/2 [==============================] - 3s 3s/step - loss: 13.0067 - root_mean_squared_erro
r: 3.6065 - val_loss: 30.5370 - val_root_mean_squared_error: 5.5260
Epoch 167/300
2/2 [==============================] - 4s 4s/step - loss: 12.9878 - root_mean_squared_erro
r: 3.6039 - val_loss: 30.4832 - val_root_mean_squared_error: 5.5212
Epoch 168/300
2/2 [==============================] - 4s 4s/step - loss: 12.9692 - root_mean_squared_erro
r: 3.6013 - val_loss: 30.4295 - val_root_mean_squared_error: 5.5163
Epoch 169/300
2/2 [==============================] - 3s 3s/step - loss: 12.9462 - root_mean_squared_erro
r: 3.5981 - val_loss: 30.3774 - val_root_mean_squared_error: 5.5116
Epoch 170/300
2/2 [==============================] - 4s 4s/step - loss: 12.9280 - root_mean_squared_erro
r: 3.5956 - val_loss: 30.3233 - val_root_mean_squared_error: 5.5067
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Epoch 171/300
2/2 [==============================] - 4s 4s/step - loss: 12.9081 - root_mean_squared_erro
r: 3.5928 - val_loss: 30.2689 - val_root_mean_squared_error: 5.5017
Epoch 172/300
2/2 [==============================] - 3s 3s/step - loss: 12.8878 - root_mean_squared_erro
r: 3.5900 - val_loss: 30.2144 - val_root_mean_squared_error: 5.4968
Epoch 173/300
2/2 [==============================] - 3s 3s/step - loss: 12.8670 - root_mean_squared_erro
r: 3.5871 - val_loss: 30.1598 - val_root_mean_squared_error: 5.4918
Epoch 174/300
2/2 [==============================] - 5s 5s/step - loss: 12.8488 - root_mean_squared_erro
r: 3.5845 - val_loss: 30.1035 - val_root_mean_squared_error: 5.4867
Epoch 175/300
2/2 [==============================] - 4s 3s/step - loss: 12.8257 - root_mean_squared_erro
r: 3.5813 - val_loss: 30.0490 - val_root_mean_squared_error: 5.4817
Epoch 176/300
2/2 [==============================] - 3s 3s/step - loss: 12.8073 - root_mean_squared_erro
r: 3.5787 - val_loss: 29.9925 - val_root_mean_squared_error: 5.4765
Epoch 177/300
2/2 [==============================] - 3s 3s/step - loss: 12.7858 - root_mean_squared_erro
r: 3.5757 - val_loss: 29.9370 - val_root_mean_squared_error: 5.4715
Epoch 178/300
2/2 [==============================] - 5s 5s/step - loss: 12.7637 - root_mean_squared_erro
r: 3.5726 - val_loss: 29.8815 - val_root_mean_squared_error: 5.4664
Epoch 179/300
2/2 [==============================] - 3s 3s/step - loss: 12.7411 - root_mean_squared_erro
r: 3.5695 - val_loss: 29.8260 - val_root_mean_squared_error: 5.4613
Epoch 180/300
2/2 [==============================] - 3s 3s/step - loss: 12.7222 - root_mean_squared_erro
r: 3.5668 - val_loss: 29.7677 - val_root_mean_squared_error: 5.4560
Epoch 181/300
2/2 [==============================] - 5s 5s/step - loss: 12.7008 - root_mean_squared_erro
r: 3.5638 - val_loss: 29.7098 - val_root_mean_squared_error: 5.4507
Epoch 182/300
2/2 [==============================] - 3s 3s/step - loss: 12.6793 - root_mean_squared_erro
r: 3.5608 - val_loss: 29.6518 - val_root_mean_squared_error: 5.4453
Epoch 183/300
2/2 [==============================] - 3s 3s/step - loss: 12.6578 - root_mean_squared_erro
r: 3.5578 - val_loss: 29.5945 - val_root_mean_squared_error: 5.4401
Epoch 184/300
2/2 [==============================] - 4s 4s/step - loss: 12.6317 - root_mean_squared_erro
r: 3.5541 - val_loss: 29.5394 - val_root_mean_squared_error: 5.4350
Epoch 185/300
2/2 [==============================] - 4s 4s/step - loss: 12.6131 - root_mean_squared_erro
r: 3.5515 - val_loss: 29.4814 - val_root_mean_squared_error: 5.4297
Epoch 186/300
2/2 [==============================] - 3s 3s/step - loss: 12.5903 - root_mean_squared_erro
r: 3.5483 - val_loss: 29.4240 - val_root_mean_squared_error: 5.4244
Epoch 187/300
2/2 [==============================] - 4s 4s/step - loss: 12.5677 - root_mean_squared_erro
r: 3.5451 - val_loss: 29.3668 - val_root_mean_squared_error: 5.4191
Epoch 188/300
2/2 [==============================] - 4s 4s/step - loss: 12.5445 - root_mean_squared_erro
r: 3.5418 - val_loss: 29.3087 - val_root_mean_squared_error: 5.4138
Epoch 189/300
2/2 [==============================] - 3s 3s/step - loss: 12.5215 - root_mean_squared_erro
r: 3.5386 - val_loss: 29.2489 - val_root_mean_squared_error: 5.4082
Epoch 190/300
2/2 [==============================] - 4s 4s/step - loss: 12.4988 - root_mean_squared_erro
r: 3.5354 - val_loss: 29.1835 - val_root_mean_squared_error: 5.4022
Epoch 191/300
2/2 [==============================] - 4s 4s/step - loss: 12.4741 - root_mean_squared_erro
r: 3.5319 - val_loss: 29.1103 - val_root_mean_squared_error: 5.3954
Epoch 192/300
2/2 [==============================] - 4s 4s/step - loss: 12.4520 - root_mean_squared_erro
r: 3.5287 - val_loss: 29.0378 - val_root_mean_squared_error: 5.3887
Epoch 193/300
2/2 [==============================] - 3s 3s/step - loss: 12.4292 - root_mean_squared_erro
r: 3.5255 - val_loss: 28.9711 - val_root_mean_squared_error: 5.3825
Epoch 194/300
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2/2 [==============================] - 4s 4s/step - loss: 12.4063 - root_mean_squared_erro
r: 3.5223 - val_loss: 28.8047 - val_root_mean_squared_error: 5.3670
Epoch 195/300
2/2 [==============================] - 0s 97ms/step - loss: 12.3785 - root_mean_squared_er
ror: 3.5183 - val_loss: 28.8493 - val_root_mean_squared_error: 5.3712
Epoch 196/300
2/2 [==============================] - 4s 4s/step - loss: 12.3594 - root_mean_squared_erro
r: 3.5156 - val_loss: 28.7908 - val_root_mean_squared_error: 5.3657
Epoch 197/300
2/2 [==============================] - 3s 3s/step - loss: 12.3185 - root_mean_squared_erro
r: 3.5098 - val_loss: 28.7316 - val_root_mean_squared_error: 5.3602
Epoch 198/300
2/2 [==============================] - 4s 4s/step - loss: 12.2955 - root_mean_squared_erro
r: 3.5065 - val_loss: 28.6723 - val_root_mean_squared_error: 5.3547
Epoch 199/300
2/2 [==============================] - 3s 3s/step - loss: 12.2725 - root_mean_squared_erro
r: 3.5032 - val_loss: 28.6125 - val_root_mean_squared_error: 5.3491
Epoch 200/300
2/2 [==============================] - 4s 4s/step - loss: 12.2485 - root_mean_squared_erro
r: 3.4998 - val_loss: 28.5527 - val_root_mean_squared_error: 5.3435
Epoch 201/300
2/2 [==============================] - 4s 4s/step - loss: 12.2235 - root_mean_squared_erro
r: 3.4962 - val_loss: 28.4939 - val_root_mean_squared_error: 5.3380
Epoch 202/300
2/2 [==============================] - 3s 3s/step - loss: 12.2033 - root_mean_squared_erro
r: 3.4933 - val_loss: 28.4324 - val_root_mean_squared_error: 5.3322
Epoch 203/300
2/2 [==============================] - 3s 3s/step - loss: 12.1793 - root_mean_squared_erro
r: 3.4899 - val_loss: 28.3733 - val_root_mean_squared_error: 5.3267
Epoch 204/300
2/2 [==============================] - 5s 5s/step - loss: 12.1606 - root_mean_squared_erro
r: 3.4872 - val_loss: 28.3116 - val_root_mean_squared_error: 5.3209
Epoch 205/300
2/2 [==============================] - 3s 3s/step - loss: 12.1462 - root_mean_squared_erro
r: 3.4851 - val_loss: 28.2517 - val_root_mean_squared_error: 5.3152
Epoch 206/300
2/2 [==============================] - 3s 3s/step - loss: 12.1335 - root_mean_squared_erro
r: 3.4833 - val_loss: 28.1892 - val_root_mean_squared_error: 5.3093
Epoch 207/300
2/2 [==============================] - 5s 5s/step - loss: 12.1066 - root_mean_squared_erro
r: 3.4795 - val_loss: 28.1298 - val_root_mean_squared_error: 5.3038
Epoch 208/300
2/2 [==============================] - 4s 4s/step - loss: 12.0855 - root_mean_squared_erro
r: 3.4764 - val_loss: 28.0684 - val_root_mean_squared_error: 5.2980
Epoch 209/300
2/2 [==============================] - 3s 3s/step - loss: 12.0491 - root_mean_squared_erro
r: 3.4712 - val_loss: 28.0064 - val_root_mean_squared_error: 5.2921
Epoch 210/300
2/2 [==============================] - 3s 3s/step - loss: 12.0234 - root_mean_squared_erro
r: 3.4675 - val_loss: 27.9459 - val_root_mean_squared_error: 5.2864
Epoch 211/300
2/2 [==============================] - 5s 5s/step - loss: 12.0021 - root_mean_squared_erro
r: 3.4644 - val_loss: 27.8835 - val_root_mean_squared_error: 5.2805
Epoch 212/300
2/2 [==============================] - 3s 3s/step - loss: 11.9796 - root_mean_squared_erro
r: 3.4612 - val_loss: 27.8186 - val_root_mean_squared_error: 5.2743
Epoch 213/300
2/2 [==============================] - 3s 3s/step - loss: 11.9531 - root_mean_squared_erro
r: 3.4573 - val_loss: 27.7567 - val_root_mean_squared_error: 5.2685
Epoch 214/300
2/2 [==============================] - 5s 5s/step - loss: 11.9304 - root_mean_squared_erro
r: 3.4540 - val_loss: 27.6948 - val_root_mean_squared_error: 5.2626
Epoch 215/300
2/2 [==============================] - 3s 3s/step - loss: 11.9058 - root_mean_squared_erro
r: 3.4505 - val_loss: 27.6338 - val_root_mean_squared_error: 5.2568
Epoch 216/300
2/2 [==============================] - 3s 3s/step - loss: 11.8848 - root_mean_squared_erro
r: 3.4474 - val_loss: 27.5705 - val_root_mean_squared_error: 5.2508
Epoch 217/300
2/2 [==============================] - 4s 4s/step - loss: 11.8612 - root_mean_squared_erro
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r: 3.4440 - val_loss: 27.5078 - val_root_mean_squared_error: 5.2448
Epoch 218/300
2/2 [==============================] - 4s 4s/step - loss: 11.8396 - root_mean_squared_erro
r: 3.4409 - val_loss: 27.4440 - val_root_mean_squared_error: 5.2387
Epoch 219/300
2/2 [==============================] - 4s 4s/step - loss: 11.8198 - root_mean_squared_erro
r: 3.4380 - val_loss: 27.3786 - val_root_mean_squared_error: 5.2325
Epoch 220/300
2/2 [==============================] - 5s 5s/step - loss: 11.8001 - root_mean_squared_erro
r: 3.4351 - val_loss: 27.3116 - val_root_mean_squared_error: 5.2260
Epoch 221/300
2/2 [==============================] - 4s 4s/step - loss: 11.7764 - root_mean_squared_erro
r: 3.4317 - val_loss: 27.2463 - val_root_mean_squared_error: 5.2198
Epoch 222/300
2/2 [==============================] - 5s 5s/step - loss: 11.7568 - root_mean_squared_erro
r: 3.4288 - val_loss: 27.1798 - val_root_mean_squared_error: 5.2134
Epoch 223/300
2/2 [==============================] - 5s 4s/step - loss: 11.7307 - root_mean_squared_erro
r: 3.4250 - val_loss: 27.1161 - val_root_mean_squared_error: 5.2073
Epoch 224/300
2/2 [==============================] - 4s 4s/step - loss: 11.7112 - root_mean_squared_erro
r: 3.4222 - val_loss: 27.0506 - val_root_mean_squared_error: 5.2010
Epoch 225/300
2/2 [==============================] - 4s 4s/step - loss: 11.6884 - root_mean_squared_erro
r: 3.4188 - val_loss: 26.9861 - val_root_mean_squared_error: 5.1948
Epoch 226/300
2/2 [==============================] - 4s 4s/step - loss: 11.6662 - root_mean_squared_erro
r: 3.4156 - val_loss: 26.9219 - val_root_mean_squared_error: 5.1886
Epoch 227/300
2/2 [==============================] - 4s 4s/step - loss: 11.6443 - root_mean_squared_erro
r: 3.4124 - val_loss: 26.8585 - val_root_mean_squared_error: 5.1825
Epoch 228/300
2/2 [==============================] - 4s 4s/step - loss: 11.6244 - root_mean_squared_erro
r: 3.4095 - val_loss: 26.7934 - val_root_mean_squared_error: 5.1762
Epoch 229/300
2/2 [==============================] - 5s 5s/step - loss: 11.6038 - root_mean_squared_erro
r: 3.4064 - val_loss: 26.7292 - val_root_mean_squared_error: 5.1700
Epoch 230/300
2/2 [==============================] - 4s 4s/step - loss: 11.5814 - root_mean_squared_erro
r: 3.4031 - val_loss: 26.6668 - val_root_mean_squared_error: 5.1640
Epoch 231/300
2/2 [==============================] - 4s 4s/step - loss: 11.5609 - root_mean_squared_erro
r: 3.4001 - val_loss: 26.6053 - val_root_mean_squared_error: 5.1580
Epoch 232/300
2/2 [==============================] - 5s 5s/step - loss: 11.5391 - root_mean_squared_erro
r: 3.3969 - val_loss: 26.5444 - val_root_mean_squared_error: 5.1521
Epoch 233/300
2/2 [==============================] - 4s 3s/step - loss: 11.5180 - root_mean_squared_erro
r: 3.3938 - val_loss: 26.4833 - val_root_mean_squared_error: 5.1462
Epoch 234/300
2/2 [==============================] - 3s 3s/step - loss: 11.4983 - root_mean_squared_erro
r: 3.3909 - val_loss: 26.4211 - val_root_mean_squared_error: 5.1402
Epoch 235/300
2/2 [==============================] - 4s 4s/step - loss: 11.4782 - root_mean_squared_erro
r: 3.3880 - val_loss: 26.3588 - val_root_mean_squared_error: 5.1341
Epoch 236/300
2/2 [==============================] - 4s 4s/step - loss: 11.4579 - root_mean_squared_erro
r: 3.3849 - val_loss: 26.2963 - val_root_mean_squared_error: 5.1280
Epoch 237/300
2/2 [==============================] - 3s 3s/step - loss: 11.4385 - root_mean_squared_erro
r: 3.3821 - val_loss: 26.2336 - val_root_mean_squared_error: 5.1219
Epoch 238/300
2/2 [==============================] - 4s 4s/step - loss: 11.4177 - root_mean_squared_erro
r: 3.3790 - val_loss: 26.1720 - val_root_mean_squared_error: 5.1159
Epoch 239/300
2/2 [==============================] - 4s 4s/step - loss: 11.3963 - root_mean_squared_erro
r: 3.3758 - val_loss: 26.1124 - val_root_mean_squared_error: 5.1100
Epoch 240/300
2/2 [==============================] - 3s 3s/step - loss: 11.3754 - root_mean_squared_erro
r: 3.3727 - val_loss: 26.0529 - val_root_mean_squared_error: 5.1042
Epoch 241/300
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Epoch 241/300
2/2 [==============================] - 4s 4s/step - loss: 11.3556 - root_mean_squared_erro
r: 3.3698 - val_loss: 25.9921 - val_root_mean_squared_error: 5.0982
Epoch 242/300
2/2 [==============================] - 4s 4s/step - loss: 11.3351 - root_mean_squared_erro
r: 3.3668 - val_loss: 25.9312 - val_root_mean_squared_error: 5.0923
Epoch 243/300
2/2 [==============================] - 4s 4s/step - loss: 11.3170 - root_mean_squared_erro
r: 3.3641 - val_loss: 25.8680 - val_root_mean_squared_error: 5.0861
Epoch 244/300
2/2 [==============================] - 4s 4s/step - loss: 11.2941 - root_mean_squared_erro
r: 3.3607 - val_loss: 25.8065 - val_root_mean_squared_error: 5.0800
Epoch 245/300
2/2 [==============================] - 4s 4s/step - loss: 11.2735 - root_mean_squared_erro
r: 3.3576 - val_loss: 25.7444 - val_root_mean_squared_error: 5.0739
Epoch 246/300
2/2 [==============================] - 4s 4s/step - loss: 11.2554 - root_mean_squared_erro
r: 3.3549 - val_loss: 25.6796 - val_root_mean_squared_error: 5.0675
Epoch 247/300
2/2 [==============================] - 4s 3s/step - loss: 11.2357 - root_mean_squared_erro
r: 3.3520 - val_loss: 25.6158 - val_root_mean_squared_error: 5.0612
Epoch 248/300
2/2 [==============================] - 4s 4s/step - loss: 11.2119 - root_mean_squared_erro
r: 3.3484 - val_loss: 25.5552 - val_root_mean_squared_error: 5.0552
Epoch 249/300
2/2 [==============================] - 4s 3s/step - loss: 11.1943 - root_mean_squared_erro
r: 3.3458 - val_loss: 25.4911 - val_root_mean_squared_error: 5.0489
Epoch 250/300
2/2 [==============================] - 4s 4s/step - loss: 11.1725 - root_mean_squared_erro
r: 3.3425 - val_loss: 25.4273 - val_root_mean_squared_error: 5.0426
Epoch 251/300
2/2 [==============================] - 4s 4s/step - loss: 11.1514 - root_mean_squared_erro
r: 3.3394 - val_loss: 25.3628 - val_root_mean_squared_error: 5.0362
Epoch 252/300
2/2 [==============================] - 3s 3s/step - loss: 11.1319 - root_mean_squared_erro
r: 3.3364 - val_loss: 25.2970 - val_root_mean_squared_error: 5.0296
Epoch 253/300
2/2 [==============================] - 3s 3s/step - loss: 11.1126 - root_mean_squared_erro
r: 3.3336 - val_loss: 25.2299 - val_root_mean_squared_error: 5.0229
Epoch 254/300
2/2 [==============================] - 5s 5s/step - loss: 11.0895 - root_mean_squared_erro
r: 3.3301 - val_loss: 25.1658 - val_root_mean_squared_error: 5.0166
Epoch 255/300
2/2 [==============================] - 3s 3s/step - loss: 11.0681 - root_mean_squared_erro
r: 3.3269 - val_loss: 25.1014 - val_root_mean_squared_error: 5.0101
Epoch 256/300
2/2 [==============================] - 4s 3s/step - loss: 11.0499 - root_mean_squared_erro
r: 3.3241 - val_loss: 25.0351 - val_root_mean_squared_error: 5.0035
Epoch 257/300
2/2 [==============================] - 5s 5s/step - loss: 11.0275 - root_mean_squared_erro
r: 3.3208 - val_loss: 24.9713 - val_root_mean_squared_error: 4.9971
Epoch 258/300
2/2 [==============================] - 3s 3s/step - loss: 11.0077 - root_mean_squared_erro
r: 3.3178 - val_loss: 24.9055 - val_root_mean_squared_error: 4.9905
Epoch 259/300
2/2 [==============================] - 4s 4s/step - loss: 10.9880 - root_mean_squared_erro
r: 3.3148 - val_loss: 24.8402 - val_root_mean_squared_error: 4.9840
Epoch 260/300
2/2 [==============================] - 4s 4s/step - loss: 10.9676 - root_mean_squared_erro
r: 3.3117 - val_loss: 24.7762 - val_root_mean_squared_error: 4.9776
Epoch 261/300
2/2 [==============================] - 5s 5s/step - loss: 10.9479 - root_mean_squared_erro
r: 3.3088 - val_loss: 24.7136 - val_root_mean_squared_error: 4.9713
Epoch 262/300
2/2 [==============================] - 4s 3s/step - loss: 10.9253 - root_mean_squared_erro
r: 3.3053 - val_loss: 24.6541 - val_root_mean_squared_error: 4.9653
Epoch 263/300
2/2 [==============================] - 4s 4s/step - loss: 10.9051 - root_mean_squared_erro
r: 3.3023 - val_loss: 24.5938 - val_root_mean_squared_error: 4.9592
Epoch 264/300
2/2 [==============================] - 5s 5s/step - loss: 10.8855 - root_mean_squared_erro
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2/2 [==============================] - 5s 5s/step - loss: 10.8859 - root_mean_squared_erro
r: 3.2993 - val_loss: 24.5336 - val_root_mean_squared_error: 4.9531
Epoch 265/300
2/2 [==============================] - 4s 4s/step - loss: 10.8663 - root_mean_squared_erro
r: 3.2964 - val_loss: 24.4706 - val_root_mean_squared_error: 4.9468
Epoch 266/300
2/2 [==============================] - 4s 4s/step - loss: 10.8460 - root_mean_squared_erro
r: 3.2933 - val_loss: 24.4076 - val_root_mean_squared_error: 4.9404
Epoch 267/300
2/2 [==============================] - 4s 4s/step - loss: 10.8280 - root_mean_squared_erro
r: 3.2906 - val_loss: 24.3438 - val_root_mean_squared_error: 4.9339
Epoch 268/300
2/2 [==============================] - 4s 4s/step - loss: 10.8059 - root_mean_squared_erro
r: 3.2872 - val_loss: 24.2826 - val_root_mean_squared_error: 4.9277
Epoch 269/300
2/2 [==============================] - 4s 4s/step - loss: 10.7874 - root_mean_squared_erro
r: 3.2844 - val_loss: 24.2204 - val_root_mean_squared_error: 4.9214
Epoch 270/300
2/2 [==============================] - 4s 4s/step - loss: 10.7695 - root_mean_squared_erro
r: 3.2817 - val_loss: 24.1573 - val_root_mean_squared_error: 4.9150
Epoch 271/300
2/2 [==============================] - 4s 4s/step - loss: 10.7481 - root_mean_squared_erro
r: 3.2784 - val_loss: 24.0967 - val_root_mean_squared_error: 4.9088
Epoch 272/300
2/2 [==============================] - 4s 3s/step - loss: 10.7296 - root_mean_squared_erro
r: 3.2756 - val_loss: 24.0326 - val_root_mean_squared_error: 4.9023
Epoch 273/300
2/2 [==============================] - 4s 4s/step - loss: 10.7098 - root_mean_squared_erro
r: 3.2726 - val_loss: 23.9694 - val_root_mean_squared_error: 4.8959
Epoch 274/300
2/2 [==============================] - 4s 3s/step - loss: 10.6904 - root_mean_squared_erro
r: 3.2696 - val_loss: 23.9059 - val_root_mean_squared_error: 4.8894
Epoch 275/300
2/2 [==============================] - 4s 4s/step - loss: 10.6719 - root_mean_squared_erro
r: 3.2668 - val_loss: 23.8419 - val_root_mean_squared_error: 4.8828
Epoch 276/300
2/2 [==============================] - 4s 4s/step - loss: 10.6525 - root_mean_squared_erro
r: 3.2638 - val_loss: 23.7790 - val_root_mean_squared_error: 4.8764
Epoch 277/300
2/2 [==============================] - 4s 3s/step - loss: 10.6335 - root_mean_squared_erro
r: 3.2609 - val_loss: 23.7175 - val_root_mean_squared_error: 4.8701
Epoch 278/300
2/2 [==============================] - 3s 3s/step - loss: 10.6142 - root_mean_squared_erro
r: 3.2579 - val_loss: 23.6551 - val_root_mean_squared_error: 4.8636
Epoch 279/300
2/2 [==============================] - 5s 5s/step - loss: 10.5959 - root_mean_squared_erro
r: 3.2551 - val_loss: 23.5922 - val_root_mean_squared_error: 4.8572
Epoch 280/300
2/2 [==============================] - 3s 3s/step - loss: 10.5781 - root_mean_squared_erro
r: 3.2524 - val_loss: 23.5276 - val_root_mean_squared_error: 4.8505
Epoch 281/300
2/2 [==============================] - 3s 3s/step - loss: 10.5590 - root_mean_squared_erro
r: 3.2495 - val_loss: 23.4631 - val_root_mean_squared_error: 4.8439
Epoch 282/300
2/2 [==============================] - 5s 5s/step - loss: 10.5398 - root_mean_squared_erro
r: 3.2465 - val_loss: 23.4001 - val_root_mean_squared_error: 4.8374
Epoch 283/300
2/2 [==============================] - 4s 3s/step - loss: 10.5204 - root_mean_squared_erro
r: 3.2435 - val_loss: 23.3377 - val_root_mean_squared_error: 4.8309
Epoch 284/300
2/2 [==============================] - 3s 3s/step - loss: 10.5016 - root_mean_squared_erro
r: 3.2406 - val_loss: 23.2751 - val_root_mean_squared_error: 4.8244
Epoch 285/300
2/2 [==============================] - 4s 4s/step - loss: 10.4837 - root_mean_squared_erro
r: 3.2379 - val_loss: 23.2108 - val_root_mean_squared_error: 4.8178
Epoch 286/300
2/2 [==============================] - 5s 5s/step - loss: 10.4639 - root_mean_squared_erro
r: 3.2348 - val_loss: 23.1487 - val_root_mean_squared_error: 4.8113
Epoch 287/300
2/2 [==============================] - 3s 3s/step - loss: 10.4457 - root_mean_squared_erro
r: 3.2320 - val_loss: 23.0857 - val_root_mean_squared_error: 4.8048
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Epoch 288/300
2/2 [==============================] - 3s 3s/step - loss: 10.4262 - root_mean_squared_erro
r: 3.2290 - val_loss: 23.0244 - val_root_mean_squared_error: 4.7984
Epoch 289/300
2/2 [==============================] - 5s 5s/step - loss: 10.4072 - root_mean_squared_erro
r: 3.2260 - val_loss: 22.9632 - val_root_mean_squared_error: 4.7920
Epoch 290/300
2/2 [==============================] - 3s 3s/step - loss: 10.3887 - root_mean_squared_erro
r: 3.2232 - val_loss: 22.9018 - val_root_mean_squared_error: 4.7856
Epoch 291/300
2/2 [==============================] - 3s 3s/step - loss: 10.3716 - root_mean_squared_erro
r: 3.2205 - val_loss: 22.8385 - val_root_mean_squared_error: 4.7790
Epoch 292/300
2/2 [==============================] - 4s 4s/step - loss: 10.3526 - root_mean_squared_erro
r: 3.2175 - val_loss: 22.7773 - val_root_mean_squared_error: 4.7726
Epoch 293/300
2/2 [==============================] - 4s 4s/step - loss: 10.3337 - root_mean_squared_erro
r: 3.2146 - val_loss: 22.7177 - val_root_mean_squared_error: 4.7663
Epoch 294/300
2/2 [==============================] - 3s 3s/step - loss: 10.3158 - root_mean_squared_erro
r: 3.2118 - val_loss: 22.6574 - val_root_mean_squared_error: 4.7600
Epoch 295/300
2/2 [==============================] - 4s 4s/step - loss: 10.2998 - root_mean_squared_erro
r: 3.2093 - val_loss: 22.5964 - val_root_mean_squared_error: 4.7536
Epoch 296/300
2/2 [==============================] - 3s 3s/step - loss: 10.2791 - root_mean_squared_erro
r: 3.2061 - val_loss: 22.5394 - val_root_mean_squared_error: 4.7476
Epoch 297/300
2/2 [==============================] - 4s 4s/step - loss: 10.2618 - root_mean_squared_erro
r: 3.2034 - val_loss: 22.4819 - val_root_mean_squared_error: 4.7415
Epoch 298/300
2/2 [==============================] - 4s 4s/step - loss: 10.2437 - root_mean_squared_erro
r: 3.2006 - val_loss: 22.4230 - val_root_mean_squared_error: 4.7353
Epoch 299/300
2/2 [==============================] - 3s 3s/step - loss: 10.2268 - root_mean_squared_erro
r: 3.1979 - val_loss: 22.3632 - val_root_mean_squared_error: 4.7290
Epoch 300/300
2/2 [==============================] - 4s 4s/step - loss: 10.2072 - root_mean_squared_erro
r: 3.1949 - val_loss: 22.3058 - val_root_mean_squared_error: 4.7229
```

In [31]:

```
error_list = [] #for storing and retrieving the best model
```

In [32]:

```
for i, n in enumerate([25, 34, 45, 60]):
  score = min(hists_DeSh[i].history['val_root_mean_squared_error'])

  print(str(score) + " = Default/Short best Val RMSE with samples sized " + str(n))

  error_list.append(score)

  print("\n")
```

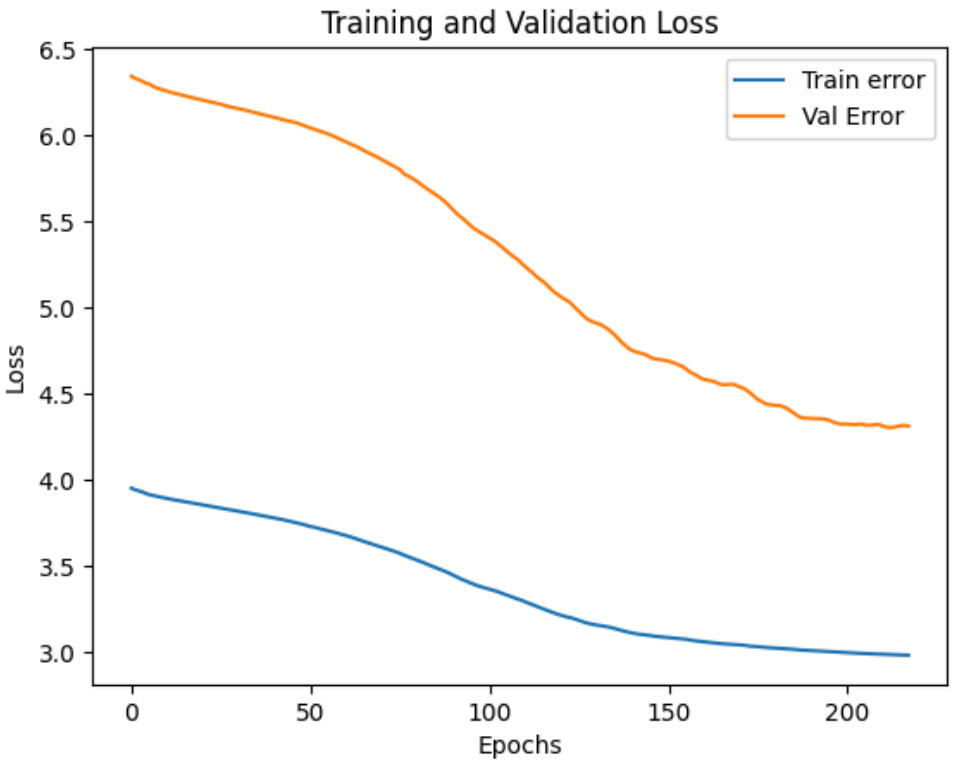
```
4.304657459259033 = Default/Short best Val RMSE with samples sized 25


4.188783645629883 = Default/Short best Val RMSE with samples sized 34


4.100379943847656 = Default/Short best Val RMSE with samples sized 45


4.722903251647949 = Default/Short best Val RMSE with samples sized 60
```

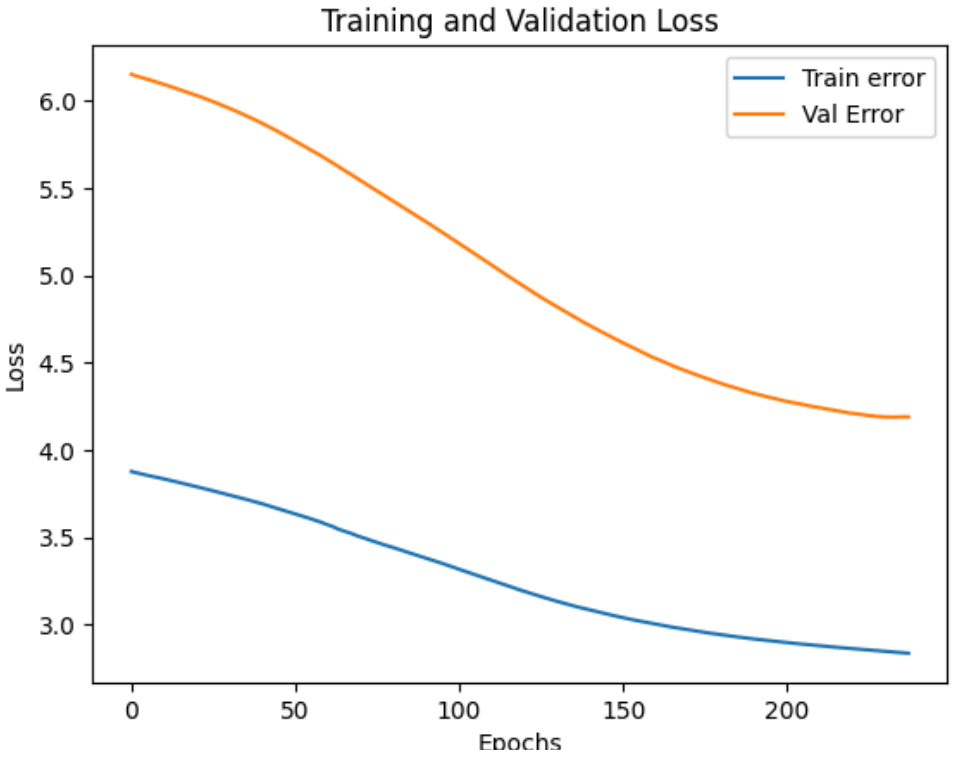
In [33]:
```
plot_error(hists_DeSh[0])
```



It appears that while the two curves haven't really converged for this model (the gap has only shrunk by about a third), we probably just passed the inflection point where the rate of the decrease is itself decreasing. The return on investment timewise in pushing through more epochs is very unappealing.

And it's only worse for the other ones...

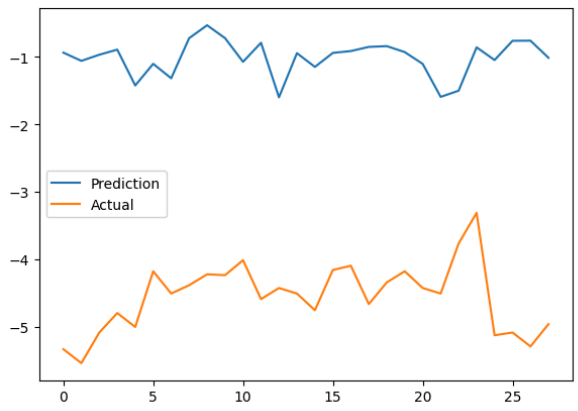
In [34]:
```
#..like this one, which stopped making meaningful progress a hundred epochs ago.
plot_error(hists_DeSh[1])
```

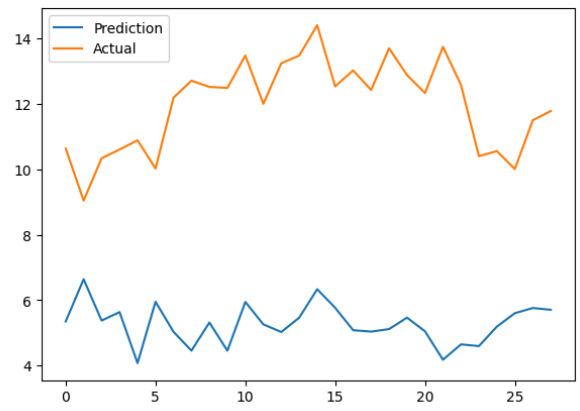


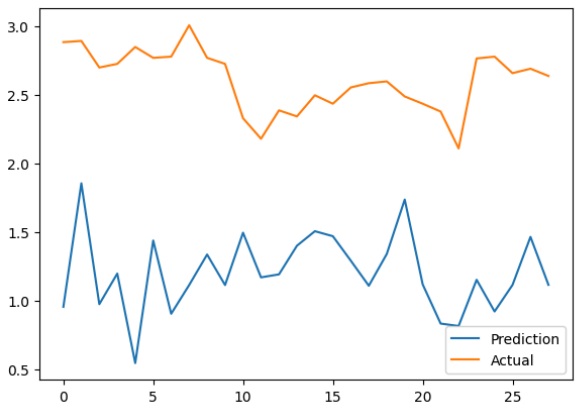
These models were ultimately unlikely to lead anywhere good, and their progress ultimately resulted in the below graphs.

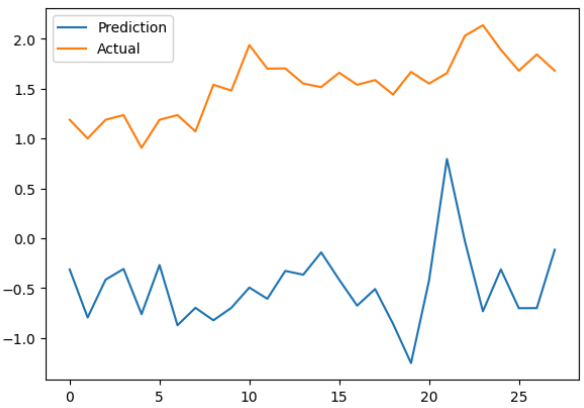
In [37]:
```
# 25 min steps, Default Learning Rate + Short Network
pred_plot_all(mod_25_DeSh, X_val25, y_val25)
```

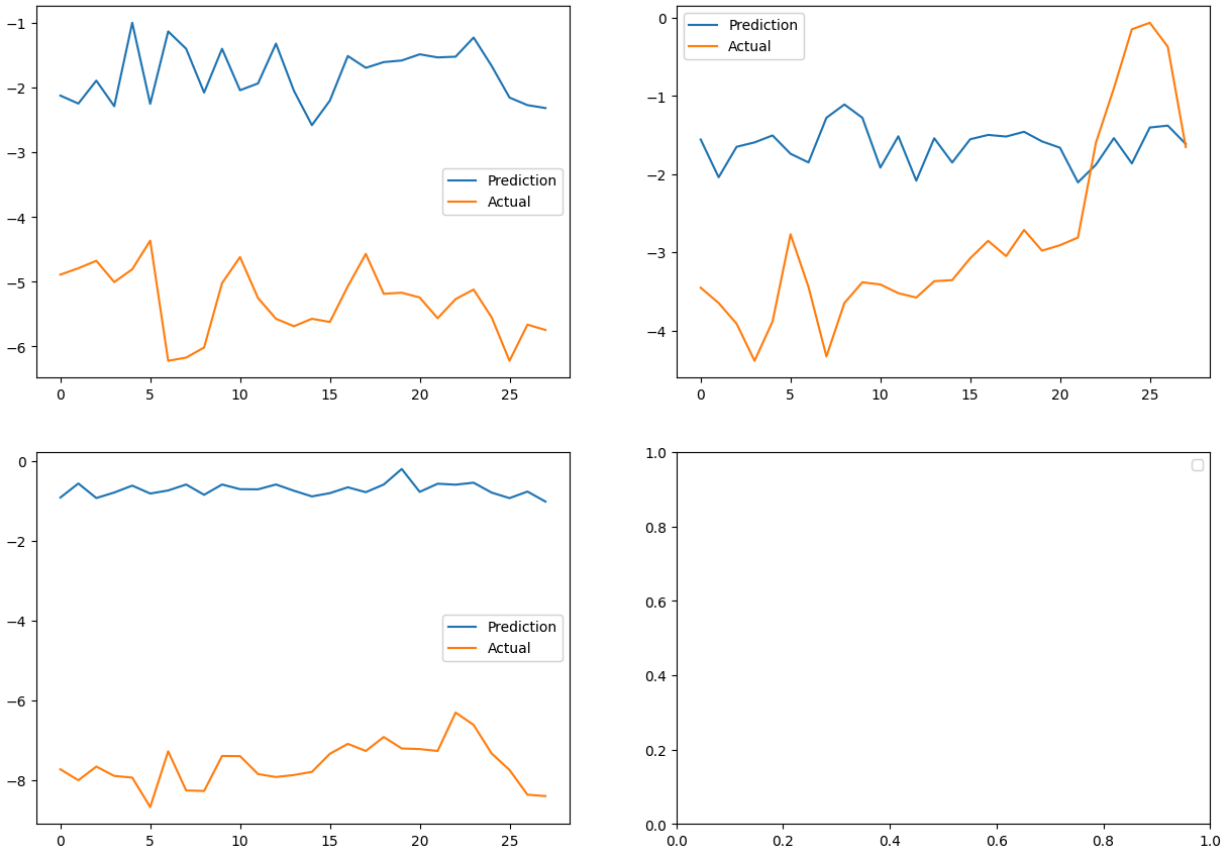
```
1/1 [==============================] - 0s 57ms/step
WARNING:matplotlib.legend:No artists with labels found to put in legend.  Note that artist
s whose label start with an underscore are ignored when legend() is called with no argumen
t.
1/1 [==============================] - 0s 64ms/step
WARNING:matplotlib.legend:No artists with labels found to put in legend.  Note that artist
s whose label start with an underscore are ignored when legend() is called with no argumen
t.
1/1 [==============================] - 0s 42ms/step
WARNING:matplotlib.legend:No artists with labels found to put in legend.  Note that artist
s whose label start with an underscore are ignored when legend() is called with no argumen
t.
1/1 [==============================] - 0s 47ms/step
WARNING:matplotlib.legend:No artists with labels found to put in legend.  Note that artist
s whose label start with an underscore are ignored when legend() is called with no argumen
t.
1/1 [==============================] - 0s 54ms/step
WARNING:matplotlib.legend:No artists with labels found to put in legend.  Note that artist
s whose label start with an underscore are ignored when legend() is called with no argumen
t.
1/1 [==============================] - 0s 44ms/step
WARNING:matplotlib.legend:No artists with labels found to put in legend.  Note that artist
s whose label start with an underscore are ignored when legend() is called with no argumen
t.
1/1 [==============================] - 0s 52ms/step
WARNING:matplotlib.legend:No artists with labels found to put in legend.  Note that artist
s whose label start with an underscore are ignored when legend() is called with no argumen
t.
```







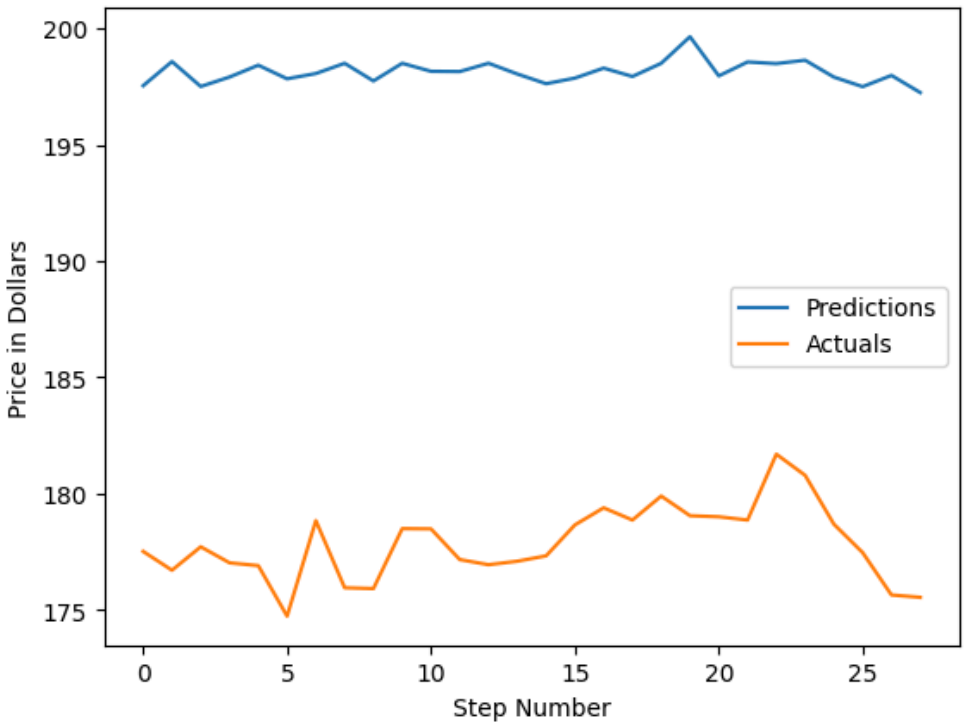




Bear with me a moment while I zoom in on just the last graph here, the one for Tesla.

In [38]:
```
pred_plot_real(mod_25_DeSh, X_val25, y_val25, 6)
```

```
1/1 [==============================] - 0s 26ms/step
```



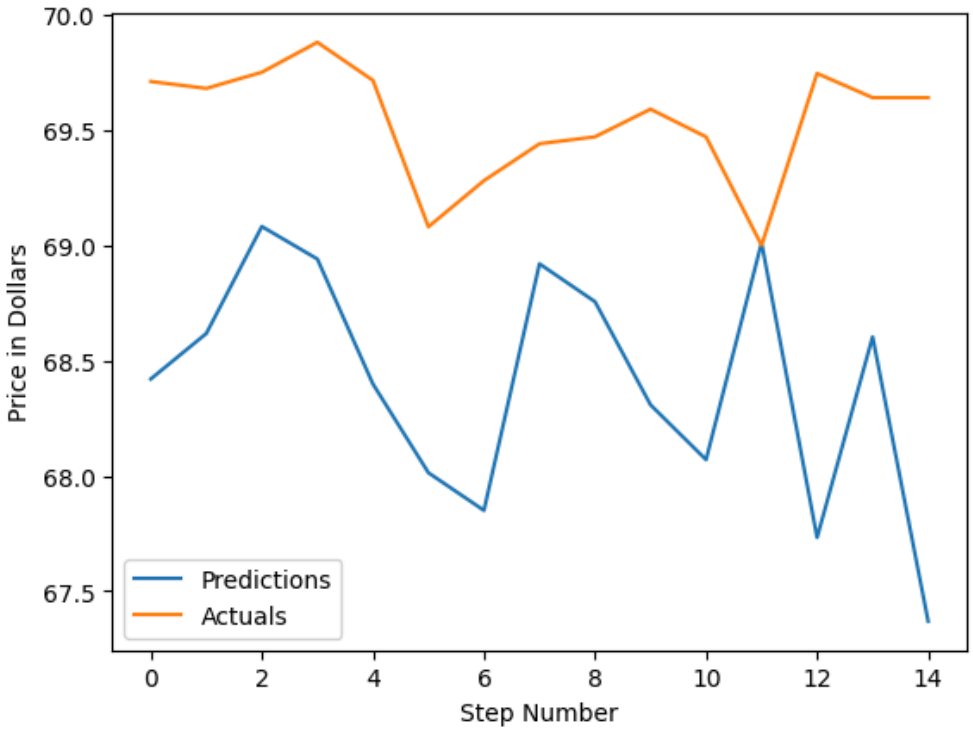
Why is there so much bias here? At first I thought "If *I'm* smart enough to realize it should add 15 dollars to the price, why isn't the model?"

Well, if you look at the other graphs they show a similar bias, but it's mixed between being consistently overshooting and undershooting. I assume that it's this mixture, born from training on multiple stocks, which explains it away. If I trained on Tesla alone, perhaps we'd see something different.

All of the other De/Sh models were about as bad. I'll spare you the gory details of those graphs, except for one glimmer here:

In [52]:
```
print("predicted price:")
print(scaler.inverse_transform(mod_45_DeSh.predict(X_val45))[:,2][11])
print("actual price:")
print(scaler.inverse_transform(y_val45)[:,2][11])
pred_plot_real(mod_45_DeSh, X_val45, y_val45, 2)
```

```
1/1 [==============================] - 0s 72ms/step
69.01133
69.0
1/1 [==============================] - 0s 72ms/step
```



There, at the 11th prediction, it got within about a penny's worth of being exactly correct. Cause for optimism, or random noise?

In any case, let's skip to the second model.

Model Type 2: Default LR and a Longer Network

These models were marginally better than those before, which is to say not very good either.

In [53]:
```
# Default and Long models
for i, n in enumerate([25, 34, 45, 60]):
  mods_DeLo[i].add(InputLayer((n,16)))
  mods_DeLo[i].add(GRU(64))
  mods_DeLo[i].add(Dense(16, "relu"))
  mods_DeLo[i].add(Dense(16, "relu"))
  mods_DeLo[i].add(Dense(15, "relu"))
  mods_DeLo[i].add(Dense(14, "relu"))
  mods_DeLo[i].add(Dense(7, "linear"))
```

```
    mods_DeLo[i].compile(loss=MeanSquaredError(),
                         optimizer=Adam(learning_rate=.0001),
                         metrics=[RootMeanSquaredError()])

    print("Default and Long, samples = " + str(n))
    hists_DeLo[i] = mods_DeLo[i].fit(the_X_trains[i], the_y_trains[i],
        validation_data=(the_X_vals[i], the_y_vals[i]), epochs = 300,
        callbacks = [cps_DeLo[i], EarlyStopping(patience=5, start_from_epoch=10)])


    print("\n")
    print("\n")
```

```
Default and Long, samples = 25
Epoch 1/300
5/5 [==============================] - 8s 1s/step - loss: 14.5867 - root_mean_squared_erro
r: 3.8193 - val_loss: 37.2766 - val_root_mean_squared_error: 6.1055
Epoch 2/300
5/5 [==============================] - 7s 2s/step - loss: 14.5100 - root_mean_squared_erro
r: 3.8092 - val_loss: 37.1259 - val_root_mean_squared_error: 6.0931
Epoch 3/300
5/5 [==============================] - 4s 1s/step - loss: 14.4446 - root_mean_squared_erro
r: 3.8006 - val_loss: 36.9693 - val_root_mean_squared_error: 6.0802
Epoch 4/300
5/5 [==============================] - 4s 932ms/step - loss: 14.3796 - root_mean_squared_e
rror: 3.7920 - val_loss: 36.8270 - val_root_mean_squared_error: 6.0685
Epoch 5/300
5/5 [==============================] - 4s 1s/step - loss: 14.3151 - root_mean_squared_erro
r: 3.7835 - val_loss: 36.6776 - val_root_mean_squared_error: 6.0562
Epoch 6/300
5/5 [==============================] - 6s 1s/step - loss: 14.2506 - root_mean_squared_erro
r: 3.7750 - val_loss: 36.5236 - val_root_mean_squared_error: 6.0435
Epoch 7/300
5/5 [==============================] - 4s 964ms/step - loss: 14.1804 - root_mean_squared_e
rror: 3.7657 - val_loss: 36.3641 - val_root_mean_squared_error: 6.0303
Epoch 8/300
5/5 [==============================] - 4s 1s/step - loss: 14.1070 - root_mean_squared_erro
r: 3.7559 - val_loss: 36.2108 - val_root_mean_squared_error: 6.0175
Epoch 9/300
5/5 [==============================] - 4s 979ms/step - loss: 14.0399 - root_mean_squared_e
rror: 3.7470 - val_loss: 36.0602 - val_root_mean_squared_error: 6.0050
Epoch 10/300
5/5 [==============================] - 5s 1s/step - loss: 13.9664 - root_mean_squared_erro
r: 3.7372 - val_loss: 35.8703 - val_root_mean_squared_error: 5.9892
Epoch 11/300
5/5 [==============================] - 4s 1s/step - loss: 13.8984 - root_mean_squared_erro
r: 3.7281 - val_loss: 35.7041 - val_root_mean_squared_error: 5.9753
Epoch 12/300
5/5 [==============================] - 4s 896ms/step - loss: 13.8233 - root_mean_squared_e
rror: 3.7180 - val_loss: 35.5213 - val_root_mean_squared_error: 5.9600
Epoch 13/300
5/5 [==============================] - 4s 1s/step - loss: 13.7444 - root_mean_squared_erro
r: 3.7073 - val_loss: 35.3439 - val_root_mean_squared_error: 5.9451
Epoch 14/300
5/5 [==============================] - 4s 1s/step - loss: 13.6632 - root_mean_squared_erro
r: 3.6964 - val_loss: 35.1547 - val_root_mean_squared_error: 5.9291
Epoch 15/300
5/5 [==============================] - 4s 908ms/step - loss: 13.5845 - root_mean_squared_e
rror: 3.6857 - val_loss: 34.9605 - val_root_mean_squared_error: 5.9127
Epoch 16/300
5/5 [==============================] - 5s 1s/step - loss: 13.5034 - root_mean_squared_erro
r: 3.6747 - val_loss: 34.7763 - val_root_mean_squared_error: 5.8971
Epoch 17/300
5/5 [==============================] - 5s 1s/step - loss: 13.4267 - root_mean_squared_erro
r: 3.6642 - val_loss: 34.5923 - val_root_mean_squared_error: 5.8815
Epoch 18/300
5/5 [==============================] - 4s 916ms/step - loss: 13.3499 - root_mean_squared_e
rror: 3.6538 - val_loss: 34.4060 - val_root_mean_squared_error: 5.8657
Epoch 19/300
```

```
5/5 [==============================] - 4s 936ms/step - loss: 13.2696 - root_mean_squared_e
rror: 3.6428 - val_loss: 34.2115 - val_root_mean_squared_error: 5.8491
Epoch 20/300
5/5 [==============================] - 5s 1s/step - loss: 13.1881 - root_mean_squared_erro
r: 3.6315 - val_loss: 34.0076 - val_root_mean_squared_error: 5.8316
Epoch 21/300
5/5 [==============================] - 4s 938ms/step - loss: 13.0959 - root_mean_squared_e
rror: 3.6188 - val_loss: 33.7785 - val_root_mean_squared_error: 5.8119
Epoch 22/300
5/5 [==============================] - 4s 933ms/step - loss: 13.0032 - root_mean_squared_e
rror: 3.6060 - val_loss: 33.5384 - val_root_mean_squared_error: 5.7912
Epoch 23/300
5/5 [==============================] - 5s 1s/step - loss: 12.9147 - root_mean_squared_erro
r: 3.5937 - val_loss: 33.3223 - val_root_mean_squared_error: 5.7725
Epoch 24/300
5/5 [==============================] - 4s 944ms/step - loss: 12.8284 - root_mean_squared_e
rror: 3.5817 - val_loss: 33.1013 - val_root_mean_squared_error: 5.7534
Epoch 25/300
5/5 [==============================] - 4s 935ms/step - loss: 12.7381 - root_mean_squared_e
rror: 3.5690 - val_loss: 32.8813 - val_root_mean_squared_error: 5.7342
Epoch 26/300
5/5 [==============================] - 4s 1s/step - loss: 12.6576 - root_mean_squared_erro
r: 3.5577 - val_loss: 32.6612 - val_root_mean_squared_error: 5.7150
Epoch 27/300
5/5 [==============================] - 5s 1s/step - loss: 12.5741 - root_mean_squared_erro
r: 3.5460 - val_loss: 32.4496 - val_root_mean_squared_error: 5.6965
Epoch 28/300
5/5 [==============================] - 4s 913ms/step - loss: 12.4939 - root_mean_squared_e
rror: 3.5347 - val_loss: 32.1941 - val_root_mean_squared_error: 5.6740
Epoch 29/300
5/5 [==============================] - 4s 1s/step - loss: 12.4030 - root_mean_squared_erro
r: 3.5218 - val_loss: 31.9502 - val_root_mean_squared_error: 5.6524
Epoch 30/300
5/5 [==============================] - 4s 1s/step - loss: 12.3062 - root_mean_squared_erro
r: 3.5080 - val_loss: 31.6882 - val_root_mean_squared_error: 5.6292
Epoch 31/300
5/5 [==============================] - 4s 928ms/step - loss: 12.2045 - root_mean_squared_e
rror: 3.4935 - val_loss: 31.4466 - val_root_mean_squared_error: 5.6077
Epoch 32/300
5/5 [==============================] - 4s 1s/step - loss: 12.1186 - root_mean_squared_erro
r: 3.4812 - val_loss: 31.2153 - val_root_mean_squared_error: 5.5871
Epoch 33/300
5/5 [==============================] - 4s 910ms/step - loss: 12.0389 - root_mean_squared_e
rror: 3.4697 - val_loss: 30.9470 - val_root_mean_squared_error: 5.5630
Epoch 34/300
5/5 [==============================] - 5s 1s/step - loss: 11.9470 - root_mean_squared_erro
r: 3.4564 - val_loss: 30.7171 - val_root_mean_squared_error: 5.5423
Epoch 35/300
5/5 [==============================] - 4s 1s/step - loss: 11.8659 - root_mean_squared_erro
r: 3.4447 - val_loss: 30.4967 - val_root_mean_squared_error: 5.5224
Epoch 36/300
5/5 [==============================] - 4s 903ms/step - loss: 11.7843 - root_mean_squared_e
rror: 3.4328 - val_loss: 30.3136 - val_root_mean_squared_error: 5.5058
Epoch 37/300
5/5 [==============================] - 4s 1s/step - loss: 11.7253 - root_mean_squared_erro
r: 3.4242 - val_loss: 30.1320 - val_root_mean_squared_error: 5.4893
Epoch 38/300
5/5 [==============================] - 4s 1s/step - loss: 11.6583 - root_mean_squared_erro
r: 3.4144 - val_loss: 29.9513 - val_root_mean_squared_error: 5.4728
Epoch 39/300
5/5 [==============================] - 4s 909ms/step - loss: 11.6030 - root_mean_squared_e
rror: 3.4063 - val_loss: 29.7480 - val_root_mean_squared_error: 5.4542
Epoch 40/300
5/5 [==============================] - 4s 900ms/step - loss: 11.5158 - root_mean_squared_e
rror: 3.3935 - val_loss: 29.5360 - val_root_mean_squared_error: 5.4347
Epoch 41/300
5/5 [==============================] - 5s 1s/step - loss: 11.4420 - root_mean_squared_erro
r: 3.3826 - val_loss: 29.3386 - val_root_mean_squared_error: 5.4165
Epoch 42/300
5/5 [==============================] - 4s 911ms/step - loss: 11.3700 - root_mean_squared_e
rror: 3.3719 - val_loss: 29.1461 - val_root_mean_squared_error: 5.3987
```

```
rror: 3.3719 - val_loss: 29.1401 - val_root_mean_squared_error: 5.3987
Epoch 43/300
5/5 [==============================] - 4s 906ms/step - loss: 11.3058 - root_mean_squared_e
rror: 3.3624 - val_loss: 28.9622 - val_root_mean_squared_error: 5.3816
Epoch 44/300
5/5 [==============================] - 5s 1s/step - loss: 11.2358 - root_mean_squared_erro
r: 3.3520 - val_loss: 28.7668 - val_root_mean_squared_error: 5.3635
Epoch 45/300
5/5 [==============================] - 4s 940ms/step - loss: 11.1697 - root_mean_squared_e
rror: 3.3421 - val_loss: 28.5622 - val_root_mean_squared_error: 5.3444
Epoch 46/300
5/5 [==============================] - 4s 913ms/step - loss: 11.0921 - root_mean_squared_e
rror: 3.3305 - val_loss: 28.3121 - val_root_mean_squared_error: 5.3209
Epoch 47/300
5/5 [==============================] - 5s 1s/step - loss: 11.0085 - root_mean_squared_erro
r: 3.3179 - val_loss: 28.0340 - val_root_mean_squared_error: 5.2947
Epoch 48/300
5/5 [==============================] - 4s 942ms/step - loss: 10.9279 - root_mean_squared_e
rror: 3.3057 - val_loss: 27.8065 - val_root_mean_squared_error: 5.2732
Epoch 49/300
5/5 [==============================] - 4s 929ms/step - loss: 10.8556 - root_mean_squared_e
rror: 3.2948 - val_loss: 27.5812 - val_root_mean_squared_error: 5.2518
Epoch 50/300
5/5 [==============================] - 4s 1s/step - loss: 10.7845 - root_mean_squared_erro
r: 3.2840 - val_loss: 27.3646 - val_root_mean_squared_error: 5.2311
Epoch 51/300
5/5 [==============================] - 5s 1s/step - loss: 10.7146 - root_mean_squared_erro
r: 3.2733 - val_loss: 27.1698 - val_root_mean_squared_error: 5.2125
Epoch 52/300
5/5 [==============================] - 4s 954ms/step - loss: 10.6536 - root_mean_squared_e
rror: 3.2640 - val_loss: 26.9803 - val_root_mean_squared_error: 5.1943
Epoch 53/300
5/5 [==============================] - 4s 1s/step - loss: 10.5967 - root_mean_squared_erro
r: 3.2553 - val_loss: 26.8296 - val_root_mean_squared_error: 5.1797
Epoch 54/300
5/5 [==============================] - 4s 1s/step - loss: 10.5520 - root_mean_squared_erro
r: 3.2484 - val_loss: 26.6919 - val_root_mean_squared_error: 5.1664
Epoch 55/300
5/5 [==============================] - 4s 997ms/step - loss: 10.5088 - root_mean_squared_e
rror: 3.2417 - val_loss: 26.5417 - val_root_mean_squared_error: 5.1519
Epoch 56/300
5/5 [==============================] - 4s 1s/step - loss: 10.4548 - root_mean_squared_erro
r: 3.2334 - val_loss: 26.3210 - val_root_mean_squared_error: 5.1304
Epoch 57/300
5/5 [==============================] - 4s 927ms/step - loss: 10.4005 - root_mean_squared_e
rror: 3.2250 - val_loss: 26.1289 - val_root_mean_squared_error: 5.1116
Epoch 58/300
5/5 [==============================] - 5s 1s/step - loss: 10.3534 - root_mean_squared_erro
r: 3.2177 - val_loss: 25.9301 - val_root_mean_squared_error: 5.0922
Epoch 59/300
5/5 [==============================] - 4s 1s/step - loss: 10.2967 - root_mean_squared_erro
r: 3.2088 - val_loss: 25.7115 - val_root_mean_squared_error: 5.0707
Epoch 60/300
5/5 [==============================] - 4s 931ms/step - loss: 10.2425 - root_mean_squared_e
rror: 3.2004 - val_loss: 25.5426 - val_root_mean_squared_error: 5.0540
Epoch 61/300
5/5 [==============================] - 5s 1s/step - loss: 10.1972 - root_mean_squared_erro
r: 3.1933 - val_loss: 25.4136 - val_root_mean_squared_error: 5.0412
Epoch 62/300
5/5 [==============================] - 4s 960ms/step - loss: 10.1605 - root_mean_squared_e
rror: 3.1876 - val_loss: 25.2941 - val_root_mean_squared_error: 5.0293
Epoch 63/300
5/5 [==============================] - 4s 910ms/step - loss: 10.1268 - root_mean_squared_e
rror: 3.1823 - val_loss: 25.1734 - val_root_mean_squared_error: 5.0173
Epoch 64/300
5/5 [==============================] - 4s 1s/step - loss: 10.0859 - root_mean_squared_erro
r: 3.1758 - val_loss: 25.0164 - val_root_mean_squared_error: 5.0016
Epoch 65/300
5/5 [==============================] - 5s 1s/step - loss: 10.0410 - root_mean_squared_erro
r: 3.1688 - val_loss: 24.8661 - val_root_mean_squared_error: 4.9866
Epoch 66/300
```

```
Epoch 66/300
5/5 [==============================] - 4s 910ms/step - loss: 10.0042 - root_mean_squared_e
rror: 3.1629 - val_loss: 24.7139 - val_root_mean_squared_error: 4.9713
Epoch 67/300
5/5 [==============================] - 4s 1s/step - loss: 9.9613 - root_mean_squared_erro
r: 3.1561 - val_loss: 24.4850 - val_root_mean_squared_error: 4.9482
Epoch 68/300
5/5 [==============================] - 5s 1s/step - loss: 9.9058 - root_mean_squared_erro
r: 3.1474 - val_loss: 24.3124 - val_root_mean_squared_error: 4.9308
Epoch 69/300
5/5 [==============================] - 4s 937ms/step - loss: 9.8658 - root_mean_squared_er
ror: 3.1410 - val_loss: 24.1231 - val_root_mean_squared_error: 4.9115
Epoch 70/300
5/5 [==============================] - 5s 1s/step - loss: 9.8176 - root_mean_squared_erro
r: 3.1333 - val_loss: 23.9257 - val_root_mean_squared_error: 4.8914
Epoch 71/300
5/5 [==============================] - 4s 1s/step - loss: 9.7740 - root_mean_squared_erro
r: 3.1263 - val_loss: 23.7600 - val_root_mean_squared_error: 4.8744
Epoch 72/300
5/5 [==============================] - 5s 1s/step - loss: 9.7360 - root_mean_squared_erro
r: 3.1203 - val_loss: 23.6323 - val_root_mean_squared_error: 4.8613
Epoch 73/300
5/5 [==============================] - 4s 1s/step - loss: 9.7014 - root_mean_squared_erro
r: 3.1147 - val_loss: 23.4549 - val_root_mean_squared_error: 4.8430
Epoch 74/300
5/5 [==============================] - 4s 909ms/step - loss: 9.6627 - root_mean_squared_er
ror: 3.1085 - val_loss: 23.2574 - val_root_mean_squared_error: 4.8226
Epoch 75/300
5/5 [==============================] - 5s 1s/step - loss: 9.6133 - root_mean_squared_erro
r: 3.1005 - val_loss: 23.0466 - val_root_mean_squared_error: 4.8007
Epoch 76/300
5/5 [==============================] - 4s 1s/step - loss: 9.5744 - root_mean_squared_erro
r: 3.0943 - val_loss: 22.8347 - val_root_mean_squared_error: 4.7786
Epoch 77/300
5/5 [==============================] - 4s 904ms/step - loss: 9.5334 - root_mean_squared_er
ror: 3.0876 - val_loss: 22.6342 - val_root_mean_squared_error: 4.7575
Epoch 78/300
5/5 [==============================] - 4s 922ms/step - loss: 9.4911 - root_mean_squared_er
ror: 3.0808 - val_loss: 22.4486 - val_root_mean_squared_error: 4.7380
Epoch 79/300
5/5 [==============================] - 5s 1s/step - loss: 9.4553 - root_mean_squared_erro
r: 3.0750 - val_loss: 22.2225 - val_root_mean_squared_error: 4.7141
Epoch 80/300
5/5 [==============================] - 4s 916ms/step - loss: 9.4118 - root_mean_squared_er
ror: 3.0679 - val_loss: 21.9810 - val_root_mean_squared_error: 4.6884
Epoch 81/300
5/5 [==============================] - 4s 914ms/step - loss: 9.3789 - root_mean_squared_er
ror: 3.0625 - val_loss: 21.8494 - val_root_mean_squared_error: 4.6743
Epoch 82/300
5/5 [==============================] - 5s 1s/step - loss: 9.3555 - root_mean_squared_erro
r: 3.0587 - val_loss: 21.7561 - val_root_mean_squared_error: 4.6643
Epoch 83/300
5/5 [==============================] - 4s 918ms/step - loss: 9.3289 - root_mean_squared_er
ror: 3.0543 - val_loss: 21.5995 - val_root_mean_squared_error: 4.6475
Epoch 84/300
5/5 [==============================] - 4s 916ms/step - loss: 9.3054 - root_mean_squared_er
ror: 3.0505 - val_loss: 21.5152 - val_root_mean_squared_error: 4.6385
Epoch 85/300
5/5 [==============================] - 4s 1s/step - loss: 9.2870 - root_mean_squared_erro
r: 3.0475 - val_loss: 21.4188 - val_root_mean_squared_error: 4.6280
Epoch 86/300
5/5 [==============================] - 5s 1s/step - loss: 9.2630 - root_mean_squared_erro
r: 3.0435 - val_loss: 21.3049 - val_root_mean_squared_error: 4.6157
Epoch 87/300
5/5 [==============================] - 4s 910ms/step - loss: 9.2423 - root_mean_squared_er
ror: 3.0401 - val_loss: 21.2602 - val_root_mean_squared_error: 4.6109
Epoch 88/300
5/5 [==============================] - 4s 1s/step - loss: 9.2269 - root_mean_squared_erro
r: 3.0376 - val_loss: 21.2543 - val_root_mean_squared_error: 4.6102
Epoch 89/300
5/5 [==============================] - 0s 26ms/step - loss: 9.2146 - root_mean_squared_err
```

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or: 3.0356 - val_loss: 21.2778 - val_root_mean_squared_error: 4.6128
Epoch 90/300
5/5 [==============================] - 0s 27ms/step - loss: 9.2057 - root_mean_squared_err
or: 3.0341 - val_loss: 21.3061 - val_root_mean_squared_error: 4.6159
Epoch 91/300
5/5 [==============================] - 0s 23ms/step - loss: 9.1945 - root_mean_squared_err
or: 3.0322 - val_loss: 21.2825 - val_root_mean_squared_error: 4.6133
Epoch 92/300
5/5 [==============================] - 4s 1s/step - loss: 9.1763 - root_mean_squared_erro
r: 3.0292 - val_loss: 21.2078 - val_root_mean_squared_error: 4.6052
Epoch 93/300
5/5 [==============================] - 4s 916ms/step - loss: 9.1521 - root_mean_squared_er
ror: 3.0252 - val_loss: 21.0598 - val_root_mean_squared_error: 4.5891
Epoch 94/300
5/5 [==============================] - 4s 1s/step - loss: 9.1237 - root_mean_squared_erro
r: 3.0206 - val_loss: 20.9207 - val_root_mean_squared_error: 4.5739
Epoch 95/300
5/5 [==============================] - 4s 902ms/step - loss: 9.0966 - root_mean_squared_er
ror: 3.0161 - val_loss: 20.8158 - val_root_mean_squared_error: 4.5624
Epoch 96/300
5/5 [==============================] - 5s 1s/step - loss: 9.0775 - root_mean_squared_erro
r: 3.0129 - val_loss: 20.7718 - val_root_mean_squared_error: 4.5576
Epoch 97/300
5/5 [==============================] - 4s 1s/step - loss: 9.0631 - root_mean_squared_erro
r: 3.0105 - val_loss: 20.7458 - val_root_mean_squared_error: 4.5548
Epoch 98/300
5/5 [==============================] - 4s 920ms/step - loss: 9.0480 - root_mean_squared_er
ror: 3.0080 - val_loss: 20.6372 - val_root_mean_squared_error: 4.5428
Epoch 99/300
5/5 [==============================] - 5s 1s/step - loss: 9.0291 - root_mean_squared_erro
r: 3.0049 - val_loss: 20.4796 - val_root_mean_squared_error: 4.5254
Epoch 100/300
5/5 [==============================] - 4s 1s/step - loss: 9.0033 - root_mean_squared_erro
r: 3.0005 - val_loss: 20.3839 - val_root_mean_squared_error: 4.5148
Epoch 101/300
5/5 [==============================] - 4s 921ms/step - loss: 8.9845 - root_mean_squared_er
ror: 2.9974 - val_loss: 20.2313 - val_root_mean_squared_error: 4.4979
Epoch 102/300
5/5 [==============================] - 4s 892ms/step - loss: 8.9618 - root_mean_squared_er
ror: 2.9936 - val_loss: 20.1217 - val_root_mean_squared_error: 4.4857
Epoch 103/300
5/5 [==============================] - 5s 1s/step - loss: 8.9379 - root_mean_squared_erro
r: 2.9896 - val_loss: 19.9592 - val_root_mean_squared_error: 4.4676
Epoch 104/300
5/5 [==============================] - 4s 911ms/step - loss: 8.9169 - root_mean_squared_er
ror: 2.9861 - val_loss: 19.7929 - val_root_mean_squared_error: 4.4489
Epoch 105/300
5/5 [==============================] - 4s 916ms/step - loss: 8.8893 - root_mean_squared_er
ror: 2.9815 - val_loss: 19.5787 - val_root_mean_squared_error: 4.4248
Epoch 106/300
5/5 [==============================] - 5s 1s/step - loss: 8.8603 - root_mean_squared_erro
r: 2.9766 - val_loss: 19.3598 - val_root_mean_squared_error: 4.4000
Epoch 107/300
5/5 [==============================] - 4s 907ms/step - loss: 8.8398 - root_mean_squared_er
ror: 2.9732 - val_loss: 19.2003 - val_root_mean_squared_error: 4.3818
Epoch 108/300
5/5 [==============================] - 4s 920ms/step - loss: 8.8208 - root_mean_squared_er
ror: 2.9700 - val_loss: 19.1320 - val_root_mean_squared_error: 4.3740
Epoch 109/300
5/5 [==============================] - 4s 1s/step - loss: 8.8032 - root_mean_squared_erro
r: 2.9670 - val_loss: 19.1046 - val_root_mean_squared_error: 4.3709
Epoch 110/300
5/5 [==============================] - 4s 1s/step - loss: 8.7886 - root_mean_squared_erro
r: 2.9646 - val_loss: 19.0835 - val_root_mean_squared_error: 4.3685
Epoch 111/300
5/5 [==============================] - 4s 958ms/step - loss: 8.7741 - root_mean_squared_er
ror: 2.9621 - val_loss: 19.0753 - val_root_mean_squared_error: 4.3675
Epoch 112/300
5/5 [==============================] - 4s 1s/step - loss: 8.7615 - root_mean_squared_erro
r: 2.9600 - val_loss: 19.0327 - val_root_mean_squared_error: 4.3627
```

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Epoch 113/300
5/5 [==============================] - 4s 1s/step - loss: 8.7486 - root_mean_squared_erro
r: 2.9578 - val_loss: 18.9823 - val_root_mean_squared_error: 4.3569
Epoch 114/300
5/5 [==============================] - 4s 982ms/step - loss: 8.7359 - root_mean_squared_er
ror: 2.9557 - val_loss: 18.9469 - val_root_mean_squared_error: 4.3528
Epoch 115/300
5/5 [==============================] - 4s 1s/step - loss: 8.7216 - root_mean_squared_erro
r: 2.9532 - val_loss: 18.7949 - val_root_mean_squared_error: 4.3353
Epoch 116/300
5/5 [==============================] - 4s 1s/step - loss: 8.7082 - root_mean_squared_erro
r: 2.9510 - val_loss: 18.6154 - val_root_mean_squared_error: 4.3146
Epoch 117/300
5/5 [==============================] - 4s 1s/step - loss: 8.6901 - root_mean_squared_erro
r: 2.9479 - val_loss: 18.4868 - val_root_mean_squared_error: 4.2996
Epoch 118/300
5/5 [==============================] - 4s 998ms/step - loss: 8.6763 - root_mean_squared_er
ror: 2.9456 - val_loss: 18.3140 - val_root_mean_squared_error: 4.2795
Epoch 119/300
5/5 [==============================] - 4s 891ms/step - loss: 8.6606 - root_mean_squared_er
ror: 2.9429 - val_loss: 18.2184 - val_root_mean_squared_error: 4.2683
Epoch 120/300
5/5 [==============================] - 5s 1s/step - loss: 8.6422 - root_mean_squared_erro
r: 2.9398 - val_loss: 18.1788 - val_root_mean_squared_error: 4.2637
Epoch 121/300
5/5 [==============================] - 0s 39ms/step - loss: 8.6295 - root_mean_squared_err
or: 2.9376 - val_loss: 18.2174 - val_root_mean_squared_error: 4.2682
Epoch 122/300
5/5 [==============================] - 0s 40ms/step - loss: 8.6156 - root_mean_squared_err
or: 2.9352 - val_loss: 18.2833 - val_root_mean_squared_error: 4.2759
Epoch 123/300
5/5 [==============================] - 0s 38ms/step - loss: 8.6044 - root_mean_squared_err
or: 2.9333 - val_loss: 18.3378 - val_root_mean_squared_error: 4.2823
Epoch 124/300
5/5 [==============================] - 0s 41ms/step - loss: 8.5924 - root_mean_squared_err
or: 2.9313 - val_loss: 18.3794 - val_root_mean_squared_error: 4.2871
Epoch 125/300
5/5 [==============================] - 0s 41ms/step - loss: 8.5831 - root_mean_squared_err
or: 2.9297 - val_loss: 18.3969 - val_root_mean_squared_error: 4.2892
```

```
Default and Long, samples = 34
Epoch 1/300
3/3 [==============================] - 7s 2s/step - loss: 14.1590 - root_mean_squared_erro
r: 3.7628 - val_loss: 35.3036 - val_root_mean_squared_error: 5.9417
Epoch 2/300
3/3 [==============================] - 4s 2s/step - loss: 14.1063 - root_mean_squared_erro
r: 3.7558 - val_loss: 35.1857 - val_root_mean_squared_error: 5.9318
Epoch 3/300
3/3 [==============================] - 5s 2s/step - loss: 14.0639 - root_mean_squared_erro
r: 3.7502 - val_loss: 35.0659 - val_root_mean_squared_error: 5.9216
Epoch 4/300
3/3 [==============================] - 4s 2s/step - loss: 14.0240 - root_mean_squared_erro
r: 3.7449 - val_loss: 34.9450 - val_root_mean_squared_error: 5.9114
Epoch 5/300
3/3 [==============================] - 4s 2s/step - loss: 13.9872 - root_mean_squared_erro
r: 3.7399 - val_loss: 34.8220 - val_root_mean_squared_error: 5.9010
Epoch 6/300
3/3 [==============================] - 5s 2s/step - loss: 13.9377 - root_mean_squared_erro
r: 3.7333 - val_loss: 34.6980 - val_root_mean_squared_error: 5.8905
Epoch 7/300
3/3 [==============================] - 4s 2s/step - loss: 13.8957 - root_mean_squared_erro
r: 3.7277 - val_loss: 34.5726 - val_root_mean_squared_error: 5.8798
Epoch 8/300
3/3 [==============================] - 4s 2s/step - loss: 13.8535 - root_mean_squared_erro
r: 3.7220 - val_loss: 34.4450 - val_root_mean_squared_error: 5.8690
Epoch 9/300
3/3 [==============================] - 4s 2s/step - loss: 13.8126 - root_mean_squared_erro
```

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r: 3.7165 - val_loss: 34.3123 - val_root_mean_squared_error: 5.8577
Epoch 10/300
3/3 [==============================] - 5s 2s/step - loss: 13.7704 - root_mean_squared_erro
r: 3.7109 - val_loss: 34.1816 - val_root_mean_squared_error: 5.8465
Epoch 11/300
3/3 [==============================] - 4s 2s/step - loss: 13.7308 - root_mean_squared_erro
r: 3.7055 - val_loss: 34.0459 - val_root_mean_squared_error: 5.8349
Epoch 12/300
3/3 [==============================] - 4s 2s/step - loss: 13.6824 - root_mean_squared_erro
r: 3.6990 - val_loss: 33.9134 - val_root_mean_squared_error: 5.8235
Epoch 13/300
3/3 [==============================] - 4s 2s/step - loss: 13.6498 - root_mean_squared_erro
r: 3.6946 - val_loss: 33.7795 - val_root_mean_squared_error: 5.8120
Epoch 14/300
3/3 [==============================] - 4s 2s/step - loss: 13.5996 - root_mean_squared_erro
r: 3.6878 - val_loss: 33.6448 - val_root_mean_squared_error: 5.8004
Epoch 15/300
3/3 [==============================] - 4s 2s/step - loss: 13.5601 - root_mean_squared_erro
r: 3.6824 - val_loss: 33.5059 - val_root_mean_squared_error: 5.7884
Epoch 16/300
3/3 [==============================] - 4s 2s/step - loss: 13.5160 - root_mean_squared_erro
r: 3.6764 - val_loss: 33.3683 - val_root_mean_squared_error: 5.7765
Epoch 17/300
3/3 [==============================] - 5s 3s/step - loss: 13.4713 - root_mean_squared_erro
r: 3.6703 - val_loss: 33.2299 - val_root_mean_squared_error: 5.7645
Epoch 18/300
3/3 [==============================] - 4s 2s/step - loss: 13.4308 - root_mean_squared_erro
r: 3.6648 - val_loss: 33.0873 - val_root_mean_squared_error: 5.7522
Epoch 19/300
3/3 [==============================] - 4s 2s/step - loss: 13.3888 - root_mean_squared_erro
r: 3.6591 - val_loss: 32.9417 - val_root_mean_squared_error: 5.7395
Epoch 20/300
3/3 [==============================] - 4s 2s/step - loss: 13.3440 - root_mean_squared_erro
r: 3.6529 - val_loss: 32.7954 - val_root_mean_squared_error: 5.7267
Epoch 21/300
3/3 [==============================] - 5s 2s/step - loss: 13.2963 - root_mean_squared_erro
r: 3.6464 - val_loss: 32.6497 - val_root_mean_squared_error: 5.7140
Epoch 22/300
3/3 [==============================] - 4s 2s/step - loss: 13.2525 - root_mean_squared_erro
r: 3.6404 - val_loss: 32.5017 - val_root_mean_squared_error: 5.7010
Epoch 23/300
3/3 [==============================] - 5s 2s/step - loss: 13.2070 - root_mean_squared_erro
r: 3.6341 - val_loss: 32.3510 - val_root_mean_squared_error: 5.6878
Epoch 24/300
3/3 [==============================] - 5s 2s/step - loss: 13.1622 - root_mean_squared_erro
r: 3.6280 - val_loss: 32.1958 - val_root_mean_squared_error: 5.6741
Epoch 25/300
3/3 [==============================] - 4s 2s/step - loss: 13.1171 - root_mean_squared_erro
r: 3.6218 - val_loss: 32.0379 - val_root_mean_squared_error: 5.6602
Epoch 26/300
3/3 [==============================] - 5s 2s/step - loss: 13.0727 - root_mean_squared_erro
r: 3.6156 - val_loss: 31.8765 - val_root_mean_squared_error: 5.6459
Epoch 27/300
3/3 [==============================] - 4s 2s/step - loss: 13.0235 - root_mean_squared_erro
r: 3.6088 - val_loss: 31.7158 - val_root_mean_squared_error: 5.6317
Epoch 28/300
3/3 [==============================] - 5s 2s/step - loss: 12.9740 - root_mean_squared_erro
r: 3.6019 - val_loss: 31.5557 - val_root_mean_squared_error: 5.6174
Epoch 29/300
3/3 [==============================] - 5s 2s/step - loss: 12.9280 - root_mean_squared_erro
r: 3.5955 - val_loss: 31.3917 - val_root_mean_squared_error: 5.6028
Epoch 30/300
3/3 [==============================] - 4s 2s/step - loss: 12.8837 - root_mean_squared_erro
r: 3.5894 - val_loss: 31.2221 - val_root_mean_squared_error: 5.5877
Epoch 31/300
3/3 [==============================] - 5s 2s/step - loss: 12.8341 - root_mean_squared_erro
r: 3.5825 - val_loss: 31.0519 - val_root_mean_squared_error: 5.5724
Epoch 32/300
3/3 [==============================] - 4s 2s/step - loss: 12.7863 - root_mean_squared_erro
r: 3.5758 - val_loss: 30.8794 - val_root_mean_squared_error: 5.5569
```

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Epoch 33/300
3/3 [==============================] - 4s 2s/step - loss: 12.7409 - root_mean_squared_erro
r: 3.5694 - val_loss: 30.7039 - val_root_mean_squared_error: 5.5411
Epoch 34/300
3/3 [==============================] - 4s 2s/step - loss: 12.6931 - root_mean_squared_erro
r: 3.5627 - val_loss: 30.5293 - val_root_mean_squared_error: 5.5253
Epoch 35/300
3/3 [==============================] - 5s 3s/step - loss: 12.6411 - root_mean_squared_erro
r: 3.5554 - val_loss: 30.3583 - val_root_mean_squared_error: 5.5098
Epoch 36/300
3/3 [==============================] - 4s 2s/step - loss: 12.5921 - root_mean_squared_erro
r: 3.5485 - val_loss: 30.1875 - val_root_mean_squared_error: 5.4943
Epoch 37/300
3/3 [==============================] - 4s 2s/step - loss: 12.5462 - root_mean_squared_erro
r: 3.5421 - val_loss: 30.0151 - val_root_mean_squared_error: 5.4786
Epoch 38/300
3/3 [==============================] - 5s 3s/step - loss: 12.4956 - root_mean_squared_erro
r: 3.5349 - val_loss: 29.8443 - val_root_mean_squared_error: 5.4630
Epoch 39/300
3/3 [==============================] - 4s 2s/step - loss: 12.4557 - root_mean_squared_erro
r: 3.5293 - val_loss: 29.6664 - val_root_mean_squared_error: 5.4467
Epoch 40/300
3/3 [==============================] - 4s 2s/step - loss: 12.4043 - root_mean_squared_erro
r: 3.5220 - val_loss: 29.4898 - val_root_mean_squared_error: 5.4305
Epoch 41/300
3/3 [==============================] - 4s 2s/step - loss: 12.3545 - root_mean_squared_erro
r: 3.5149 - val_loss: 29.3142 - val_root_mean_squared_error: 5.4143
Epoch 42/300
3/3 [==============================] - 5s 2s/step - loss: 12.3050 - root_mean_squared_erro
r: 3.5078 - val_loss: 29.1389 - val_root_mean_squared_error: 5.3980
Epoch 43/300
3/3 [==============================] - 4s 2s/step - loss: 12.2620 - root_mean_squared_erro
r: 3.5017 - val_loss: 28.9670 - val_root_mean_squared_error: 5.3821
Epoch 44/300
3/3 [==============================] - 4s 2s/step - loss: 12.2142 - root_mean_squared_erro
r: 3.4949 - val_loss: 28.7877 - val_root_mean_squared_error: 5.3654
Epoch 45/300
3/3 [==============================] - 4s 2s/step - loss: 12.1624 - root_mean_squared_erro
r: 3.4875 - val_loss: 28.6243 - val_root_mean_squared_error: 5.3502
Epoch 46/300
3/3 [==============================] - 5s 3s/step - loss: 12.1100 - root_mean_squared_erro
r: 3.4799 - val_loss: 28.4518 - val_root_mean_squared_error: 5.3340
Epoch 47/300
3/3 [==============================] - 4s 2s/step - loss: 12.0612 - root_mean_squared_erro
r: 3.4729 - val_loss: 28.2816 - val_root_mean_squared_error: 5.3180
Epoch 48/300
3/3 [==============================] - 4s 2s/step - loss: 12.0174 - root_mean_squared_erro
r: 3.4666 - val_loss: 28.1052 - val_root_mean_squared_error: 5.3014
Epoch 49/300
3/3 [==============================] - 5s 2s/step - loss: 11.9746 - root_mean_squared_erro
r: 3.4604 - val_loss: 27.9238 - val_root_mean_squared_error: 5.2843
Epoch 50/300
3/3 [==============================] - 4s 2s/step - loss: 11.9275 - root_mean_squared_erro
r: 3.4536 - val_loss: 27.7456 - val_root_mean_squared_error: 5.2674
Epoch 51/300
3/3 [==============================] - 4s 2s/step - loss: 11.8867 - root_mean_squared_erro
r: 3.4477 - val_loss: 27.5612 - val_root_mean_squared_error: 5.2499
Epoch 52/300
3/3 [==============================] - 4s 2s/step - loss: 11.8383 - root_mean_squared_erro
r: 3.4407 - val_loss: 27.3838 - val_root_mean_squared_error: 5.2330
Epoch 53/300
3/3 [==============================] - 5s 2s/step - loss: 11.7902 - root_mean_squared_erro
r: 3.4337 - val_loss: 27.2161 - val_root_mean_squared_error: 5.2169
Epoch 54/300
3/3 [==============================] - 4s 2s/step - loss: 11.7512 - root_mean_squared_erro
r: 3.4280 - val_loss: 27.0401 - val_root_mean_squared_error: 5.2000
Epoch 55/300
3/3 [==============================] - 4s 2s/step - loss: 11.7013 - root_mean_squared_erro
r: 3.4207 - val_loss: 26.8785 - val_root_mean_squared_error: 5.1844
Epoch 56/300
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3/3 [==============================] - 4s 2s/step - loss: 11.6615 - root_mean_squared_erro
r: 3.4149 - val_loss: 26.7130 - val_root_mean_squared_error: 5.1685
Epoch 57/300
3/3 [==============================] - 5s 2s/step - loss: 11.6204 - root_mean_squared_erro
r: 3.4089 - val_loss: 26.5451 - val_root_mean_squared_error: 5.1522
Epoch 58/300
3/3 [==============================] - 4s 2s/step - loss: 11.5797 - root_mean_squared_erro
r: 3.4029 - val_loss: 26.3742 - val_root_mean_squared_error: 5.1356
Epoch 59/300
3/3 [==============================] - 4s 2s/step - loss: 11.5380 - root_mean_squared_erro
r: 3.3968 - val_loss: 26.2092 - val_root_mean_squared_error: 5.1195
Epoch 60/300
3/3 [==============================] - 4s 2s/step - loss: 11.4977 - root_mean_squared_erro
r: 3.3908 - val_loss: 26.0445 - val_root_mean_squared_error: 5.1034
Epoch 61/300
3/3 [==============================] - 4s 2s/step - loss: 11.4620 - root_mean_squared_erro
r: 3.3856 - val_loss: 25.8701 - val_root_mean_squared_error: 5.0863
Epoch 62/300
3/3 [==============================] - 4s 2s/step - loss: 11.4193 - root_mean_squared_erro
r: 3.3792 - val_loss: 25.7069 - val_root_mean_squared_error: 5.0702
Epoch 63/300
3/3 [==============================] - 4s 2s/step - loss: 11.3799 - root_mean_squared_erro
r: 3.3734 - val_loss: 25.5460 - val_root_mean_squared_error: 5.0543
Epoch 64/300
3/3 [==============================] - 5s 2s/step - loss: 11.3441 - root_mean_squared_erro
r: 3.3681 - val_loss: 25.3819 - val_root_mean_squared_error: 5.0380
Epoch 65/300
3/3 [==============================] - 4s 2s/step - loss: 11.3011 - root_mean_squared_erro
r: 3.3617 - val_loss: 25.2318 - val_root_mean_squared_error: 5.0231
Epoch 66/300
3/3 [==============================] - 4s 2s/step - loss: 11.2630 - root_mean_squared_erro
r: 3.3560 - val_loss: 25.0870 - val_root_mean_squared_error: 5.0087
Epoch 67/300
3/3 [==============================] - 5s 2s/step - loss: 11.2295 - root_mean_squared_erro
r: 3.3510 - val_loss: 24.9336 - val_root_mean_squared_error: 4.9934
Epoch 68/300
3/3 [==============================] - 4s 2s/step - loss: 11.1932 - root_mean_squared_erro
r: 3.3456 - val_loss: 24.7823 - val_root_mean_squared_error: 4.9782
Epoch 69/300
3/3 [==============================] - 4s 2s/step - loss: 11.1540 - root_mean_squared_erro
r: 3.3398 - val_loss: 24.6429 - val_root_mean_squared_error: 4.9642
Epoch 70/300
3/3 [==============================] - 4s 2s/step - loss: 11.1213 - root_mean_squared_erro
r: 3.3349 - val_loss: 24.4949 - val_root_mean_squared_error: 4.9492
Epoch 71/300
3/3 [==============================] - 5s 3s/step - loss: 11.0871 - root_mean_squared_erro
r: 3.3297 - val_loss: 24.3451 - val_root_mean_squared_error: 4.9341
Epoch 72/300
3/3 [==============================] - 4s 2s/step - loss: 11.0506 - root_mean_squared_erro
r: 3.3242 - val_loss: 24.2032 - val_root_mean_squared_error: 4.9197
Epoch 73/300
3/3 [==============================] - 4s 2s/step - loss: 11.0144 - root_mean_squared_erro
r: 3.3188 - val_loss: 24.0720 - val_root_mean_squared_error: 4.9063
Epoch 74/300
3/3 [==============================] - 4s 2s/step - loss: 10.9830 - root_mean_squared_erro
r: 3.3141 - val_loss: 23.9306 - val_root_mean_squared_error: 4.8919
Epoch 75/300
3/3 [==============================] - 4s 2s/step - loss: 10.9488 - root_mean_squared_erro
r: 3.3089 - val_loss: 23.7950 - val_root_mean_squared_error: 4.8780
Epoch 76/300
3/3 [==============================] - 4s 2s/step - loss: 10.9137 - root_mean_squared_erro
r: 3.3036 - val_loss: 23.6703 - val_root_mean_squared_error: 4.8652
Epoch 77/300
3/3 [==============================] - 4s 2s/step - loss: 10.8847 - root_mean_squared_erro
r: 3.2992 - val_loss: 23.5320 - val_root_mean_squared_error: 4.8510
Epoch 78/300
3/3 [==============================] - 4s 2s/step - loss: 10.8526 - root_mean_squared_erro
r: 3.2943 - val_loss: 23.3964 - val_root_mean_squared_error: 4.8370
Epoch 79/300
3/3 [==============================] - 4s 2s/step - loss: 10.8202 - root_mean_squared_erro
r: 3.2894 - val_loss: 23.2651 - val_root_mean_squared_error: 4.8234
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r: 3.2894 - val_loss: 23.2651 - val_root_mean_squared_error: 4.8254
Epoch 80/300
3/3 [==============================] - 4s 2s/step - loss: 10.7868 - root_mean_squared_erro
r: 3.2843 - val_loss: 23.1445 - val_root_mean_squared_error: 4.8109
Epoch 81/300
3/3 [==============================] - 4s 2s/step - loss: 10.7612 - root_mean_squared_erro
r: 3.2804 - val_loss: 23.0088 - val_root_mean_squared_error: 4.7968
Epoch 82/300
3/3 [==============================] - 5s 2s/step - loss: 10.7262 - root_mean_squared_erro
r: 3.2751 - val_loss: 22.8903 - val_root_mean_squared_error: 4.7844
Epoch 83/300
3/3 [==============================] - 4s 2s/step - loss: 10.6991 - root_mean_squared_erro
r: 3.2709 - val_loss: 22.7628 - val_root_mean_squared_error: 4.7710
Epoch 84/300
3/3 [==============================] - 4s 2s/step - loss: 10.6656 - root_mean_squared_erro
r: 3.2658 - val_loss: 22.6507 - val_root_mean_squared_error: 4.7593
Epoch 85/300
3/3 [==============================] - 4s 2s/step - loss: 10.6382 - root_mean_squared_erro
r: 3.2616 - val_loss: 22.5317 - val_root_mean_squared_error: 4.7468
Epoch 86/300
3/3 [==============================] - 5s 3s/step - loss: 10.6084 - root_mean_squared_erro
r: 3.2571 - val_loss: 22.4164 - val_root_mean_squared_error: 4.7346
Epoch 87/300
3/3 [==============================] - 4s 2s/step - loss: 10.5771 - root_mean_squared_erro
r: 3.2522 - val_loss: 22.3100 - val_root_mean_squared_error: 4.7233
Epoch 88/300
3/3 [==============================] - 4s 2s/step - loss: 10.5505 - root_mean_squared_erro
r: 3.2482 - val_loss: 22.1971 - val_root_mean_squared_error: 4.7114
Epoch 89/300
3/3 [==============================] - 5s 3s/step - loss: 10.5204 - root_mean_squared_erro
r: 3.2435 - val_loss: 22.0878 - val_root_mean_squared_error: 4.6998
Epoch 90/300
3/3 [==============================] - 4s 2s/step - loss: 10.4925 - root_mean_squared_erro
r: 3.2392 - val_loss: 21.9774 - val_root_mean_squared_error: 4.6880
Epoch 91/300
3/3 [==============================] - 4s 2s/step - loss: 10.4644 - root_mean_squared_erro
r: 3.2349 - val_loss: 21.8677 - val_root_mean_squared_error: 4.6763
Epoch 92/300
3/3 [==============================] - 4s 2s/step - loss: 10.4365 - root_mean_squared_erro
r: 3.2306 - val_loss: 21.7582 - val_root_mean_squared_error: 4.6646
Epoch 93/300
3/3 [==============================] - 5s 2s/step - loss: 10.4083 - root_mean_squared_erro
r: 3.2262 - val_loss: 21.6528 - val_root_mean_squared_error: 4.6533
Epoch 94/300
3/3 [==============================] - 4s 2s/step - loss: 10.3831 - root_mean_squared_erro
r: 3.2223 - val_loss: 21.5530 - val_root_mean_squared_error: 4.6425
Epoch 95/300
3/3 [==============================] - 4s 2s/step - loss: 10.3571 - root_mean_squared_erro
r: 3.2182 - val_loss: 21.4488 - val_root_mean_squared_error: 4.6313
Epoch 96/300
3/3 [==============================] - 4s 2s/step - loss: 10.3275 - root_mean_squared_erro
r: 3.2136 - val_loss: 21.3562 - val_root_mean_squared_error: 4.6213
Epoch 97/300
3/3 [==============================] - 4s 2s/step - loss: 10.3019 - root_mean_squared_erro
r: 3.2097 - val_loss: 21.2549 - val_root_mean_squared_error: 4.6103
Epoch 98/300
3/3 [==============================] - 4s 2s/step - loss: 10.2741 - root_mean_squared_erro
r: 3.2053 - val_loss: 21.1602 - val_root_mean_squared_error: 4.6000
Epoch 99/300
3/3 [==============================] - 4s 2s/step - loss: 10.2446 - root_mean_squared_erro
r: 3.2007 - val_loss: 21.0794 - val_root_mean_squared_error: 4.5912
Epoch 100/300
3/3 [==============================] - 5s 2s/step - loss: 10.2220 - root_mean_squared_erro
r: 3.1972 - val_loss: 20.9802 - val_root_mean_squared_error: 4.5804
Epoch 101/300
3/3 [==============================] - 4s 2s/step - loss: 10.1940 - root_mean_squared_erro
r: 3.1928 - val_loss: 20.8866 - val_root_mean_squared_error: 4.5702
Epoch 102/300
3/3 [==============================] - 4s 2s/step - loss: 10.1655 - root_mean_squared_erro
r: 3.1883 - val_loss: 20.8069 - val_root_mean_squared_error: 4.5615
Epoch 103/300
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Epoch 103/300
3/3 [==============================] - 4s 2s/step - loss: 10.1407 - root_mean_squared_erro
r: 3.1844 - val_loss: 20.7192 - val_root_mean_squared_error: 4.5518
Epoch 104/300
3/3 [==============================] - 5s 3s/step - loss: 10.1161 - root_mean_squared_erro
r: 3.1806 - val_loss: 20.6280 - val_root_mean_squared_error: 4.5418
Epoch 105/300
3/3 [==============================] - 4s 2s/step - loss: 10.0884 - root_mean_squared_erro
r: 3.1762 - val_loss: 20.5521 - val_root_mean_squared_error: 4.5334
Epoch 106/300
3/3 [==============================] - 4s 2s/step - loss: 10.0651 - root_mean_squared_erro
r: 3.1726 - val_loss: 20.4614 - val_root_mean_squared_error: 4.5234
Epoch 107/300
3/3 [==============================] - 5s 2s/step - loss: 10.0380 - root_mean_squared_erro
r: 3.1683 - val_loss: 20.3812 - val_root_mean_squared_error: 4.5146
Epoch 108/300
3/3 [==============================] - 4s 2s/step - loss: 10.0146 - root_mean_squared_erro
r: 3.1646 - val_loss: 20.2952 - val_root_mean_squared_error: 4.5050
Epoch 109/300
3/3 [==============================] - 4s 2s/step - loss: 9.9890 - root_mean_squared_erro
r: 3.1605 - val_loss: 20.2094 - val_root_mean_squared_error: 4.4955
Epoch 110/300
3/3 [==============================] - 4s 2s/step - loss: 9.9631 - root_mean_squared_erro
r: 3.1564 - val_loss: 20.1321 - val_root_mean_squared_error: 4.4869
Epoch 111/300
3/3 [==============================] - 5s 2s/step - loss: 9.9366 - root_mean_squared_erro
r: 3.1522 - val_loss: 20.0630 - val_root_mean_squared_error: 4.4792
Epoch 112/300
3/3 [==============================] - 4s 2s/step - loss: 9.9114 - root_mean_squared_erro
r: 3.1482 - val_loss: 19.9972 - val_root_mean_squared_error: 4.4718
Epoch 113/300
3/3 [==============================] - 4s 2s/step - loss: 9.8879 - root_mean_squared_erro
r: 3.1445 - val_loss: 19.9211 - val_root_mean_squared_error: 4.4633
Epoch 114/300
3/3 [==============================] - 4s 2s/step - loss: 9.8639 - root_mean_squared_erro
r: 3.1407 - val_loss: 19.8451 - val_root_mean_squared_error: 4.4548
Epoch 115/300
3/3 [==============================] - 4s 2s/step - loss: 9.8374 - root_mean_squared_erro
r: 3.1365 - val_loss: 19.7785 - val_root_mean_squared_error: 4.4473
Epoch 116/300
3/3 [==============================] - 4s 2s/step - loss: 9.8136 - root_mean_squared_erro
r: 3.1327 - val_loss: 19.7053 - val_root_mean_squared_error: 4.4391
Epoch 117/300
3/3 [==============================] - 4s 2s/step - loss: 9.7875 - root_mean_squared_erro
r: 3.1285 - val_loss: 19.6423 - val_root_mean_squared_error: 4.4320
Epoch 118/300
3/3 [==============================] - 5s 2s/step - loss: 9.7651 - root_mean_squared_erro
r: 3.1249 - val_loss: 19.5669 - val_root_mean_squared_error: 4.4235
Epoch 119/300
3/3 [==============================] - 4s 2s/step - loss: 9.7390 - root_mean_squared_erro
r: 3.1207 - val_loss: 19.4958 - val_root_mean_squared_error: 4.4154
Epoch 120/300
3/3 [==============================] - 4s 2s/step - loss: 9.7148 - root_mean_squared_erro
r: 3.1169 - val_loss: 19.4312 - val_root_mean_squared_error: 4.4081
Epoch 121/300
3/3 [==============================] - 4s 2s/step - loss: 9.6914 - root_mean_squared_erro
r: 3.1131 - val_loss: 19.3617 - val_root_mean_squared_error: 4.4002
Epoch 122/300
3/3 [==============================] - 4s 2s/step - loss: 9.6661 - root_mean_squared_erro
r: 3.1090 - val_loss: 19.3010 - val_root_mean_squared_error: 4.3933
Epoch 123/300
3/3 [==============================] - 4s 2s/step - loss: 9.6440 - root_mean_squared_erro
r: 3.1055 - val_loss: 19.2301 - val_root_mean_squared_error: 4.3852
Epoch 124/300
3/3 [==============================] - 4s 2s/step - loss: 9.6182 - root_mean_squared_erro
r: 3.1013 - val_loss: 19.1792 - val_root_mean_squared_error: 4.3794
Epoch 125/300
3/3 [==============================] - 5s 3s/step - loss: 9.5956 - root_mean_squared_erro
r: 3.0977 - val_loss: 19.1161 - val_root_mean_squared_error: 4.3722
Epoch 126/300
3/3 [==============================] - 4s 2s/step - loss: 9.5734 - root_mean_squared_erro
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r: 3.0941 - val_loss: 19.0513 - val_root_mean_squared_error: 4.3648
Epoch 127/300
3/3 [==============================] - 4s 2s/step - loss: 9.5490 - root_mean_squared_erro
r: 3.0902 - val_loss: 18.9962 - val_root_mean_squared_error: 4.3585
Epoch 128/300
3/3 [==============================] - 5s 3s/step - loss: 9.5269 - root_mean_squared_erro
r: 3.0866 - val_loss: 18.9348 - val_root_mean_squared_error: 4.3514
Epoch 129/300
3/3 [==============================] - 4s 2s/step - loss: 9.5020 - root_mean_squared_erro
r: 3.0825 - val_loss: 18.8954 - val_root_mean_squared_error: 4.3469
Epoch 130/300
3/3 [==============================] - 4s 2s/step - loss: 9.4815 - root_mean_squared_erro
r: 3.0792 - val_loss: 18.8364 - val_root_mean_squared_error: 4.3401
Epoch 131/300
3/3 [==============================] - 4s 2s/step - loss: 9.4579 - root_mean_squared_erro
r: 3.0754 - val_loss: 18.7860 - val_root_mean_squared_error: 4.3343
Epoch 132/300
3/3 [==============================] - 5s 2s/step - loss: 9.4362 - root_mean_squared_erro
r: 3.0718 - val_loss: 18.7328 - val_root_mean_squared_error: 4.3281
Epoch 133/300
3/3 [==============================] - 4s 2s/step - loss: 9.4128 - root_mean_squared_erro
r: 3.0680 - val_loss: 18.6944 - val_root_mean_squared_error: 4.3237
Epoch 134/300
3/3 [==============================] - 4s 2s/step - loss: 9.3926 - root_mean_squared_erro
r: 3.0647 - val_loss: 18.6380 - val_root_mean_squared_error: 4.3172
Epoch 135/300
3/3 [==============================] - 4s 2s/step - loss: 9.3728 - root_mean_squared_erro
r: 3.0615 - val_loss: 18.5711 - val_root_mean_squared_error: 4.3094
Epoch 136/300
3/3 [==============================] - 5s 2s/step - loss: 9.3499 - root_mean_squared_erro
r: 3.0578 - val_loss: 18.5271 - val_root_mean_squared_error: 4.3043
Epoch 137/300
3/3 [==============================] - 4s 2s/step - loss: 9.3291 - root_mean_squared_erro
r: 3.0544 - val_loss: 18.4827 - val_root_mean_squared_error: 4.2992
Epoch 138/300
3/3 [==============================] - 4s 2s/step - loss: 9.3076 - root_mean_squared_erro
r: 3.0508 - val_loss: 18.4382 - val_root_mean_squared_error: 4.2940
Epoch 139/300
3/3 [==============================] - 4s 2s/step - loss: 9.2882 - root_mean_squared_erro
r: 3.0477 - val_loss: 18.3917 - val_root_mean_squared_error: 4.2886
Epoch 140/300
3/3 [==============================] - 4s 2s/step - loss: 9.2666 - root_mean_squared_erro
r: 3.0441 - val_loss: 18.3477 - val_root_mean_squared_error: 4.2834
Epoch 141/300
3/3 [==============================] - 4s 2s/step - loss: 9.2474 - root_mean_squared_erro
r: 3.0410 - val_loss: 18.2976 - val_root_mean_squared_error: 4.2776
Epoch 142/300
3/3 [==============================] - 4s 2s/step - loss: 9.2272 - root_mean_squared_erro
r: 3.0376 - val_loss: 18.2558 - val_root_mean_squared_error: 4.2727
Epoch 143/300
3/3 [==============================] - 5s 3s/step - loss: 9.2082 - root_mean_squared_erro
r: 3.0345 - val_loss: 18.2014 - val_root_mean_squared_error: 4.2663
Epoch 144/300
3/3 [==============================] - 4s 2s/step - loss: 9.1872 - root_mean_squared_erro
r: 3.0310 - val_loss: 18.1616 - val_root_mean_squared_error: 4.2616
Epoch 145/300
3/3 [==============================] - 4s 2s/step - loss: 9.1694 - root_mean_squared_erro
r: 3.0281 - val_loss: 18.1052 - val_root_mean_squared_error: 4.2550
Epoch 146/300
3/3 [==============================] - 5s 3s/step - loss: 9.1477 - root_mean_squared_erro
r: 3.0245 - val_loss: 18.0724 - val_root_mean_squared_error: 4.2512
Epoch 147/300
3/3 [==============================] - 4s 2s/step - loss: 9.1296 - root_mean_squared_erro
r: 3.0215 - val_loss: 18.0328 - val_root_mean_squared_error: 4.2465
Epoch 148/300
3/3 [==============================] - 4s 2s/step - loss: 9.1102 - root_mean_squared_erro
r: 3.0183 - val_loss: 17.9813 - val_root_mean_squared_error: 4.2404
Epoch 149/300
3/3 [==============================] - 4s 2s/step - loss: 9.0909 - root_mean_squared_erro
r: 3.0151 - val_loss: 17.9316 - val_root_mean_squared_error: 4.2346
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Epoch 150/300
3/3 [==============================] - 5s 2s/step - loss: 9.0718 - root_mean_squared_erro
r: 3.0119 - val_loss: 17.8996 - val_root_mean_squared_error: 4.2308
Epoch 151/300
3/3 [==============================] - 4s 2s/step - loss: 9.0533 - root_mean_squared_erro
r: 3.0089 - val_loss: 17.8614 - val_root_mean_squared_error: 4.2263
Epoch 152/300
3/3 [==============================] - 4s 2s/step - loss: 9.0350 - root_mean_squared_erro
r: 3.0058 - val_loss: 17.8263 - val_root_mean_squared_error: 4.2221
Epoch 153/300
3/3 [==============================] - 4s 2s/step - loss: 9.0181 - root_mean_squared_erro
r: 3.0030 - val_loss: 17.7743 - val_root_mean_squared_error: 4.2160
Epoch 154/300
3/3 [==============================] - 5s 2s/step - loss: 8.9992 - root_mean_squared_erro
r: 2.9999 - val_loss: 17.7342 - val_root_mean_squared_error: 4.2112
Epoch 155/300
3/3 [==============================] - 4s 2s/step - loss: 8.9817 - root_mean_squared_erro
r: 2.9969 - val_loss: 17.6872 - val_root_mean_squared_error: 4.2056
Epoch 156/300
3/3 [==============================] - 4s 2s/step - loss: 8.9632 - root_mean_squared_erro
r: 2.9939 - val_loss: 17.6471 - val_root_mean_squared_error: 4.2009
Epoch 157/300
3/3 [==============================] - 4s 2s/step - loss: 8.9463 - root_mean_squared_erro
r: 2.9910 - val_loss: 17.6047 - val_root_mean_squared_error: 4.1958
Epoch 158/300
3/3 [==============================] - 5s 2s/step - loss: 8.9330 - root_mean_squared_erro
r: 2.9888 - val_loss: 17.5336 - val_root_mean_squared_error: 4.1873
Epoch 159/300
3/3 [==============================] - 4s 2s/step - loss: 8.9117 - root_mean_squared_erro
r: 2.9853 - val_loss: 17.4998 - val_root_mean_squared_error: 4.1833
Epoch 160/300
3/3 [==============================] - 4s 2s/step - loss: 8.8951 - root_mean_squared_erro
r: 2.9825 - val_loss: 17.4606 - val_root_mean_squared_error: 4.1786
Epoch 161/300
3/3 [==============================] - 5s 3s/step - loss: 8.8778 - root_mean_squared_erro
r: 2.9796 - val_loss: 17.4319 - val_root_mean_squared_error: 4.1752
Epoch 162/300
3/3 [==============================] - 4s 2s/step - loss: 8.8629 - root_mean_squared_erro
r: 2.9771 - val_loss: 17.3828 - val_root_mean_squared_error: 4.1693
Epoch 163/300
3/3 [==============================] - 4s 2s/step - loss: 8.8456 - root_mean_squared_erro
r: 2.9742 - val_loss: 17.3664 - val_root_mean_squared_error: 4.1673
Epoch 164/300
3/3 [==============================] - 5s 2s/step - loss: 8.8291 - root_mean_squared_erro
r: 2.9714 - val_loss: 17.3274 - val_root_mean_squared_error: 4.1626
Epoch 165/300
3/3 [==============================] - 5s 2s/step - loss: 8.8130 - root_mean_squared_erro
r: 2.9687 - val_loss: 17.3017 - val_root_mean_squared_error: 4.1595
Epoch 166/300
3/3 [==============================] - 4s 2s/step - loss: 8.7967 - root_mean_squared_erro
r: 2.9659 - val_loss: 17.2728 - val_root_mean_squared_error: 4.1561
Epoch 167/300
3/3 [==============================] - 4s 2s/step - loss: 8.7820 - root_mean_squared_erro
r: 2.9634 - val_loss: 17.2280 - val_root_mean_squared_error: 4.1507
Epoch 168/300
3/3 [==============================] - 5s 2s/step - loss: 8.7665 - root_mean_squared_erro
r: 2.9608 - val_loss: 17.1872 - val_root_mean_squared_error: 4.1458
Epoch 169/300
3/3 [==============================] - 4s 2s/step - loss: 8.7502 - root_mean_squared_erro
r: 2.9581 - val_loss: 17.1618 - val_root_mean_squared_error: 4.1427
Epoch 170/300
3/3 [==============================] - 4s 2s/step - loss: 8.7370 - root_mean_squared_erro
r: 2.9558 - val_loss: 17.1126 - val_root_mean_squared_error: 4.1367
Epoch 171/300
3/3 [==============================] - 4s 2s/step - loss: 8.7197 - root_mean_squared_erro
r: 2.9529 - val_loss: 17.0875 - val_root_mean_squared_error: 4.1337
Epoch 172/300
3/3 [==============================] - 4s 2s/step - loss: 8.7048 - root_mean_squared_erro
r: 2.9504 - val_loss: 17.0564 - val_root_mean_squared_error: 4.1299
Epoch 173/300
```

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3/3 [==============================] - 4s 2s/step - loss: 8.6895 - root_mean_squared_erro
r: 2.9478 - val_loss: 17.0269 - val_root_mean_squared_error: 4.1264
Epoch 174/300
3/3 [==============================] - 4s 2s/step - loss: 8.6743 - root_mean_squared_erro
r: 2.9452 - val_loss: 16.9964 - val_root_mean_squared_error: 4.1227
Epoch 175/300
3/3 [==============================] - 5s 3s/step - loss: 8.6593 - root_mean_squared_erro
r: 2.9427 - val_loss: 16.9729 - val_root_mean_squared_error: 4.1198
Epoch 176/300
3/3 [==============================] - 4s 2s/step - loss: 8.6447 - root_mean_squared_erro
r: 2.9402 - val_loss: 16.9477 - val_root_mean_squared_error: 4.1168
Epoch 177/300
3/3 [==============================] - 4s 2s/step - loss: 8.6318 - root_mean_squared_erro
r: 2.9380 - val_loss: 16.9119 - val_root_mean_squared_error: 4.1124
Epoch 178/300
3/3 [==============================] - 4s 2s/step - loss: 8.6152 - root_mean_squared_erro
r: 2.9352 - val_loss: 16.8983 - val_root_mean_squared_error: 4.1108
Epoch 179/300
3/3 [==============================] - 5s 3s/step - loss: 8.6012 - root_mean_squared_erro
r: 2.9328 - val_loss: 16.8876 - val_root_mean_squared_error: 4.1095
Epoch 180/300
3/3 [==============================] - 4s 2s/step - loss: 8.5875 - root_mean_squared_erro
r: 2.9304 - val_loss: 16.8773 - val_root_mean_squared_error: 4.1082
Epoch 181/300
3/3 [==============================] - 4s 2s/step - loss: 8.5734 - root_mean_squared_erro
r: 2.9280 - val_loss: 16.8465 - val_root_mean_squared_error: 4.1044
Epoch 182/300
3/3 [==============================] - 5s 2s/step - loss: 8.5586 - root_mean_squared_erro
r: 2.9255 - val_loss: 16.8244 - val_root_mean_squared_error: 4.1018
Epoch 183/300
3/3 [==============================] - 4s 2s/step - loss: 8.5457 - root_mean_squared_erro
r: 2.9233 - val_loss: 16.8032 - val_root_mean_squared_error: 4.0992
Epoch 184/300
3/3 [==============================] - 4s 2s/step - loss: 8.5323 - root_mean_squared_erro
r: 2.9210 - val_loss: 16.7673 - val_root_mean_squared_error: 4.0948
Epoch 185/300
3/3 [==============================] - 4s 2s/step - loss: 8.5188 - root_mean_squared_erro
r: 2.9187 - val_loss: 16.7389 - val_root_mean_squared_error: 4.0913
Epoch 186/300
3/3 [==============================] - 5s 2s/step - loss: 8.5057 - root_mean_squared_erro
r: 2.9165 - val_loss: 16.7028 - val_root_mean_squared_error: 4.0869
Epoch 187/300
3/3 [==============================] - 4s 2s/step - loss: 8.4918 - root_mean_squared_erro
r: 2.9141 - val_loss: 16.6938 - val_root_mean_squared_error: 4.0858
Epoch 188/300
3/3 [==============================] - 4s 2s/step - loss: 8.4791 - root_mean_squared_erro
r: 2.9119 - val_loss: 16.6618 - val_root_mean_squared_error: 4.0819
Epoch 189/300
3/3 [==============================] - 0s 40ms/step - loss: 8.4657 - root_mean_squared_err
or: 2.9096 - val_loss: 16.6758 - val_root_mean_squared_error: 4.0836
Epoch 190/300
3/3 [==============================] - 6s 3s/step - loss: 8.4527 - root_mean_squared_erro
r: 2.9074 - val_loss: 16.6580 - val_root_mean_squared_error: 4.0814
Epoch 191/300
3/3 [==============================] - 7s 4s/step - loss: 8.4406 - root_mean_squared_erro
r: 2.9053 - val_loss: 16.6241 - val_root_mean_squared_error: 4.0773
Epoch 192/300
3/3 [==============================] - 0s 42ms/step - loss: 8.4270 - root_mean_squared_err
or: 2.9029 - val_loss: 16.6255 - val_root_mean_squared_error: 4.0774
Epoch 193/300
3/3 [==============================] - 5s 2s/step - loss: 8.4132 - root_mean_squared_erro
r: 2.9006 - val_loss: 16.6093 - val_root_mean_squared_error: 4.0754
Epoch 194/300
3/3 [==============================] - 5s 3s/step - loss: 8.3960 - root_mean_squared_erro
r: 2.8976 - val_loss: 16.5897 - val_root_mean_squared_error: 4.0730
Epoch 195/300
3/3 [==============================] - 5s 3s/step - loss: 8.3835 - root_mean_squared_erro
r: 2.8954 - val_loss: 16.5654 - val_root_mean_squared_error: 4.0701
Epoch 196/300
3/3 [==============================] - 6s 3s/step - loss: 8.3714 - root_mean_squared_erro
```

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r: 2.8933 - val_loss: 16.5355 - val_root_mean_squared_error: 4.0664
Epoch 197/300
3/3 [==============================] - 0s 43ms/step - loss: 8.3579 - root_mean_squared_err
or: 2.8910 - val_loss: 16.5362 - val_root_mean_squared_error: 4.0665
Epoch 198/300
3/3 [==============================] - 4s 2s/step - loss: 8.3454 - root_mean_squared_erro
r: 2.8888 - val_loss: 16.5222 - val_root_mean_squared_error: 4.0647
Epoch 199/300
3/3 [==============================] - 4s 2s/step - loss: 8.3325 - root_mean_squared_erro
r: 2.8866 - val_loss: 16.5091 - val_root_mean_squared_error: 4.0631
Epoch 200/300
3/3 [==============================] - 5s 3s/step - loss: 8.3218 - root_mean_squared_erro
r: 2.8847 - val_loss: 16.5039 - val_root_mean_squared_error: 4.0625
Epoch 201/300
3/3 [==============================] - 0s 54ms/step - loss: 8.3097 - root_mean_squared_err
or: 2.8827 - val_loss: 16.5068 - val_root_mean_squared_error: 4.0629
Epoch 202/300
3/3 [==============================] - 5s 3s/step - loss: 8.2993 - root_mean_squared_erro
r: 2.8809 - val_loss: 16.4709 - val_root_mean_squared_error: 4.0584
Epoch 203/300
3/3 [==============================] - 5s 3s/step - loss: 8.2871 - root_mean_squared_erro
r: 2.8787 - val_loss: 16.4434 - val_root_mean_squared_error: 4.0550
Epoch 204/300
3/3 [==============================] - 5s 2s/step - loss: 8.2748 - root_mean_squared_erro
r: 2.8766 - val_loss: 16.4217 - val_root_mean_squared_error: 4.0524
Epoch 205/300
3/3 [==============================] - 4s 2s/step - loss: 8.2634 - root_mean_squared_erro
r: 2.8746 - val_loss: 16.4202 - val_root_mean_squared_error: 4.0522
Epoch 206/300
3/3 [==============================] - 4s 2s/step - loss: 8.2531 - root_mean_squared_erro
r: 2.8728 - val_loss: 16.3976 - val_root_mean_squared_error: 4.0494
Epoch 207/300
3/3 [==============================] - 4s 2s/step - loss: 8.2408 - root_mean_squared_erro
r: 2.8707 - val_loss: 16.3870 - val_root_mean_squared_error: 4.0481
Epoch 208/300
3/3 [==============================] - 0s 45ms/step - loss: 8.2298 - root_mean_squared_err
or: 2.8688 - val_loss: 16.3896 - val_root_mean_squared_error: 4.0484
Epoch 209/300
3/3 [==============================] - 5s 2s/step - loss: 8.2192 - root_mean_squared_erro
r: 2.8669 - val_loss: 16.3733 - val_root_mean_squared_error: 4.0464
Epoch 210/300
3/3 [==============================] - 4s 2s/step - loss: 8.2077 - root_mean_squared_erro
r: 2.8649 - val_loss: 16.3725 - val_root_mean_squared_error: 4.0463
Epoch 211/300
3/3 [==============================] - 4s 2s/step - loss: 8.1965 - root_mean_squared_erro
r: 2.8630 - val_loss: 16.3693 - val_root_mean_squared_error: 4.0459
Epoch 212/300
3/3 [==============================] - 4s 2s/step - loss: 8.1865 - root_mean_squared_erro
r: 2.8612 - val_loss: 16.3473 - val_root_mean_squared_error: 4.0432
Epoch 213/300
3/3 [==============================] - 0s 46ms/step - loss: 8.1762 - root_mean_squared_err
or: 2.8594 - val_loss: 16.3519 - val_root_mean_squared_error: 4.0437
Epoch 214/300
3/3 [==============================] - 0s 35ms/step - loss: 8.1649 - root_mean_squared_err
or: 2.8574 - val_loss: 16.3483 - val_root_mean_squared_error: 4.0433
Epoch 215/300
3/3 [==============================] - 5s 3s/step - loss: 8.1544 - root_mean_squared_erro
r: 2.8556 - val_loss: 16.3355 - val_root_mean_squared_error: 4.0417
Epoch 216/300
3/3 [==============================] - 4s 2s/step - loss: 8.1455 - root_mean_squared_erro
r: 2.8540 - val_loss: 16.3087 - val_root_mean_squared_error: 4.0384
Epoch 217/300
3/3 [==============================] - 0s 42ms/step - loss: 8.1345 - root_mean_squared_err
or: 2.8521 - val_loss: 16.3126 - val_root_mean_squared_error: 4.0389
Epoch 218/300
3/3 [==============================] - 4s 2s/step - loss: 8.1245 - root_mean_squared_erro
r: 2.8504 - val_loss: 16.2922 - val_root_mean_squared_error: 4.0364
Epoch 219/300
3/3 [==============================] - 5s 3s/step - loss: 8.1141 - root_mean_squared_erro
r: 2.8485 - val_loss: 16.2910 - val_root_mean_squared_error: 4.0362
Epoch 220/300
```

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Epoch 220/300
3/3 [==============================] - 4s 2s/step - loss: 8.1039 - root_mean_squared_erro
r: 2.8467 - val_loss: 16.2798 - val_root_mean_squared_error: 4.0348
Epoch 221/300
3/3 [==============================] - 4s 2s/step - loss: 8.0939 - root_mean_squared_erro
r: 2.8450 - val_loss: 16.2761 - val_root_mean_squared_error: 4.0344
Epoch 222/300
3/3 [==============================] - 4s 2s/step - loss: 8.0859 - root_mean_squared_erro
r: 2.8436 - val_loss: 16.2439 - val_root_mean_squared_error: 4.0304
Epoch 223/300
3/3 [==============================] - 5s 2s/step - loss: 8.0753 - root_mean_squared_erro
r: 2.8417 - val_loss: 16.2286 - val_root_mean_squared_error: 4.0285
Epoch 224/300
3/3 [==============================] - 0s 43ms/step - loss: 8.0644 - root_mean_squared_err
or: 2.8398 - val_loss: 16.2340 - val_root_mean_squared_error: 4.0291
Epoch 225/300
3/3 [==============================] - 0s 49ms/step - loss: 8.0553 - root_mean_squared_err
or: 2.8382 - val_loss: 16.2385 - val_root_mean_squared_error: 4.0297
Epoch 226/300
3/3 [==============================] - 0s 49ms/step - loss: 8.0457 - root_mean_squared_err
or: 2.8365 - val_loss: 16.2297 - val_root_mean_squared_error: 4.0286
Epoch 227/300
3/3 [==============================] - 4s 2s/step - loss: 8.0370 - root_mean_squared_erro
r: 2.8350 - val_loss: 16.2119 - val_root_mean_squared_error: 4.0264
Epoch 228/300
3/3 [==============================] - 4s 2s/step - loss: 8.0282 - root_mean_squared_erro
r: 2.8334 - val_loss: 16.1992 - val_root_mean_squared_error: 4.0248
Epoch 229/300
3/3 [==============================] - 4s 2s/step - loss: 8.0186 - root_mean_squared_erro
r: 2.8317 - val_loss: 16.1946 - val_root_mean_squared_error: 4.0243
Epoch 230/300
3/3 [==============================] - 5s 2s/step - loss: 8.0089 - root_mean_squared_erro
r: 2.8300 - val_loss: 16.1884 - val_root_mean_squared_error: 4.0235
Epoch 231/300
3/3 [==============================] - 4s 2s/step - loss: 8.0009 - root_mean_squared_erro
r: 2.8286 - val_loss: 16.1632 - val_root_mean_squared_error: 4.0203
Epoch 232/300
3/3 [==============================] - 4s 2s/step - loss: 7.9909 - root_mean_squared_erro
r: 2.8268 - val_loss: 16.1622 - val_root_mean_squared_error: 4.0202
Epoch 233/300
3/3 [==============================] - 4s 2s/step - loss: 7.9821 - root_mean_squared_erro
r: 2.8253 - val_loss: 16.1468 - val_root_mean_squared_error: 4.0183
Epoch 234/300
3/3 [==============================] - 0s 48ms/step - loss: 7.9727 - root_mean_squared_err
or: 2.8236 - val_loss: 16.1484 - val_root_mean_squared_error: 4.0185
Epoch 235/300
3/3 [==============================] - 0s 49ms/step - loss: 7.9654 - root_mean_squared_err
or: 2.8223 - val_loss: 16.1740 - val_root_mean_squared_error: 4.0217
Epoch 236/300
3/3 [==============================] - 0s 42ms/step - loss: 7.9561 - root_mean_squared_err
or: 2.8207 - val_loss: 16.1667 - val_root_mean_squared_error: 4.0208
Epoch 237/300
3/3 [==============================] - 0s 44ms/step - loss: 7.9473 - root_mean_squared_err
or: 2.8191 - val_loss: 16.1573 - val_root_mean_squared_error: 4.0196
Epoch 238/300
3/3 [==============================] - 4s 2s/step - loss: 7.9417 - root_mean_squared_erro
r: 2.8181 - val_loss: 16.1218 - val_root_mean_squared_error: 4.0152
Epoch 239/300
3/3 [==============================] - 0s 41ms/step - loss: 7.9304 - root_mean_squared_err
or: 2.8161 - val_loss: 16.1316 - val_root_mean_squared_error: 4.0164
Epoch 240/300
3/3 [==============================] - 0s 39ms/step - loss: 7.9223 - root_mean_squared_err
or: 2.8147 - val_loss: 16.1306 - val_root_mean_squared_error: 4.0163
Epoch 241/300
3/3 [==============================] - 0s 47ms/step - loss: 7.9146 - root_mean_squared_err
or: 2.8133 - val_loss: 16.1439 - val_root_mean_squared_error: 4.0179
Epoch 242/300
3/3 [==============================] - 0s 41ms/step - loss: 7.9059 - root_mean_squared_err
or: 2.8117 - val_loss: 16.1371 - val_root_mean_squared_error: 4.0171
Epoch 243/300
3/3 [==============================] - 4s 2s/step - loss: 7.8995 - root_mean_squared_erro
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3/3 [==============================] - 4s 2s/step - loss: 7.8995 - root_mean_squared_erro
r: 2.8106 - val_loss: 16.1032 - val_root_mean_squared_error: 4.0129
Epoch 244/300
3/3 [==============================] - 4s 2s/step - loss: 7.8896 - root_mean_squared_erro
r: 2.8088 - val_loss: 16.0882 - val_root_mean_squared_error: 4.0110
Epoch 245/300
3/3 [==============================] - 0s 47ms/step - loss: 7.8821 - root_mean_squared_err
or: 2.8075 - val_loss: 16.1012 - val_root_mean_squared_error: 4.0126
Epoch 246/300
3/3 [==============================] - 0s 44ms/step - loss: 7.8743 - root_mean_squared_err
or: 2.8061 - val_loss: 16.1041 - val_root_mean_squared_error: 4.0130
Epoch 247/300
3/3 [==============================] - 0s 46ms/step - loss: 7.8657 - root_mean_squared_err
or: 2.8046 - val_loss: 16.1048 - val_root_mean_squared_error: 4.0131
Epoch 248/300
3/3 [==============================] - 0s 45ms/step - loss: 7.8577 - root_mean_squared_err
or: 2.8032 - val_loss: 16.1026 - val_root_mean_squared_error: 4.0128
Epoch 249/300
3/3 [==============================] - 0s 53ms/step - loss: 7.8501 - root_mean_squared_err
or: 2.8018 - val_loss: 16.1062 - val_root_mean_squared_error: 4.0132
```

```
Default and Long, samples = 45
Epoch 1/300
3/3 [==============================] - 8s 2s/step - loss: 16.5686 - root_mean_squared_erro
r: 4.0705 - val_loss: 40.6105 - val_root_mean_squared_error: 6.3726
Epoch 2/300
3/3 [==============================] - 4s 2s/step - loss: 16.5015 - root_mean_squared_erro
r: 4.0622 - val_loss: 40.4718 - val_root_mean_squared_error: 6.3617
Epoch 3/300
3/3 [==============================] - 5s 2s/step - loss: 16.4501 - root_mean_squared_erro
r: 4.0559 - val_loss: 40.3356 - val_root_mean_squared_error: 6.3510
Epoch 4/300
3/3 [==============================] - 4s 2s/step - loss: 16.4027 - root_mean_squared_erro
r: 4.0500 - val_loss: 40.2017 - val_root_mean_squared_error: 6.3405
Epoch 5/300
3/3 [==============================] - 4s 2s/step - loss: 16.3239 - root_mean_squared_erro
r: 4.0403 - val_loss: 40.0761 - val_root_mean_squared_error: 6.3306
Epoch 6/300
3/3 [==============================] - 4s 2s/step - loss: 16.2673 - root_mean_squared_erro
r: 4.0333 - val_loss: 39.9673 - val_root_mean_squared_error: 6.3220
Epoch 7/300
3/3 [==============================] - 5s 2s/step - loss: 16.2303 - root_mean_squared_erro
r: 4.0287 - val_loss: 39.8463 - val_root_mean_squared_error: 6.3124
Epoch 8/300
3/3 [==============================] - 4s 2s/step - loss: 16.1879 - root_mean_squared_erro
r: 4.0234 - val_loss: 39.7299 - val_root_mean_squared_error: 6.3032
Epoch 9/300
3/3 [==============================] - 4s 2s/step - loss: 16.1450 - root_mean_squared_erro
r: 4.0181 - val_loss: 39.6271 - val_root_mean_squared_error: 6.2950
Epoch 10/300
3/3 [==============================] - 4s 2s/step - loss: 16.1086 - root_mean_squared_erro
r: 4.0136 - val_loss: 39.5310 - val_root_mean_squared_error: 6.2874
Epoch 11/300
3/3 [==============================] - 5s 2s/step - loss: 16.0663 - root_mean_squared_erro
r: 4.0083 - val_loss: 39.4393 - val_root_mean_squared_error: 6.2801
Epoch 12/300
3/3 [==============================] - 4s 2s/step - loss: 16.0306 - root_mean_squared_erro
r: 4.0038 - val_loss: 39.3538 - val_root_mean_squared_error: 6.2733
Epoch 13/300
3/3 [==============================] - 4s 2s/step - loss: 15.9948 - root_mean_squared_erro
r: 3.9993 - val_loss: 39.2703 - val_root_mean_squared_error: 6.2666
Epoch 14/300
3/3 [==============================] - 4s 2s/step - loss: 15.9666 - root_mean_squared_erro
r: 3.9958 - val_loss: 39.1998 - val_root_mean_squared_error: 6.2610
Epoch 15/300
3/3 [==============================] - 8s 4s/step - loss: 15.9407 - root_mean_squared_erro
r: 3.9926 - val_loss: 39.1347 - val_root_mean_squared_error: 6.2558
Epoch 16/300
```

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3/3 [==============================] - 5s 3s/step - loss: 15.9159 - root_mean_squared_erro
r: 3.9895 - val_loss: 39.0696 - val_root_mean_squared_error: 6.2506
Epoch 17/300
3/3 [==============================] - 6s 3s/step - loss: 15.8929 - root_mean_squared_erro
r: 3.9866 - val_loss: 39.0050 - val_root_mean_squared_error: 6.2454
Epoch 18/300
3/3 [==============================] - 6s 3s/step - loss: 15.8703 - root_mean_squared_erro
r: 3.9838 - val_loss: 38.9448 - val_root_mean_squared_error: 6.2406
Epoch 19/300
3/3 [==============================] - 7s 4s/step - loss: 15.8499 - root_mean_squared_erro
r: 3.9812 - val_loss: 38.8861 - val_root_mean_squared_error: 6.2359
Epoch 20/300
3/3 [==============================] - 5s 2s/step - loss: 15.8303 - root_mean_squared_erro
r: 3.9787 - val_loss: 38.8292 - val_root_mean_squared_error: 6.2313
Epoch 21/300
3/3 [==============================] - 7s 3s/step - loss: 15.8138 - root_mean_squared_erro
r: 3.9767 - val_loss: 38.7698 - val_root_mean_squared_error: 6.2265
Epoch 22/300
3/3 [==============================] - 8s 4s/step - loss: 15.7953 - root_mean_squared_erro
r: 3.9743 - val_loss: 38.7296 - val_root_mean_squared_error: 6.2233
Epoch 23/300
3/3 [==============================] - 7s 4s/step - loss: 15.7784 - root_mean_squared_erro
r: 3.9722 - val_loss: 38.6891 - val_root_mean_squared_error: 6.2201
Epoch 24/300
3/3 [==============================] - 7s 3s/step - loss: 15.7590 - root_mean_squared_erro
r: 3.9698 - val_loss: 38.6436 - val_root_mean_squared_error: 6.2164
Epoch 25/300
3/3 [==============================] - 7s 4s/step - loss: 15.7417 - root_mean_squared_erro
r: 3.9676 - val_loss: 38.6016 - val_root_mean_squared_error: 6.2130
Epoch 26/300
3/3 [==============================] - 8s 4s/step - loss: 15.7260 - root_mean_squared_erro
r: 3.9656 - val_loss: 38.5604 - val_root_mean_squared_error: 6.2097
Epoch 27/300
3/3 [==============================] - 5s 3s/step - loss: 15.7104 - root_mean_squared_erro
r: 3.9636 - val_loss: 38.5211 - val_root_mean_squared_error: 6.2065
Epoch 28/300
3/3 [==============================] - 5s 3s/step - loss: 15.6963 - root_mean_squared_erro
r: 3.9618 - val_loss: 38.4808 - val_root_mean_squared_error: 6.2033
Epoch 29/300
3/3 [==============================] - 9s 4s/step - loss: 15.6805 - root_mean_squared_erro
r: 3.9599 - val_loss: 38.4407 - val_root_mean_squared_error: 6.2001
Epoch 30/300
3/3 [==============================] - 10s 5s/step - loss: 15.6672 - root_mean_squared_err
or: 3.9582 - val_loss: 38.4016 - val_root_mean_squared_error: 6.1969
Epoch 31/300
3/3 [==============================] - 4s 2s/step - loss: 15.6533 - root_mean_squared_erro
r: 3.9564 - val_loss: 38.3652 - val_root_mean_squared_error: 6.1940
Epoch 32/300
3/3 [==============================] - 4s 2s/step - loss: 15.6349 - root_mean_squared_erro
r: 3.9541 - val_loss: 38.3282 - val_root_mean_squared_error: 6.1910
Epoch 33/300
3/3 [==============================] - 4s 2s/step - loss: 15.6294 - root_mean_squared_erro
r: 3.9534 - val_loss: 38.2901 - val_root_mean_squared_error: 6.1879
Epoch 34/300
3/3 [==============================] - 4s 2s/step - loss: 15.6166 - root_mean_squared_erro
r: 3.9518 - val_loss: 38.2575 - val_root_mean_squared_error: 6.1853
Epoch 35/300
3/3 [==============================] - 4s 2s/step - loss: 15.6004 - root_mean_squared_erro
r: 3.9497 - val_loss: 38.2170 - val_root_mean_squared_error: 6.1820
Epoch 36/300
3/3 [==============================] - 4s 2s/step - loss: 15.5871 - root_mean_squared_erro
r: 3.9481 - val_loss: 38.1854 - val_root_mean_squared_error: 6.1794
Epoch 37/300
3/3 [==============================] - 5s 2s/step - loss: 15.5738 - root_mean_squared_erro
r: 3.9464 - val_loss: 38.1513 - val_root_mean_squared_error: 6.1767
Epoch 38/300
3/3 [==============================] - 4s 2s/step - loss: 15.5578 - root_mean_squared_erro
r: 3.9443 - val_loss: 38.1200 - val_root_mean_squared_error: 6.1741
Epoch 39/300
3/3 [==============================] - 4s 2s/step - loss: 15.5452 - root_mean_squared_erro
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r: 3.9427 - val_loss: 38.0900 - val_root_mean_squared_error: 6.1717
Epoch 40/300
3/3 [==============================] - 4s 2s/step - loss: 15.5318 - root_mean_squared_erro
r: 3.9410 - val_loss: 38.0568 - val_root_mean_squared_error: 6.1690
Epoch 41/300
3/3 [==============================] - 5s 3s/step - loss: 15.5193 - root_mean_squared_erro
r: 3.9395 - val_loss: 38.0202 - val_root_mean_squared_error: 6.1661
Epoch 42/300
3/3 [==============================] - 4s 2s/step - loss: 15.5059 - root_mean_squared_erro
r: 3.9378 - val_loss: 37.9545 - val_root_mean_squared_error: 6.1607
Epoch 43/300
3/3 [==============================] - 4s 2s/step - loss: 15.4937 - root_mean_squared_erro
r: 3.9362 - val_loss: 37.9200 - val_root_mean_squared_error: 6.1579
Epoch 44/300
3/3 [==============================] - 5s 3s/step - loss: 15.4816 - root_mean_squared_erro
r: 3.9347 - val_loss: 37.9044 - val_root_mean_squared_error: 6.1567
Epoch 45/300
3/3 [==============================] - 4s 2s/step - loss: 15.4692 - root_mean_squared_erro
r: 3.9331 - val_loss: 37.8746 - val_root_mean_squared_error: 6.1542
Epoch 46/300
3/3 [==============================] - 4s 2s/step - loss: 15.4559 - root_mean_squared_erro
r: 3.9314 - val_loss: 37.8395 - val_root_mean_squared_error: 6.1514
Epoch 47/300
3/3 [==============================] - 4s 2s/step - loss: 15.4443 - root_mean_squared_erro
r: 3.9299 - val_loss: 37.7959 - val_root_mean_squared_error: 6.1478
Epoch 48/300
3/3 [==============================] - 5s 2s/step - loss: 15.4316 - root_mean_squared_erro
r: 3.9283 - val_loss: 37.7860 - val_root_mean_squared_error: 6.1470
Epoch 49/300
3/3 [==============================] - 4s 2s/step - loss: 15.4191 - root_mean_squared_erro
r: 3.9267 - val_loss: 37.7559 - val_root_mean_squared_error: 6.1446
Epoch 50/300
3/3 [==============================] - 4s 2s/step - loss: 15.4064 - root_mean_squared_erro
r: 3.9251 - val_loss: 37.7248 - val_root_mean_squared_error: 6.1420
Epoch 51/300
3/3 [==============================] - 4s 2s/step - loss: 15.3928 - root_mean_squared_erro
r: 3.9234 - val_loss: 37.6926 - val_root_mean_squared_error: 6.1394
Epoch 52/300
3/3 [==============================] - 5s 2s/step - loss: 15.3788 - root_mean_squared_erro
r: 3.9216 - val_loss: 37.6609 - val_root_mean_squared_error: 6.1368
Epoch 53/300
3/3 [==============================] - 4s 2s/step - loss: 15.3639 - root_mean_squared_erro
r: 3.9197 - val_loss: 37.6281 - val_root_mean_squared_error: 6.1342
Epoch 54/300
3/3 [==============================] - 4s 2s/step - loss: 15.3496 - root_mean_squared_erro
r: 3.9179 - val_loss: 37.5746 - val_root_mean_squared_error: 6.1298
Epoch 55/300
3/3 [==============================] - 4s 2s/step - loss: 15.3340 - root_mean_squared_erro
r: 3.9159 - val_loss: 37.5498 - val_root_mean_squared_error: 6.1278
Epoch 56/300
3/3 [==============================] - 5s 3s/step - loss: 15.3199 - root_mean_squared_erro
r: 3.9141 - val_loss: 37.5241 - val_root_mean_squared_error: 6.1257
Epoch 57/300
3/3 [==============================] - 4s 2s/step - loss: 15.3044 - root_mean_squared_erro
r: 3.9121 - val_loss: 37.4759 - val_root_mean_squared_error: 6.1218
Epoch 58/300
3/3 [==============================] - 4s 2s/step - loss: 15.2912 - root_mean_squared_erro
r: 3.9104 - val_loss: 37.4389 - val_root_mean_squared_error: 6.1187
Epoch 59/300
3/3 [==============================] - 4s 2s/step - loss: 15.2752 - root_mean_squared_erro
r: 3.9084 - val_loss: 37.4243 - val_root_mean_squared_error: 6.1175
Epoch 60/300
3/3 [==============================] - 4s 2s/step - loss: 15.2613 - root_mean_squared_erro
r: 3.9066 - val_loss: 37.3932 - val_root_mean_squared_error: 6.1150
Epoch 61/300
3/3 [==============================] - 4s 2s/step - loss: 15.2466 - root_mean_squared_erro
r: 3.9047 - val_loss: 37.3582 - val_root_mean_squared_error: 6.1121
Epoch 62/300
3/3 [==============================] - 4s 2s/step - loss: 15.2317 - root_mean_squared_erro
r: 3.9028 - val_loss: 37.3041 - val_root_mean_squared_error: 6.1077
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Epoch 63/300
3/3 [==============================] - 4s 2s/step - loss: 15.2154 - root_mean_squared_erro
r: 3.9007 - val_loss: 37.2532 - val_root_mean_squared_error: 6.1035
Epoch 64/300
3/3 [==============================] - 4s 2s/step - loss: 15.2033 - root_mean_squared_erro
r: 3.8991 - val_loss: 37.2141 - val_root_mean_squared_error: 6.1003
Epoch 65/300
3/3 [==============================] - 4s 2s/step - loss: 15.1868 - root_mean_squared_erro
r: 3.8970 - val_loss: 37.1760 - val_root_mean_squared_error: 6.0972
Epoch 66/300
3/3 [==============================] - 4s 2s/step - loss: 15.1711 - root_mean_squared_erro
r: 3.8950 - val_loss: 37.1377 - val_root_mean_squared_error: 6.0941
Epoch 67/300
3/3 [==============================] - 4s 2s/step - loss: 15.1546 - root_mean_squared_erro
r: 3.8929 - val_loss: 37.0990 - val_root_mean_squared_error: 6.0909
Epoch 68/300
3/3 [==============================] - 4s 2s/step - loss: 15.1372 - root_mean_squared_erro
r: 3.8907 - val_loss: 37.0648 - val_root_mean_squared_error: 6.0881
Epoch 69/300
3/3 [==============================] - 4s 2s/step - loss: 15.1206 - root_mean_squared_erro
r: 3.8885 - val_loss: 37.0396 - val_root_mean_squared_error: 6.0860
Epoch 70/300
3/3 [==============================] - 4s 2s/step - loss: 15.1037 - root_mean_squared_erro
r: 3.8863 - val_loss: 36.9944 - val_root_mean_squared_error: 6.0823
Epoch 71/300
3/3 [==============================] - 5s 3s/step - loss: 15.0866 - root_mean_squared_erro
r: 3.8841 - val_loss: 36.9307 - val_root_mean_squared_error: 6.0771
Epoch 72/300
3/3 [==============================] - 4s 2s/step - loss: 15.0680 - root_mean_squared_erro
r: 3.8818 - val_loss: 36.8772 - val_root_mean_squared_error: 6.0727
Epoch 73/300
3/3 [==============================] - 4s 2s/step - loss: 15.0491 - root_mean_squared_erro
r: 3.8793 - val_loss: 36.8280 - val_root_mean_squared_error: 6.0686
Epoch 74/300
3/3 [==============================] - 4s 2s/step - loss: 15.0309 - root_mean_squared_erro
r: 3.8770 - val_loss: 36.7805 - val_root_mean_squared_error: 6.0647
Epoch 75/300
3/3 [==============================] - 5s 2s/step - loss: 15.0108 - root_mean_squared_erro
r: 3.8744 - val_loss: 36.7357 - val_root_mean_squared_error: 6.0610
Epoch 76/300
3/3 [==============================] - 4s 2s/step - loss: 14.9921 - root_mean_squared_erro
r: 3.8720 - val_loss: 36.6862 - val_root_mean_squared_error: 6.0569
Epoch 77/300
3/3 [==============================] - 5s 2s/step - loss: 14.9715 - root_mean_squared_erro
r: 3.8693 - val_loss: 36.6316 - val_root_mean_squared_error: 6.0524
Epoch 78/300
3/3 [==============================] - 4s 2s/step - loss: 14.9519 - root_mean_squared_erro
r: 3.8668 - val_loss: 36.5727 - val_root_mean_squared_error: 6.0475
Epoch 79/300
3/3 [==============================] - 5s 3s/step - loss: 14.9323 - root_mean_squared_erro
r: 3.8642 - val_loss: 36.5222 - val_root_mean_squared_error: 6.0434
Epoch 80/300
3/3 [==============================] - 4s 2s/step - loss: 14.9121 - root_mean_squared_erro
r: 3.8616 - val_loss: 36.4724 - val_root_mean_squared_error: 6.0392
Epoch 81/300
3/3 [==============================] - 4s 2s/step - loss: 14.8928 - root_mean_squared_erro
r: 3.8591 - val_loss: 36.4211 - val_root_mean_squared_error: 6.0350
Epoch 82/300
3/3 [==============================] - 5s 2s/step - loss: 14.8717 - root_mean_squared_erro
r: 3.8564 - val_loss: 36.3647 - val_root_mean_squared_error: 6.0303
Epoch 83/300
3/3 [==============================] - 4s 2s/step - loss: 14.8503 - root_mean_squared_erro
r: 3.8536 - val_loss: 36.3039 - val_root_mean_squared_error: 6.0253
Epoch 84/300
3/3 [==============================] - 4s 2s/step - loss: 14.8294 - root_mean_squared_erro
r: 3.8509 - val_loss: 36.2402 - val_root_mean_squared_error: 6.0200
Epoch 85/300
3/3 [==============================] - 4s 2s/step - loss: 14.8074 - root_mean_squared_erro
r: 3.8480 - val_loss: 36.1761 - val_root_mean_squared_error: 6.0147
Epoch 86/300
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3/3 [==============================] - 5s 3s/step - loss: 14.7850 - root_mean_squared_erro
r: 3.8451 - val_loss: 36.1118 - val_root_mean_squared_error: 6.0093
Epoch 87/300
3/3 [==============================] - 4s 2s/step - loss: 14.7635 - root_mean_squared_erro
r: 3.8423 - val_loss: 36.0485 - val_root_mean_squared_error: 6.0040
Epoch 88/300
3/3 [==============================] - 4s 2s/step - loss: 14.7405 - root_mean_squared_erro
r: 3.8393 - val_loss: 35.9876 - val_root_mean_squared_error: 5.9990
Epoch 89/300
3/3 [==============================] - 4s 2s/step - loss: 14.7172 - root_mean_squared_erro
r: 3.8363 - val_loss: 35.9252 - val_root_mean_squared_error: 5.9938
Epoch 90/300
3/3 [==============================] - 5s 2s/step - loss: 14.6928 - root_mean_squared_erro
r: 3.8331 - val_loss: 35.8576 - val_root_mean_squared_error: 5.9881
Epoch 91/300
3/3 [==============================] - 5s 2s/step - loss: 14.6699 - root_mean_squared_erro
r: 3.8301 - val_loss: 35.7848 - val_root_mean_squared_error: 5.9820
Epoch 92/300
3/3 [==============================] - 4s 2s/step - loss: 14.6434 - root_mean_squared_erro
r: 3.8267 - val_loss: 35.7119 - val_root_mean_squared_error: 5.9759
Epoch 93/300
3/3 [==============================] - 4s 2s/step - loss: 14.6189 - root_mean_squared_erro
r: 3.8235 - val_loss: 35.6368 - val_root_mean_squared_error: 5.9697
Epoch 94/300
3/3 [==============================] - 5s 3s/step - loss: 14.5918 - root_mean_squared_erro
r: 3.8199 - val_loss: 35.5617 - val_root_mean_squared_error: 5.9634
Epoch 95/300
3/3 [==============================] - 4s 2s/step - loss: 14.5662 - root_mean_squared_erro
r: 3.8166 - val_loss: 35.4866 - val_root_mean_squared_error: 5.9571
Epoch 96/300
3/3 [==============================] - 4s 2s/step - loss: 14.5388 - root_mean_squared_erro
r: 3.8130 - val_loss: 35.4110 - val_root_mean_squared_error: 5.9507
Epoch 97/300
3/3 [==============================] - 5s 3s/step - loss: 14.5121 - root_mean_squared_erro
r: 3.8095 - val_loss: 35.3303 - val_root_mean_squared_error: 5.9439
Epoch 98/300
3/3 [==============================] - 4s 2s/step - loss: 14.4840 - root_mean_squared_erro
r: 3.8058 - val_loss: 35.2476 - val_root_mean_squared_error: 5.9370
Epoch 99/300
3/3 [==============================] - 4s 2s/step - loss: 14.4524 - root_mean_squared_erro
r: 3.8016 - val_loss: 35.1623 - val_root_mean_squared_error: 5.9298
Epoch 100/300
3/3 [==============================] - 4s 2s/step - loss: 14.4256 - root_mean_squared_erro
r: 3.7981 - val_loss: 35.0698 - val_root_mean_squared_error: 5.9220
Epoch 101/300
3/3 [==============================] - 5s 2s/step - loss: 14.3928 - root_mean_squared_erro
r: 3.7938 - val_loss: 34.9776 - val_root_mean_squared_error: 5.9142
Epoch 102/300
3/3 [==============================] - 4s 2s/step - loss: 14.3601 - root_mean_squared_erro
r: 3.7895 - val_loss: 34.8826 - val_root_mean_squared_error: 5.9062
Epoch 103/300
3/3 [==============================] - 4s 2s/step - loss: 14.3278 - root_mean_squared_erro
r: 3.7852 - val_loss: 34.7847 - val_root_mean_squared_error: 5.8979
Epoch 104/300
3/3 [==============================] - 4s 2s/step - loss: 14.2933 - root_mean_squared_erro
r: 3.7806 - val_loss: 34.6824 - val_root_mean_squared_error: 5.8892
Epoch 105/300
3/3 [==============================] - 5s 2s/step - loss: 14.2569 - root_mean_squared_erro
r: 3.7758 - val_loss: 34.5762 - val_root_mean_squared_error: 5.8802
Epoch 106/300
3/3 [==============================] - 4s 2s/step - loss: 14.2236 - root_mean_squared_erro
r: 3.7714 - val_loss: 34.4662 - val_root_mean_squared_error: 5.8708
Epoch 107/300
3/3 [==============================] - 4s 2s/step - loss: 14.1857 - root_mean_squared_erro
r: 3.7664 - val_loss: 34.3536 - val_root_mean_squared_error: 5.8612
Epoch 108/300
3/3 [==============================] - 4s 2s/step - loss: 14.1516 - root_mean_squared_erro
r: 3.7619 - val_loss: 34.2376 - val_root_mean_squared_error: 5.8513
Epoch 109/300
3/3 [==============================] - 5s 3s/step - loss: 14.1135 - root_mean_squared_erro
r: 3.7568 - val_loss: 34.1234 - val_root_mean_squared_error: 5.8415
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r: 3.7568 - val_loss: 34.1234 - val_root_mean_squared_error: 5.8415
Epoch 110/300
3/3 [==============================] - 4s 2s/step - loss: 14.0757 - root_mean_squared_erro
r: 3.7518 - val_loss: 34.0056 - val_root_mean_squared_error: 5.8314
Epoch 111/300
3/3 [==============================] - 4s 2s/step - loss: 14.0375 - root_mean_squared_erro
r: 3.7467 - val_loss: 33.8850 - val_root_mean_squared_error: 5.8211
Epoch 112/300
3/3 [==============================] - 5s 3s/step - loss: 13.9973 - root_mean_squared_erro
r: 3.7413 - val_loss: 33.7609 - val_root_mean_squared_error: 5.8104
Epoch 113/300
3/3 [==============================] - 4s 2s/step - loss: 13.9552 - root_mean_squared_erro
r: 3.7357 - val_loss: 33.6317 - val_root_mean_squared_error: 5.7993
Epoch 114/300
3/3 [==============================] - 4s 2s/step - loss: 13.9123 - root_mean_squared_erro
r: 3.7299 - val_loss: 33.4979 - val_root_mean_squared_error: 5.7877
Epoch 115/300
3/3 [==============================] - 4s 2s/step - loss: 13.8664 - root_mean_squared_erro
r: 3.7238 - val_loss: 33.3631 - val_root_mean_squared_error: 5.7761
Epoch 116/300
3/3 [==============================] - 5s 2s/step - loss: 13.8216 - root_mean_squared_erro
r: 3.7177 - val_loss: 33.2246 - val_root_mean_squared_error: 5.7641
Epoch 117/300
3/3 [==============================] - 4s 2s/step - loss: 13.7751 - root_mean_squared_erro
r: 3.7115 - val_loss: 33.0835 - val_root_mean_squared_error: 5.7518
Epoch 118/300
3/3 [==============================] - 4s 2s/step - loss: 13.7283 - root_mean_squared_erro
r: 3.7052 - val_loss: 32.9354 - val_root_mean_squared_error: 5.7389
Epoch 119/300
3/3 [==============================] - 4s 2s/step - loss: 13.6793 - root_mean_squared_erro
r: 3.6986 - val_loss: 32.7782 - val_root_mean_squared_error: 5.7252
Epoch 120/300
3/3 [==============================] - 4s 2s/step - loss: 13.6237 - root_mean_squared_erro
r: 3.6910 - val_loss: 32.6165 - val_root_mean_squared_error: 5.7111
Epoch 121/300
3/3 [==============================] - 4s 2s/step - loss: 13.5724 - root_mean_squared_erro
r: 3.6841 - val_loss: 32.4514 - val_root_mean_squared_error: 5.6966
Epoch 122/300
3/3 [==============================] - 4s 2s/step - loss: 13.5122 - root_mean_squared_erro
r: 3.6759 - val_loss: 32.2885 - val_root_mean_squared_error: 5.6823
Epoch 123/300
3/3 [==============================] - 4s 2s/step - loss: 13.4565 - root_mean_squared_erro
r: 3.6683 - val_loss: 32.1177 - val_root_mean_squared_error: 5.6672
Epoch 124/300
3/3 [==============================] - 5s 3s/step - loss: 13.3998 - root_mean_squared_erro
r: 3.6606 - val_loss: 31.9409 - val_root_mean_squared_error: 5.6516
Epoch 125/300
3/3 [==============================] - 4s 2s/step - loss: 13.3383 - root_mean_squared_erro
r: 3.6522 - val_loss: 31.7580 - val_root_mean_squared_error: 5.6354
Epoch 126/300
3/3 [==============================] - 4s 2s/step - loss: 13.2710 - root_mean_squared_erro
r: 3.6429 - val_loss: 31.5711 - val_root_mean_squared_error: 5.6188
Epoch 127/300
3/3 [==============================] - 5s 3s/step - loss: 13.2071 - root_mean_squared_erro
r: 3.6342 - val_loss: 31.3716 - val_root_mean_squared_error: 5.6010
Epoch 128/300
3/3 [==============================] - 4s 2s/step - loss: 13.1404 - root_mean_squared_erro
r: 3.6250 - val_loss: 31.1613 - val_root_mean_squared_error: 5.5822
Epoch 129/300
3/3 [==============================] - 4s 2s/step - loss: 13.0685 - root_mean_squared_erro
r: 3.6150 - val_loss: 30.9466 - val_root_mean_squared_error: 5.5630
Epoch 130/300
3/3 [==============================] - 4s 2s/step - loss: 12.9992 - root_mean_squared_erro
r: 3.6054 - val_loss: 30.7223 - val_root_mean_squared_error: 5.5428
Epoch 131/300
3/3 [==============================] - 5s 2s/step - loss: 12.9257 - root_mean_squared_erro
r: 3.5952 - val_loss: 30.4994 - val_root_mean_squared_error: 5.5226
Epoch 132/300
3/3 [==============================] - 4s 2s/step - loss: 12.8490 - root_mean_squared_erro
r: 3.5846 - val_loss: 30.2728 - val_root_mean_squared_error: 5.5021
Epoch 133/300
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Epoch 133/300
3/3 [==============================] - 4s 2s/step - loss: 12.7778 - root_mean_squared_erro
r: 3.5746 - val_loss: 30.0393 - val_root_mean_squared_error: 5.4808
Epoch 134/300
3/3 [==============================] - 4s 2s/step - loss: 12.6922 - root_mean_squared_erro
r: 3.5626 - val_loss: 29.8056 - val_root_mean_squared_error: 5.4594
Epoch 135/300
3/3 [==============================] - 5s 2s/step - loss: 12.6230 - root_mean_squared_erro
r: 3.5529 - val_loss: 29.5595 - val_root_mean_squared_error: 5.4369
Epoch 136/300
3/3 [==============================] - 5s 2s/step - loss: 12.5379 - root_mean_squared_erro
r: 3.5409 - val_loss: 29.3210 - val_root_mean_squared_error: 5.4149
Epoch 137/300
3/3 [==============================] - 4s 2s/step - loss: 12.4597 - root_mean_squared_erro
r: 3.5298 - val_loss: 29.0748 - val_root_mean_squared_error: 5.3921
Epoch 138/300
3/3 [==============================] - 4s 2s/step - loss: 12.3882 - root_mean_squared_erro
r: 3.5197 - val_loss: 28.8177 - val_root_mean_squared_error: 5.3682
Epoch 139/300
3/3 [==============================] - 5s 3s/step - loss: 12.3057 - root_mean_squared_erro
r: 3.5080 - val_loss: 28.5705 - val_root_mean_squared_error: 5.3451
Epoch 140/300
3/3 [==============================] - 4s 2s/step - loss: 12.2303 - root_mean_squared_erro
r: 3.4972 - val_loss: 28.3315 - val_root_mean_squared_error: 5.3227
Epoch 141/300
3/3 [==============================] - 4s 2s/step - loss: 12.1571 - root_mean_squared_erro
r: 3.4867 - val_loss: 28.1061 - val_root_mean_squared_error: 5.3015
Epoch 142/300
3/3 [==============================] - 4s 2s/step - loss: 12.0831 - root_mean_squared_erro
r: 3.4761 - val_loss: 27.8841 - val_root_mean_squared_error: 5.2805
Epoch 143/300
3/3 [==============================] - 5s 2s/step - loss: 12.0170 - root_mean_squared_erro
r: 3.4666 - val_loss: 27.6457 - val_root_mean_squared_error: 5.2579
Epoch 144/300
3/3 [==============================] - 4s 2s/step - loss: 11.9457 - root_mean_squared_erro
r: 3.4563 - val_loss: 27.4096 - val_root_mean_squared_error: 5.2354
Epoch 145/300
3/3 [==============================] - 4s 2s/step - loss: 11.8682 - root_mean_squared_erro
r: 3.4450 - val_loss: 27.1801 - val_root_mean_squared_error: 5.2135
Epoch 146/300
3/3 [==============================] - 4s 2s/step - loss: 11.8013 - root_mean_squared_erro
r: 3.4353 - val_loss: 26.9356 - val_root_mean_squared_error: 5.1899
Epoch 147/300
3/3 [==============================] - 4s 2s/step - loss: 11.7189 - root_mean_squared_erro
r: 3.4233 - val_loss: 26.6792 - val_root_mean_squared_error: 5.1652
Epoch 148/300
3/3 [==============================] - 4s 2s/step - loss: 11.6522 - root_mean_squared_erro
r: 3.4135 - val_loss: 26.4049 - val_root_mean_squared_error: 5.1386
Epoch 149/300
3/3 [==============================] - 4s 2s/step - loss: 11.5763 - root_mean_squared_erro
r: 3.4024 - val_loss: 26.1434 - val_root_mean_squared_error: 5.1131
Epoch 150/300
3/3 [==============================] - 5s 2s/step - loss: 11.4989 - root_mean_squared_erro
r: 3.3910 - val_loss: 25.8907 - val_root_mean_squared_error: 5.0883
Epoch 151/300
3/3 [==============================] - 4s 2s/step - loss: 11.4284 - root_mean_squared_erro
r: 3.3806 - val_loss: 25.6355 - val_root_mean_squared_error: 5.0632
Epoch 152/300
3/3 [==============================] - 4s 2s/step - loss: 11.3363 - root_mean_squared_erro
r: 3.3669 - val_loss: 25.3903 - val_root_mean_squared_error: 5.0389
Epoch 153/300
3/3 [==============================] - 4s 2s/step - loss: 11.2685 - root_mean_squared_erro
r: 3.3569 - val_loss: 25.1424 - val_root_mean_squared_error: 5.0142
Epoch 154/300
3/3 [==============================] - 5s 3s/step - loss: 11.2041 - root_mean_squared_erro
r: 3.3473 - val_loss: 24.8984 - val_root_mean_squared_error: 4.9898
Epoch 155/300
3/3 [==============================] - 4s 2s/step - loss: 11.1377 - root_mean_squared_erro
r: 3.3373 - val_loss: 24.6668 - val_root_mean_squared_error: 4.9666
Epoch 156/300
3/3 [==============================] - 4s 2s/step - loss: 11.0913 - root_mean_squared_erro
```

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r: 3.3304 - val_loss: 24.4419 - val_root_mean_squared_error: 4.9439
Epoch 157/300
3/3 [==============================] - 5s 2s/step - loss: 11.0301 - root_mean_squared_erro
r: 3.3212 - val_loss: 24.2275 - val_root_mean_squared_error: 4.9221
Epoch 158/300
3/3 [==============================] - 4s 2s/step - loss: 10.9698 - root_mean_squared_erro
r: 3.3121 - val_loss: 24.0028 - val_root_mean_squared_error: 4.8993
Epoch 159/300
3/3 [==============================] - 4s 2s/step - loss: 10.9106 - root_mean_squared_erro
r: 3.3031 - val_loss: 23.7645 - val_root_mean_squared_error: 4.8749
Epoch 160/300
3/3 [==============================] - 4s 2s/step - loss: 10.8501 - root_mean_squared_erro
r: 3.2939 - val_loss: 23.5280 - val_root_mean_squared_error: 4.8506
Epoch 161/300
3/3 [==============================] - 5s 2s/step - loss: 10.7750 - root_mean_squared_erro
r: 3.2825 - val_loss: 23.3049 - val_root_mean_squared_error: 4.8275
Epoch 162/300
3/3 [==============================] - 4s 2s/step - loss: 10.7213 - root_mean_squared_erro
r: 3.2743 - val_loss: 23.0939 - val_root_mean_squared_error: 4.8056
Epoch 163/300
3/3 [==============================] - 4s 2s/step - loss: 10.6677 - root_mean_squared_erro
r: 3.2661 - val_loss: 22.8671 - val_root_mean_squared_error: 4.7820
Epoch 164/300
3/3 [==============================] - 4s 2s/step - loss: 10.5960 - root_mean_squared_erro
r: 3.2552 - val_loss: 22.6269 - val_root_mean_squared_error: 4.7568
Epoch 165/300
3/3 [==============================] - 5s 3s/step - loss: 10.5893 - root_mean_squared_erro
r: 3.2541 - val_loss: 22.2457 - val_root_mean_squared_error: 4.7165
Epoch 166/300
3/3 [==============================] - 4s 2s/step - loss: 10.5303 - root_mean_squared_erro
r: 3.2450 - val_loss: 22.0173 - val_root_mean_squared_error: 4.6923
Epoch 167/300
3/3 [==============================] - 4s 2s/step - loss: 10.4917 - root_mean_squared_erro
r: 3.2391 - val_loss: 21.8276 - val_root_mean_squared_error: 4.6720
Epoch 168/300
3/3 [==============================] - 4s 2s/step - loss: 10.4266 - root_mean_squared_erro
r: 3.2290 - val_loss: 21.6045 - val_root_mean_squared_error: 4.6481
Epoch 169/300
3/3 [==============================] - 5s 2s/step - loss: 10.3796 - root_mean_squared_erro
r: 3.2217 - val_loss: 21.3836 - val_root_mean_squared_error: 4.6242
Epoch 170/300
3/3 [==============================] - 4s 2s/step - loss: 10.3253 - root_mean_squared_erro
r: 3.2133 - val_loss: 21.2752 - val_root_mean_squared_error: 4.6125
Epoch 171/300
3/3 [==============================] - 4s 2s/step - loss: 10.2497 - root_mean_squared_erro
r: 3.2015 - val_loss: 21.0976 - val_root_mean_squared_error: 4.5932
Epoch 172/300
3/3 [==============================] - 5s 2s/step - loss: 10.2257 - root_mean_squared_erro
r: 3.1978 - val_loss: 20.9152 - val_root_mean_squared_error: 4.5733
Epoch 173/300
3/3 [==============================] - 4s 2s/step - loss: 10.1646 - root_mean_squared_erro
r: 3.1882 - val_loss: 20.7268 - val_root_mean_squared_error: 4.5527
Epoch 174/300
3/3 [==============================] - 4s 2s/step - loss: 10.1258 - root_mean_squared_erro
r: 3.1821 - val_loss: 20.5615 - val_root_mean_squared_error: 4.5345
Epoch 175/300
3/3 [==============================] - 4s 2s/step - loss: 10.1099 - root_mean_squared_erro
r: 3.1796 - val_loss: 20.4019 - val_root_mean_squared_error: 4.5168
Epoch 176/300
3/3 [==============================] - 5s 2s/step - loss: 10.0766 - root_mean_squared_erro
r: 3.1744 - val_loss: 20.2504 - val_root_mean_squared_error: 4.5000
Epoch 177/300
3/3 [==============================] - 4s 2s/step - loss: 10.0474 - root_mean_squared_erro
r: 3.1698 - val_loss: 20.1057 - val_root_mean_squared_error: 4.4839
Epoch 178/300
3/3 [==============================] - 4s 2s/step - loss: 10.0123 - root_mean_squared_erro
r: 3.1642 - val_loss: 19.9710 - val_root_mean_squared_error: 4.4689
Epoch 179/300
3/3 [==============================] - 4s 2s/step - loss: 9.9866 - root_mean_squared_erro
r: 3.1602 - val_loss: 19.8416 - val_root_mean_squared_error: 4.4544
```

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Epoch 180/300
3/3 [==============================] - 5s 3s/step - loss: 9.9480 - root_mean_squared_erro
r: 3.1540 - val_loss: 19.7051 - val_root_mean_squared_error: 4.4390
Epoch 181/300
3/3 [==============================] - 4s 2s/step - loss: 9.9121 - root_mean_squared_erro
r: 3.1484 - val_loss: 19.5583 - val_root_mean_squared_error: 4.4225
Epoch 182/300
3/3 [==============================] - 4s 2s/step - loss: 9.8786 - root_mean_squared_erro
r: 3.1430 - val_loss: 19.3929 - val_root_mean_squared_error: 4.4037
Epoch 183/300
3/3 [==============================] - 4s 2s/step - loss: 9.8469 - root_mean_squared_erro
r: 3.1380 - val_loss: 19.2254 - val_root_mean_squared_error: 4.3847
Epoch 184/300
3/3 [==============================] - 5s 2s/step - loss: 9.8072 - root_mean_squared_erro
r: 3.1317 - val_loss: 19.0790 - val_root_mean_squared_error: 4.3680
Epoch 185/300
3/3 [==============================] - 4s 2s/step - loss: 9.7765 - root_mean_squared_erro
r: 3.1267 - val_loss: 18.9211 - val_root_mean_squared_error: 4.3498
Epoch 186/300
3/3 [==============================] - 4s 2s/step - loss: 9.7418 - root_mean_squared_erro
r: 3.1212 - val_loss: 18.7729 - val_root_mean_squared_error: 4.3328
Epoch 187/300
3/3 [==============================] - 4s 2s/step - loss: 9.7083 - root_mean_squared_erro
r: 3.1158 - val_loss: 18.6325 - val_root_mean_squared_error: 4.3165
Epoch 188/300
3/3 [==============================] - 5s 2s/step - loss: 9.6822 - root_mean_squared_erro
r: 3.1116 - val_loss: 18.4880 - val_root_mean_squared_error: 4.2998
Epoch 189/300
3/3 [==============================] - 4s 2s/step - loss: 9.6476 - root_mean_squared_erro
r: 3.1061 - val_loss: 18.3666 - val_root_mean_squared_error: 4.2856
Epoch 190/300
3/3 [==============================] - 4s 2s/step - loss: 9.6173 - root_mean_squared_erro
r: 3.1012 - val_loss: 18.2329 - val_root_mean_squared_error: 4.2700
Epoch 191/300
3/3 [==============================] - 4s 2s/step - loss: 9.5834 - root_mean_squared_erro
r: 3.0957 - val_loss: 18.1091 - val_root_mean_squared_error: 4.2555
Epoch 192/300
3/3 [==============================] - 4s 2s/step - loss: 9.5543 - root_mean_squared_erro
r: 3.0910 - val_loss: 17.9857 - val_root_mean_squared_error: 4.2410
Epoch 193/300
3/3 [==============================] - 4s 2s/step - loss: 9.5226 - root_mean_squared_erro
r: 3.0859 - val_loss: 17.8779 - val_root_mean_squared_error: 4.2282
Epoch 194/300
3/3 [==============================] - 4s 2s/step - loss: 9.4918 - root_mean_squared_erro
r: 3.0809 - val_loss: 17.7544 - val_root_mean_squared_error: 4.2136
Epoch 195/300
3/3 [==============================] - 5s 3s/step - loss: 9.4711 - root_mean_squared_erro
r: 3.0775 - val_loss: 17.6095 - val_root_mean_squared_error: 4.1964
Epoch 196/300
3/3 [==============================] - 4s 2s/step - loss: 9.4399 - root_mean_squared_erro
r: 3.0724 - val_loss: 17.5063 - val_root_mean_squared_error: 4.1841
Epoch 197/300
3/3 [==============================] - 4s 2s/step - loss: 9.4149 - root_mean_squared_erro
r: 3.0684 - val_loss: 17.4187 - val_root_mean_squared_error: 4.1736
Epoch 198/300
3/3 [==============================] - 4s 2s/step - loss: 9.3861 - root_mean_squared_erro
r: 3.0637 - val_loss: 17.3528 - val_root_mean_squared_error: 4.1657
Epoch 199/300
3/3 [==============================] - 5s 2s/step - loss: 9.3641 - root_mean_squared_erro
r: 3.0601 - val_loss: 17.2620 - val_root_mean_squared_error: 4.1548
Epoch 200/300
3/3 [==============================] - 4s 2s/step - loss: 9.3390 - root_mean_squared_erro
r: 3.0560 - val_loss: 17.1715 - val_root_mean_squared_error: 4.1439
Epoch 201/300
3/3 [==============================] - 4s 2s/step - loss: 9.3128 - root_mean_squared_erro
r: 3.0517 - val_loss: 17.0842 - val_root_mean_squared_error: 4.1333
Epoch 202/300
3/3 [==============================] - 4s 2s/step - loss: 9.2861 - root_mean_squared_erro
r: 3.0473 - val_loss: 16.9980 - val_root_mean_squared_error: 4.1229
Epoch 203/300
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3/3 [==============================] - 5s 2s/step - loss: 9.2632 - root_mean_squared_erro
r: 3.0436 - val_loss: 16.8909 - val_root_mean_squared_error: 4.1099
Epoch 204/300
3/3 [==============================] - 4s 2s/step - loss: 9.2357 - root_mean_squared_erro
r: 3.0390 - val_loss: 16.7858 - val_root_mean_squared_error: 4.0971
Epoch 205/300
3/3 [==============================] - 4s 2s/step - loss: 9.2143 - root_mean_squared_erro
r: 3.0355 - val_loss: 16.6720 - val_root_mean_squared_error: 4.0831
Epoch 206/300
3/3 [==============================] - 4s 2s/step - loss: 9.1891 - root_mean_squared_erro
r: 3.0314 - val_loss: 16.5611 - val_root_mean_squared_error: 4.0695
Epoch 207/300
3/3 [==============================] - 4s 2s/step - loss: 9.1658 - root_mean_squared_erro
r: 3.0275 - val_loss: 16.4646 - val_root_mean_squared_error: 4.0577
Epoch 208/300
3/3 [==============================] - 4s 2s/step - loss: 9.1434 - root_mean_squared_erro
r: 3.0238 - val_loss: 16.3756 - val_root_mean_squared_error: 4.0467
Epoch 209/300
3/3 [==============================] - 4s 2s/step - loss: 9.1206 - root_mean_squared_erro
r: 3.0200 - val_loss: 16.2802 - val_root_mean_squared_error: 4.0349
Epoch 210/300
3/3 [==============================] - 5s 3s/step - loss: 9.0949 - root_mean_squared_erro
r: 3.0158 - val_loss: 16.1861 - val_root_mean_squared_error: 4.0232
Epoch 211/300
3/3 [==============================] - 4s 2s/step - loss: 9.0770 - root_mean_squared_erro
r: 3.0128 - val_loss: 16.1099 - val_root_mean_squared_error: 4.0137
Epoch 212/300
3/3 [==============================] - 4s 2s/step - loss: 9.0536 - root_mean_squared_erro
r: 3.0089 - val_loss: 16.0616 - val_root_mean_squared_error: 4.0077
Epoch 213/300
3/3 [==============================] - 4s 2s/step - loss: 9.0322 - root_mean_squared_erro
r: 3.0054 - val_loss: 16.0050 - val_root_mean_squared_error: 4.0006
Epoch 214/300
3/3 [==============================] - 5s 2s/step - loss: 9.0122 - root_mean_squared_erro
r: 3.0020 - val_loss: 15.9714 - val_root_mean_squared_error: 3.9964
Epoch 215/300
3/3 [==============================] - 4s 2s/step - loss: 8.9915 - root_mean_squared_erro
r: 2.9986 - val_loss: 15.9515 - val_root_mean_squared_error: 3.9939
Epoch 216/300
3/3 [==============================] - 4s 2s/step - loss: 8.9721 - root_mean_squared_erro
r: 2.9953 - val_loss: 15.9182 - val_root_mean_squared_error: 3.9898
Epoch 217/300
3/3 [==============================] - 4s 2s/step - loss: 8.9550 - root_mean_squared_erro
r: 2.9925 - val_loss: 15.8866 - val_root_mean_squared_error: 3.9858
Epoch 218/300
3/3 [==============================] - 5s 2s/step - loss: 8.9350 - root_mean_squared_erro
r: 2.9891 - val_loss: 15.8675 - val_root_mean_squared_error: 3.9834
Epoch 219/300
3/3 [==============================] - 4s 2s/step - loss: 8.9157 - root_mean_squared_erro
r: 2.9859 - val_loss: 15.8339 - val_root_mean_squared_error: 3.9792
Epoch 220/300
3/3 [==============================] - 4s 2s/step - loss: 8.8955 - root_mean_squared_erro
r: 2.9825 - val_loss: 15.8217 - val_root_mean_squared_error: 3.9776
Epoch 221/300
3/3 [==============================] - 4s 2s/step - loss: 8.8711 - root_mean_squared_erro
r: 2.9784 - val_loss: 15.7783 - val_root_mean_squared_error: 3.9722
Epoch 222/300
3/3 [==============================] - 4s 2s/step - loss: 8.8508 - root_mean_squared_erro
r: 2.9750 - val_loss: 15.7501 - val_root_mean_squared_error: 3.9686
Epoch 223/300
3/3 [==============================] - 4s 2s/step - loss: 8.8315 - root_mean_squared_erro
r: 2.9718 - val_loss: 15.7113 - val_root_mean_squared_error: 3.9638
Epoch 224/300
3/3 [==============================] - 4s 2s/step - loss: 8.8143 - root_mean_squared_erro
r: 2.9689 - val_loss: 15.6804 - val_root_mean_squared_error: 3.9598
Epoch 225/300
3/3 [==============================] - 5s 3s/step - loss: 8.7959 - root_mean_squared_erro
r: 2.9658 - val_loss: 15.6596 - val_root_mean_squared_error: 3.9572
Epoch 226/300
3/3 [==============================] - 4s 2s/step - loss: 8.7781 - root_mean_squared_erro
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r: 2.9628 - val_loss: 15.6212 - val_root_mean_squared_error: 3.9524
Epoch 227/300
3/3 [==============================] - 4s 2s/step - loss: 8.7597 - root_mean_squared_erro
r: 2.9597 - val_loss: 15.6118 - val_root_mean_squared_error: 3.9512
Epoch 228/300
3/3 [==============================] - 4s 2s/step - loss: 8.7426 - root_mean_squared_erro
r: 2.9568 - val_loss: 15.5700 - val_root_mean_squared_error: 3.9459
Epoch 229/300
3/3 [==============================] - 5s 2s/step - loss: 8.7261 - root_mean_squared_erro
r: 2.9540 - val_loss: 15.5162 - val_root_mean_squared_error: 3.9391
Epoch 230/300
3/3 [==============================] - 4s 2s/step - loss: 8.7083 - root_mean_squared_erro
r: 2.9510 - val_loss: 15.4761 - val_root_mean_squared_error: 3.9340
Epoch 231/300
3/3 [==============================] - 5s 2s/step - loss: 8.6907 - root_mean_squared_erro
r: 2.9480 - val_loss: 15.4532 - val_root_mean_squared_error: 3.9311
Epoch 232/300
3/3 [==============================] - 4s 2s/step - loss: 8.6750 - root_mean_squared_erro
r: 2.9453 - val_loss: 15.4434 - val_root_mean_squared_error: 3.9298
Epoch 233/300
3/3 [==============================] - 6s 3s/step - loss: 8.6580 - root_mean_squared_erro
r: 2.9424 - val_loss: 15.4204 - val_root_mean_squared_error: 3.9269
Epoch 234/300
3/3 [==============================] - 4s 2s/step - loss: 8.6431 - root_mean_squared_erro
r: 2.9399 - val_loss: 15.3842 - val_root_mean_squared_error: 3.9223
Epoch 235/300
3/3 [==============================] - 4s 2s/step - loss: 8.6263 - root_mean_squared_erro
r: 2.9371 - val_loss: 15.3731 - val_root_mean_squared_error: 3.9209
Epoch 236/300
3/3 [==============================] - 0s 52ms/step - loss: 8.6115 - root_mean_squared_err
or: 2.9345 - val_loss: 15.3754 - val_root_mean_squared_error: 3.9212
Epoch 237/300
3/3 [==============================] - 5s 3s/step - loss: 8.5965 - root_mean_squared_erro
r: 2.9320 - val_loss: 15.3537 - val_root_mean_squared_error: 3.9184
Epoch 238/300
3/3 [==============================] - 4s 2s/step - loss: 8.5801 - root_mean_squared_erro
r: 2.9292 - val_loss: 15.2956 - val_root_mean_squared_error: 3.9110
Epoch 239/300
3/3 [==============================] - 4s 2s/step - loss: 8.5635 - root_mean_squared_erro
r: 2.9263 - val_loss: 15.2143 - val_root_mean_squared_error: 3.9006
Epoch 240/300
3/3 [==============================] - 4s 2s/step - loss: 8.5452 - root_mean_squared_erro
r: 2.9232 - val_loss: 15.1432 - val_root_mean_squared_error: 3.8914
Epoch 241/300
3/3 [==============================] - 5s 2s/step - loss: 8.5303 - root_mean_squared_erro
r: 2.9207 - val_loss: 15.0775 - val_root_mean_squared_error: 3.8830
Epoch 242/300
3/3 [==============================] - 4s 2s/step - loss: 8.5151 - root_mean_squared_erro
r: 2.9181 - val_loss: 15.0304 - val_root_mean_squared_error: 3.8769
Epoch 243/300
3/3 [==============================] - 4s 2s/step - loss: 8.4971 - root_mean_squared_erro
r: 2.9150 - val_loss: 15.0280 - val_root_mean_squared_error: 3.8766
Epoch 244/300
3/3 [==============================] - 4s 2s/step - loss: 8.4820 - root_mean_squared_erro
r: 2.9124 - val_loss: 15.0146 - val_root_mean_squared_error: 3.8749
Epoch 245/300
3/3 [==============================] - 5s 2s/step - loss: 8.4673 - root_mean_squared_erro
r: 2.9099 - val_loss: 14.9950 - val_root_mean_squared_error: 3.8723
Epoch 246/300
3/3 [==============================] - 4s 2s/step - loss: 8.4524 - root_mean_squared_erro
r: 2.9073 - val_loss: 14.9640 - val_root_mean_squared_error: 3.8683
Epoch 247/300
3/3 [==============================] - 4s 2s/step - loss: 8.4369 - root_mean_squared_erro
r: 2.9046 - val_loss: 14.9018 - val_root_mean_squared_error: 3.8603
Epoch 248/300
3/3 [==============================] - 4s 2s/step - loss: 8.4244 - root_mean_squared_erro
r: 2.9025 - val_loss: 14.8120 - val_root_mean_squared_error: 3.8486
Epoch 249/300
3/3 [==============================] - 6s 3s/step - loss: 8.4063 - root_mean_squared_erro
r: 2.8994 - val_loss: 14.7385 - val_root_mean_squared_error: 3.8391
```

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Epoch 250/300
3/3 [==============================] - 4s 2s/step - loss: 8.3918 - root_mean_squared_erro
r: 2.8969 - val_loss: 14.6701 - val_root_mean_squared_error: 3.8302
Epoch 251/300
3/3 [==============================] - 4s 2s/step - loss: 8.3791 - root_mean_squared_erro
r: 2.8947 - val_loss: 14.6024 - val_root_mean_squared_error: 3.8213
Epoch 252/300
3/3 [==============================] - 6s 3s/step - loss: 8.3621 - root_mean_squared_erro
r: 2.8917 - val_loss: 14.5570 - val_root_mean_squared_error: 3.8154
Epoch 253/300
3/3 [==============================] - 4s 2s/step - loss: 8.3492 - root_mean_squared_erro
r: 2.8895 - val_loss: 14.5348 - val_root_mean_squared_error: 3.8124
Epoch 254/300
3/3 [==============================] - 0s 56ms/step - loss: 8.3356 - root_mean_squared_err
or: 2.8872 - val_loss: 14.5569 - val_root_mean_squared_error: 3.8153
Epoch 255/300
3/3 [==============================] - 0s 65ms/step - loss: 8.3225 - root_mean_squared_err
or: 2.8849 - val_loss: 14.5480 - val_root_mean_squared_error: 3.8142
Epoch 256/300
3/3 [==============================] - 5s 2s/step - loss: 8.3102 - root_mean_squared_erro
r: 2.8827 - val_loss: 14.4911 - val_root_mean_squared_error: 3.8067
Epoch 257/300
3/3 [==============================] - 4s 2s/step - loss: 8.2968 - root_mean_squared_erro
r: 2.8804 - val_loss: 14.4539 - val_root_mean_squared_error: 3.8018
Epoch 258/300
3/3 [==============================] - 5s 2s/step - loss: 8.2835 - root_mean_squared_erro
r: 2.8781 - val_loss: 14.4519 - val_root_mean_squared_error: 3.8016
Epoch 259/300
3/3 [==============================] - 0s 70ms/step - loss: 8.2716 - root_mean_squared_err
or: 2.8760 - val_loss: 14.4624 - val_root_mean_squared_error: 3.8029
Epoch 260/300
3/3 [==============================] - 0s 81ms/step - loss: 8.2597 - root_mean_squared_err
or: 2.8740 - val_loss: 14.4884 - val_root_mean_squared_error: 3.8064
Epoch 261/300
3/3 [==============================] - 0s 71ms/step - loss: 8.2492 - root_mean_squared_err
or: 2.8721 - val_loss: 14.5128 - val_root_mean_squared_error: 3.8096
Epoch 262/300
3/3 [==============================] - 0s 64ms/step - loss: 8.2387 - root_mean_squared_err
or: 2.8703 - val_loss: 14.5031 - val_root_mean_squared_error: 3.8083
Epoch 263/300
3/3 [==============================] - 0s 74ms/step - loss: 8.2253 - root_mean_squared_err
or: 2.8680 - val_loss: 14.5305 - val_root_mean_squared_error: 3.8119
```

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Default and Long, samples = 60
Epoch 1/300
2/2 [==============================] - 8s 4s/step - loss: 16.2521 - root_mean_squared_erro
r: 4.0314 - val_loss: 40.3562 - val_root_mean_squared_error: 6.3527
Epoch 2/300
2/2 [==============================] - 4s 4s/step - loss: 16.2471 - root_mean_squared_erro
r: 4.0308 - val_loss: 40.3489 - val_root_mean_squared_error: 6.3521
Epoch 3/300
2/2 [==============================] - 5s 5s/step - loss: 16.2423 - root_mean_squared_erro
r: 4.0302 - val_loss: 40.3417 - val_root_mean_squared_error: 6.3515
Epoch 4/300
2/2 [==============================] - 4s 4s/step - loss: 16.2374 - root_mean_squared_erro
r: 4.0296 - val_loss: 40.3342 - val_root_mean_squared_error: 6.3509
Epoch 5/300
2/2 [==============================] - 4s 4s/step - loss: 16.2327 - root_mean_squared_erro
r: 4.0290 - val_loss: 40.3267 - val_root_mean_squared_error: 6.3503
Epoch 6/300
2/2 [==============================] - 4s 4s/step - loss: 16.2279 - root_mean_squared_erro
r: 4.0284 - val_loss: 40.3196 - val_root_mean_squared_error: 6.3498
Epoch 7/300
2/2 [==============================] - 5s 5s/step - loss: 16.2233 - root_mean_squared_erro
r: 4.0278 - val_loss: 40.3127 - val_root_mean_squared_error: 6.3492
Epoch 8/300
2/2 [==============================] - 4s 4s/step - loss: 16.2187 - root_mean_squared_erro
r: 4.0272 - val_loss: 40.3059 - val_root_mean_squared_error: 6.3487
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r: 4.0272 - val_loss: 40.3059 - val_root_mean_squared_error: 6.3487
Epoch 9/300
2/2 [==============================] - 4s 4s/step - loss: 16.2143 - root_mean_squared_erro
r: 4.0267 - val_loss: 40.2993 - val_root_mean_squared_error: 6.3482
Epoch 10/300
2/2 [==============================] - 4s 4s/step - loss: 16.2097 - root_mean_squared_erro
r: 4.0261 - val_loss: 40.2927 - val_root_mean_squared_error: 6.3477
Epoch 11/300
2/2 [==============================] - 5s 5s/step - loss: 16.2050 - root_mean_squared_erro
r: 4.0255 - val_loss: 40.2863 - val_root_mean_squared_error: 6.3471
Epoch 12/300
2/2 [==============================] - 4s 4s/step - loss: 16.2008 - root_mean_squared_erro
r: 4.0250 - val_loss: 40.2794 - val_root_mean_squared_error: 6.3466
Epoch 13/300
2/2 [==============================] - 4s 4s/step - loss: 16.1964 - root_mean_squared_erro
r: 4.0245 - val_loss: 40.2727 - val_root_mean_squared_error: 6.3461
Epoch 14/300
2/2 [==============================] - 4s 4s/step - loss: 16.1923 - root_mean_squared_erro
r: 4.0240 - val_loss: 40.2662 - val_root_mean_squared_error: 6.3456
Epoch 15/300
2/2 [==============================] - 5s 5s/step - loss: 16.1882 - root_mean_squared_erro
r: 4.0235 - val_loss: 40.2603 - val_root_mean_squared_error: 6.3451
Epoch 16/300
2/2 [==============================] - 4s 4s/step - loss: 16.1843 - root_mean_squared_erro
r: 4.0230 - val_loss: 40.2549 - val_root_mean_squared_error: 6.3447
Epoch 17/300
2/2 [==============================] - 4s 4s/step - loss: 16.1805 - root_mean_squared_erro
r: 4.0225 - val_loss: 40.2495 - val_root_mean_squared_error: 6.3442
Epoch 18/300
2/2 [==============================] - 4s 4s/step - loss: 16.1765 - root_mean_squared_erro
r: 4.0220 - val_loss: 40.2441 - val_root_mean_squared_error: 6.3438
Epoch 19/300
2/2 [==============================] - 5s 5s/step - loss: 16.1727 - root_mean_squared_erro
r: 4.0215 - val_loss: 40.2387 - val_root_mean_squared_error: 6.3434
Epoch 20/300
2/2 [==============================] - 4s 4s/step - loss: 16.1690 - root_mean_squared_erro
r: 4.0211 - val_loss: 40.2333 - val_root_mean_squared_error: 6.3430
Epoch 21/300
2/2 [==============================] - 4s 4s/step - loss: 16.1654 - root_mean_squared_erro
r: 4.0206 - val_loss: 40.2278 - val_root_mean_squared_error: 6.3425
Epoch 22/300
2/2 [==============================] - 4s 4s/step - loss: 16.1620 - root_mean_squared_erro
r: 4.0202 - val_loss: 40.2224 - val_root_mean_squared_error: 6.3421
Epoch 23/300
2/2 [==============================] - 5s 5s/step - loss: 16.1582 - root_mean_squared_erro
r: 4.0197 - val_loss: 40.2169 - val_root_mean_squared_error: 6.3417
Epoch 24/300
2/2 [==============================] - 4s 4s/step - loss: 16.1548 - root_mean_squared_erro
r: 4.0193 - val_loss: 40.2115 - val_root_mean_squared_error: 6.3413
Epoch 25/300
2/2 [==============================] - 4s 4s/step - loss: 16.1510 - root_mean_squared_erro
r: 4.0188 - val_loss: 40.2063 - val_root_mean_squared_error: 6.3408
Epoch 26/300
2/2 [==============================] - 4s 4s/step - loss: 16.1476 - root_mean_squared_erro
r: 4.0184 - val_loss: 40.2015 - val_root_mean_squared_error: 6.3405
Epoch 27/300
2/2 [==============================] - 5s 5s/step - loss: 16.1447 - root_mean_squared_erro
r: 4.0180 - val_loss: 40.1968 - val_root_mean_squared_error: 6.3401
Epoch 28/300
2/2 [==============================] - 4s 4s/step - loss: 16.1417 - root_mean_squared_erro
r: 4.0177 - val_loss: 40.1924 - val_root_mean_squared_error: 6.3397
Epoch 29/300
2/2 [==============================] - 4s 4s/step - loss: 16.1387 - root_mean_squared_erro
r: 4.0173 - val_loss: 40.1882 - val_root_mean_squared_error: 6.3394
Epoch 30/300
2/2 [==============================] - 5s 5s/step - loss: 16.1358 - root_mean_squared_erro
r: 4.0169 - val_loss: 40.1840 - val_root_mean_squared_error: 6.3391
Epoch 31/300
2/2 [==============================] - 4s 4s/step - loss: 16.1332 - root_mean_squared_erro
r: 4.0166 - val_loss: 40.1800 - val_root_mean_squared_error: 6.3388
Epoch 32/300
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Epoch 32/300
2/2 [==============================] - 4s 4s/step - loss: 16.1305 - root_mean_squared_erro
r: 4.0163 - val_loss: 40.1760 - val_root_mean_squared_error: 6.3385
Epoch 33/300
2/2 [==============================] - 4s 4s/step - loss: 16.1281 - root_mean_squared_erro
r: 4.0160 - val_loss: 40.1726 - val_root_mean_squared_error: 6.3382
Epoch 34/300
2/2 [==============================] - 5s 5s/step - loss: 16.1254 - root_mean_squared_erro
r: 4.0156 - val_loss: 40.1691 - val_root_mean_squared_error: 6.3379
Epoch 35/300
2/2 [==============================] - 5s 5s/step - loss: 16.1230 - root_mean_squared_erro
r: 4.0153 - val_loss: 40.1656 - val_root_mean_squared_error: 6.3376
Epoch 36/300
2/2 [==============================] - 4s 4s/step - loss: 16.1205 - root_mean_squared_erro
r: 4.0150 - val_loss: 40.1622 - val_root_mean_squared_error: 6.3374
Epoch 37/300
2/2 [==============================] - 4s 4s/step - loss: 16.1182 - root_mean_squared_erro
r: 4.0147 - val_loss: 40.1592 - val_root_mean_squared_error: 6.3371
Epoch 38/300
2/2 [==============================] - 5s 5s/step - loss: 16.1156 - root_mean_squared_erro
r: 4.0144 - val_loss: 40.1561 - val_root_mean_squared_error: 6.3369
Epoch 39/300
2/2 [==============================] - 4s 4s/step - loss: 16.1135 - root_mean_squared_erro
r: 4.0142 - val_loss: 40.1531 - val_root_mean_squared_error: 6.3366
Epoch 40/300
2/2 [==============================] - 4s 4s/step - loss: 16.1110 - root_mean_squared_erro
r: 4.0139 - val_loss: 40.1502 - val_root_mean_squared_error: 6.3364
Epoch 41/300
2/2 [==============================] - 4s 4s/step - loss: 16.1086 - root_mean_squared_erro
r: 4.0136 - val_loss: 40.1472 - val_root_mean_squared_error: 6.3362
Epoch 42/300
2/2 [==============================] - 5s 5s/step - loss: 16.1065 - root_mean_squared_erro
r: 4.0133 - val_loss: 40.1443 - val_root_mean_squared_error: 6.3360
Epoch 43/300
2/2 [==============================] - 4s 4s/step - loss: 16.1045 - root_mean_squared_erro
r: 4.0130 - val_loss: 40.1413 - val_root_mean_squared_error: 6.3357
Epoch 44/300
2/2 [==============================] - 4s 4s/step - loss: 16.1022 - root_mean_squared_erro
r: 4.0128 - val_loss: 40.1383 - val_root_mean_squared_error: 6.3355
Epoch 45/300
2/2 [==============================] - 4s 4s/step - loss: 16.1000 - root_mean_squared_erro
r: 4.0125 - val_loss: 40.1354 - val_root_mean_squared_error: 6.3353
Epoch 46/300
2/2 [==============================] - 5s 5s/step - loss: 16.0977 - root_mean_squared_erro
r: 4.0122 - val_loss: 40.1325 - val_root_mean_squared_error: 6.3350
Epoch 47/300
2/2 [==============================] - 5s 4s/step - loss: 16.0955 - root_mean_squared_erro
r: 4.0119 - val_loss: 40.1296 - val_root_mean_squared_error: 6.3348
Epoch 48/300
2/2 [==============================] - 0s 76ms/step - loss: 16.0931 - root_mean_squared_er
ror: 4.0116 - val_loss: 40.1332 - val_root_mean_squared_error: 6.3351
Epoch 49/300
2/2 [==============================] - 0s 94ms/step - loss: 16.0909 - root_mean_squared_er
ror: 4.0114 - val_loss: 40.1305 - val_root_mean_squared_error: 6.3349
Epoch 50/300
2/2 [==============================] - 4s 4s/step - loss: 16.0886 - root_mean_squared_erro
r: 4.0111 - val_loss: 40.1276 - val_root_mean_squared_error: 6.3346
Epoch 51/300
2/2 [==============================] - 4s 4s/step - loss: 16.0865 - root_mean_squared_erro
r: 4.0108 - val_loss: 40.1249 - val_root_mean_squared_error: 6.3344
Epoch 52/300
2/2 [==============================] - 5s 5s/step - loss: 16.0843 - root_mean_squared_erro
r: 4.0105 - val_loss: 40.1222 - val_root_mean_squared_error: 6.3342
Epoch 53/300
2/2 [==============================] - 4s 4s/step - loss: 16.0820 - root_mean_squared_erro
r: 4.0102 - val_loss: 40.1194 - val_root_mean_squared_error: 6.3340
Epoch 54/300
2/2 [==============================] - 4s 4s/step - loss: 16.0796 - root_mean_squared_erro
r: 4.0099 - val_loss: 40.1168 - val_root_mean_squared_error: 6.3338
Epoch 55/300
2/2 [==============================] - 4s 4s/step - loss: 16.0776 - root_mean_squared_erro
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r: 4.0097 - val_loss: 40.1142 - val_root_mean_squared_error: 6.3336
Epoch 56/300
2/2 [==============================] - 5s 5s/step - loss: 16.0755 - root_mean_squared_erro
r: 4.0094 - val_loss: 40.1116 - val_root_mean_squared_error: 6.3334
Epoch 57/300
2/2 [==============================] - 4s 4s/step - loss: 16.0731 - root_mean_squared_erro
r: 4.0091 - val_loss: 40.1090 - val_root_mean_squared_error: 6.3332
Epoch 58/300
2/2 [==============================] - 4s 4s/step - loss: 16.0711 - root_mean_squared_erro
r: 4.0089 - val_loss: 40.1063 - val_root_mean_squared_error: 6.3330
Epoch 59/300
2/2 [==============================] - 4s 4s/step - loss: 16.0687 - root_mean_squared_erro
r: 4.0086 - val_loss: 40.1038 - val_root_mean_squared_error: 6.3328
Epoch 60/300
2/2 [==============================] - 5s 5s/step - loss: 16.0663 - root_mean_squared_erro
r: 4.0083 - val_loss: 40.1020 - val_root_mean_squared_error: 6.3326
Epoch 61/300
2/2 [==============================] - 4s 4s/step - loss: 16.0634 - root_mean_squared_erro
r: 4.0079 - val_loss: 40.0997 - val_root_mean_squared_error: 6.3324
Epoch 62/300
2/2 [==============================] - 4s 4s/step - loss: 16.0610 - root_mean_squared_erro
r: 4.0076 - val_loss: 40.0973 - val_root_mean_squared_error: 6.3322
Epoch 63/300
2/2 [==============================] - 4s 4s/step - loss: 16.0586 - root_mean_squared_erro
r: 4.0073 - val_loss: 40.0950 - val_root_mean_squared_error: 6.3321
Epoch 64/300
2/2 [==============================] - 5s 5s/step - loss: 16.0560 - root_mean_squared_erro
r: 4.0070 - val_loss: 40.0925 - val_root_mean_squared_error: 6.3319
Epoch 65/300
2/2 [==============================] - 4s 4s/step - loss: 16.0536 - root_mean_squared_erro
r: 4.0067 - val_loss: 40.0900 - val_root_mean_squared_error: 6.3317
Epoch 66/300
2/2 [==============================] - 4s 4s/step - loss: 16.0513 - root_mean_squared_erro
r: 4.0064 - val_loss: 40.0877 - val_root_mean_squared_error: 6.3315
Epoch 67/300
2/2 [==============================] - 4s 4s/step - loss: 16.0488 - root_mean_squared_erro
r: 4.0061 - val_loss: 40.0852 - val_root_mean_squared_error: 6.3313
Epoch 68/300
2/2 [==============================] - 5s 5s/step - loss: 16.0465 - root_mean_squared_erro
r: 4.0058 - val_loss: 40.0828 - val_root_mean_squared_error: 6.3311
Epoch 69/300
2/2 [==============================] - 5s 5s/step - loss: 16.0437 - root_mean_squared_erro
r: 4.0055 - val_loss: 40.0806 - val_root_mean_squared_error: 6.3309
Epoch 70/300
2/2 [==============================] - 4s 4s/step - loss: 16.0411 - root_mean_squared_erro
r: 4.0051 - val_loss: 40.0787 - val_root_mean_squared_error: 6.3308
Epoch 71/300
2/2 [==============================] - 4s 4s/step - loss: 16.0389 - root_mean_squared_erro
r: 4.0049 - val_loss: 40.0769 - val_root_mean_squared_error: 6.3306
Epoch 72/300
2/2 [==============================] - 5s 5s/step - loss: 16.0361 - root_mean_squared_erro
r: 4.0045 - val_loss: 40.0750 - val_root_mean_squared_error: 6.3305
Epoch 73/300
2/2 [==============================] - 4s 4s/step - loss: 16.0334 - root_mean_squared_erro
r: 4.0042 - val_loss: 40.0731 - val_root_mean_squared_error: 6.3303
Epoch 74/300
2/2 [==============================] - 4s 4s/step - loss: 16.0308 - root_mean_squared_erro
r: 4.0038 - val_loss: 40.0713 - val_root_mean_squared_error: 6.3302
Epoch 75/300
2/2 [==============================] - 4s 4s/step - loss: 16.0283 - root_mean_squared_erro
r: 4.0035 - val_loss: 40.0695 - val_root_mean_squared_error: 6.3300
Epoch 76/300
2/2 [==============================] - 5s 5s/step - loss: 16.0256 - root_mean_squared_erro
r: 4.0032 - val_loss: 40.0676 - val_root_mean_squared_error: 6.3299
Epoch 77/300
2/2 [==============================] - 4s 4s/step - loss: 16.0229 - root_mean_squared_erro
r: 4.0029 - val_loss: 40.0657 - val_root_mean_squared_error: 6.3298
Epoch 78/300
2/2 [==============================] - 4s 4s/step - loss: 16.0204 - root_mean_squared_erro
r: 4.0026 - val_loss: 40.0639 - val_root_mean_squared_error: 6.3296
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Epoch 79/300
2/2 [==============================] - 4s 4s/step - loss: 16.0176 - root_mean_squared_erro
r: 4.0022 - val_loss: 40.0619 - val_root_mean_squared_error: 6.3294
Epoch 80/300
2/2 [==============================] - 5s 5s/step - loss: 16.0147 - root_mean_squared_erro
r: 4.0018 - val_loss: 40.0600 - val_root_mean_squared_error: 6.3293
Epoch 81/300
2/2 [==============================] - 4s 4s/step - loss: 16.0122 - root_mean_squared_erro
r: 4.0015 - val_loss: 40.0583 - val_root_mean_squared_error: 6.3292
Epoch 82/300
2/2 [==============================] - 4s 4s/step - loss: 16.0092 - root_mean_squared_erro
r: 4.0012 - val_loss: 40.0565 - val_root_mean_squared_error: 6.3290
Epoch 83/300
2/2 [==============================] - 4s 4s/step - loss: 16.0063 - root_mean_squared_erro
r: 4.0008 - val_loss: 40.0549 - val_root_mean_squared_error: 6.3289
Epoch 84/300
2/2 [==============================] - 5s 5s/step - loss: 16.0034 - root_mean_squared_erro
r: 4.0004 - val_loss: 40.0532 - val_root_mean_squared_error: 6.3288
Epoch 85/300
2/2 [==============================] - 4s 4s/step - loss: 16.0006 - root_mean_squared_erro
r: 4.0001 - val_loss: 40.0516 - val_root_mean_squared_error: 6.3286
Epoch 86/300
2/2 [==============================] - 4s 4s/step - loss: 15.9974 - root_mean_squared_erro
r: 3.9997 - val_loss: 40.0499 - val_root_mean_squared_error: 6.3285
Epoch 87/300
2/2 [==============================] - 5s 5s/step - loss: 15.9944 - root_mean_squared_erro
r: 3.9993 - val_loss: 40.0484 - val_root_mean_squared_error: 6.3284
Epoch 88/300
2/2 [==============================] - 5s 5s/step - loss: 15.9914 - root_mean_squared_erro
r: 3.9989 - val_loss: 40.0469 - val_root_mean_squared_error: 6.3283
Epoch 89/300
2/2 [==============================] - 4s 4s/step - loss: 15.9880 - root_mean_squared_erro
r: 3.9985 - val_loss: 40.0453 - val_root_mean_squared_error: 6.3281
Epoch 90/300
2/2 [==============================] - 5s 5s/step - loss: 15.9853 - root_mean_squared_erro
r: 3.9982 - val_loss: 40.0440 - val_root_mean_squared_error: 6.3280
Epoch 91/300
2/2 [==============================] - 5s 5s/step - loss: 15.9817 - root_mean_squared_erro
r: 3.9977 - val_loss: 40.0425 - val_root_mean_squared_error: 6.3279
Epoch 92/300
2/2 [==============================] - 4s 4s/step - loss: 15.9791 - root_mean_squared_erro
r: 3.9974 - val_loss: 40.0412 - val_root_mean_squared_error: 6.3278
Epoch 93/300
2/2 [==============================] - 5s 5s/step - loss: 15.9757 - root_mean_squared_erro
r: 3.9970 - val_loss: 40.0398 - val_root_mean_squared_error: 6.3277
Epoch 94/300
2/2 [==============================] - 4s 4s/step - loss: 15.9727 - root_mean_squared_erro
r: 3.9966 - val_loss: 40.0383 - val_root_mean_squared_error: 6.3276
Epoch 95/300
2/2 [==============================] - 6s 6s/step - loss: 15.9694 - root_mean_squared_erro
r: 3.9962 - val_loss: 40.0367 - val_root_mean_squared_error: 6.3275
Epoch 96/300
2/2 [==============================] - 4s 4s/step - loss: 15.9662 - root_mean_squared_erro
r: 3.9958 - val_loss: 40.0351 - val_root_mean_squared_error: 6.3273
Epoch 97/300
2/2 [==============================] - 4s 4s/step - loss: 15.9629 - root_mean_squared_erro
r: 3.9954 - val_loss: 40.0335 - val_root_mean_squared_error: 6.3272
Epoch 98/300
2/2 [==============================] - 5s 4s/step - loss: 15.9591 - root_mean_squared_erro
r: 3.9949 - val_loss: 40.0319 - val_root_mean_squared_error: 6.3271
Epoch 99/300
2/2 [==============================] - 4s 4s/step - loss: 15.9557 - root_mean_squared_erro
r: 3.9945 - val_loss: 40.0303 - val_root_mean_squared_error: 6.3269
Epoch 100/300
2/2 [==============================] - 5s 5s/step - loss: 15.9518 - root_mean_squared_erro
r: 3.9940 - val_loss: 40.0285 - val_root_mean_squared_error: 6.3268
Epoch 101/300
2/2 [==============================] - 4s 4s/step - loss: 15.9479 - root_mean_squared_erro
r: 3.9935 - val_loss: 40.0265 - val_root_mean_squared_error: 6.3267
Epoch 102/300
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2/2 [==============================] - 4s 4s/step - loss: 15.9445 - root_mean_squared_erro
r: 3.9931 - val_loss: 40.0247 - val_root_mean_squared_error: 6.3265
Epoch 103/300
2/2 [==============================] - 5s 5s/step - loss: 15.9403 - root_mean_squared_erro
r: 3.9925 - val_loss: 40.0229 - val_root_mean_squared_error: 6.3264
Epoch 104/300
2/2 [==============================] - 4s 4s/step - loss: 15.9364 - root_mean_squared_erro
r: 3.9920 - val_loss: 40.0211 - val_root_mean_squared_error: 6.3262
Epoch 105/300
2/2 [==============================] - 4s 4s/step - loss: 15.9324 - root_mean_squared_erro
r: 3.9915 - val_loss: 40.0193 - val_root_mean_squared_error: 6.3261
Epoch 106/300
2/2 [==============================] - 4s 4s/step - loss: 15.9279 - root_mean_squared_erro
r: 3.9910 - val_loss: 40.0175 - val_root_mean_squared_error: 6.3259
Epoch 107/300
2/2 [==============================] - 5s 5s/step - loss: 15.9234 - root_mean_squared_erro
r: 3.9904 - val_loss: 40.0156 - val_root_mean_squared_error: 6.3258
Epoch 108/300
2/2 [==============================] - 4s 4s/step - loss: 15.9194 - root_mean_squared_erro
r: 3.9899 - val_loss: 40.0138 - val_root_mean_squared_error: 6.3256
Epoch 109/300
2/2 [==============================] - 5s 5s/step - loss: 15.9145 - root_mean_squared_erro
r: 3.9893 - val_loss: 40.0118 - val_root_mean_squared_error: 6.3255
Epoch 110/300
2/2 [==============================] - 4s 4s/step - loss: 15.9103 - root_mean_squared_erro
r: 3.9888 - val_loss: 40.0098 - val_root_mean_squared_error: 6.3253
Epoch 111/300
2/2 [==============================] - 5s 5s/step - loss: 15.9057 - root_mean_squared_erro
r: 3.9882 - val_loss: 40.0077 - val_root_mean_squared_error: 6.3252
Epoch 112/300
2/2 [==============================] - 5s 5s/step - loss: 15.9013 - root_mean_squared_erro
r: 3.9876 - val_loss: 40.0054 - val_root_mean_squared_error: 6.3250
Epoch 113/300
2/2 [==============================] - 4s 4s/step - loss: 15.8971 - root_mean_squared_erro
r: 3.9871 - val_loss: 40.0045 - val_root_mean_squared_error: 6.3249
Epoch 114/300
2/2 [==============================] - 4s 4s/step - loss: 15.8924 - root_mean_squared_erro
r: 3.9865 - val_loss: 40.0022 - val_root_mean_squared_error: 6.3247
Epoch 115/300
2/2 [==============================] - 6s 6s/step - loss: 15.8877 - root_mean_squared_erro
r: 3.9859 - val_loss: 39.9967 - val_root_mean_squared_error: 6.3243
Epoch 116/300
2/2 [==============================] - 4s 4s/step - loss: 15.8831 - root_mean_squared_erro
r: 3.9854 - val_loss: 39.9929 - val_root_mean_squared_error: 6.3240
Epoch 117/300
2/2 [==============================] - 5s 5s/step - loss: 15.8785 - root_mean_squared_erro
r: 3.9848 - val_loss: 39.9889 - val_root_mean_squared_error: 6.3237
Epoch 118/300
2/2 [==============================] - 4s 4s/step - loss: 15.8746 - root_mean_squared_erro
r: 3.9843 - val_loss: 39.9846 - val_root_mean_squared_error: 6.3233
Epoch 119/300
2/2 [==============================] - 5s 5s/step - loss: 15.8679 - root_mean_squared_erro
r: 3.9835 - val_loss: 39.9811 - val_root_mean_squared_error: 6.3231
Epoch 120/300
2/2 [==============================] - 0s 96ms/step - loss: 15.8630 - root_mean_squared_er
ror: 3.9828 - val_loss: 39.9830 - val_root_mean_squared_error: 6.3232
Epoch 121/300
2/2 [==============================] - 5s 5s/step - loss: 15.8578 - root_mean_squared_erro
r: 3.9822 - val_loss: 39.9780 - val_root_mean_squared_error: 6.3228
Epoch 122/300
2/2 [==============================] - 4s 4s/step - loss: 15.8532 - root_mean_squared_erro
r: 3.9816 - val_loss: 39.9726 - val_root_mean_squared_error: 6.3224
Epoch 123/300
2/2 [==============================] - 4s 4s/step - loss: 15.8476 - root_mean_squared_erro
r: 3.9809 - val_loss: 39.9631 - val_root_mean_squared_error: 6.3216
Epoch 124/300
2/2 [==============================] - 6s 6s/step - loss: 15.8419 - root_mean_squared_erro
r: 3.9802 - val_loss: 39.9573 - val_root_mean_squared_error: 6.3212
Epoch 125/300
2/2 [==============================] - 5s 5s/step - loss: 15.8367 - root_mean_squared_erro
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r: 3.9795 - val_loss: 39.9511 - val_root_mean_squared_error: 6.3207
Epoch 126/300
2/2 [==============================] - 5s 5s/step - loss: 15.8296 - root_mean_squared_erro
r: 3.9786 - val_loss: 39.9447 - val_root_mean_squared_error: 6.3202
Epoch 127/300
2/2 [==============================] - 4s 4s/step - loss: 15.8230 - root_mean_squared_erro
r: 3.9778 - val_loss: 39.9381 - val_root_mean_squared_error: 6.3197
Epoch 128/300
2/2 [==============================] - 5s 5s/step - loss: 15.8172 - root_mean_squared_erro
r: 3.9771 - val_loss: 39.9307 - val_root_mean_squared_error: 6.3191
Epoch 129/300
2/2 [==============================] - 5s 5s/step - loss: 15.8097 - root_mean_squared_erro
r: 3.9761 - val_loss: 39.9210 - val_root_mean_squared_error: 6.3183
Epoch 130/300
2/2 [==============================] - 4s 4s/step - loss: 15.8023 - root_mean_squared_erro
r: 3.9752 - val_loss: 39.9106 - val_root_mean_squared_error: 6.3175
Epoch 131/300
2/2 [==============================] - 4s 4s/step - loss: 15.7944 - root_mean_squared_erro
r: 3.9742 - val_loss: 39.9000 - val_root_mean_squared_error: 6.3166
Epoch 132/300
2/2 [==============================] - 6s 5s/step - loss: 15.7865 - root_mean_squared_erro
r: 3.9732 - val_loss: 39.8888 - val_root_mean_squared_error: 6.3158
Epoch 133/300
2/2 [==============================] - 4s 4s/step - loss: 15.7790 - root_mean_squared_erro
r: 3.9723 - val_loss: 39.8766 - val_root_mean_squared_error: 6.3148
Epoch 134/300
2/2 [==============================] - 4s 4s/step - loss: 15.7694 - root_mean_squared_erro
r: 3.9711 - val_loss: 39.8640 - val_root_mean_squared_error: 6.3138
Epoch 135/300
2/2 [==============================] - 5s 4s/step - loss: 15.7609 - root_mean_squared_erro
r: 3.9700 - val_loss: 39.8511 - val_root_mean_squared_error: 6.3128
Epoch 136/300
2/2 [==============================] - 5s 5s/step - loss: 15.7527 - root_mean_squared_erro
r: 3.9690 - val_loss: 39.8378 - val_root_mean_squared_error: 6.3117
Epoch 137/300
2/2 [==============================] - 5s 5s/step - loss: 15.7425 - root_mean_squared_erro
r: 3.9677 - val_loss: 39.8241 - val_root_mean_squared_error: 6.3106
Epoch 138/300
2/2 [==============================] - 4s 4s/step - loss: 15.7332 - root_mean_squared_erro
r: 3.9665 - val_loss: 39.8100 - val_root_mean_squared_error: 6.3095
Epoch 139/300
2/2 [==============================] - 4s 4s/step - loss: 15.7234 - root_mean_squared_erro
r: 3.9653 - val_loss: 39.7948 - val_root_mean_squared_error: 6.3083
Epoch 140/300
2/2 [==============================] - 5s 5s/step - loss: 15.7128 - root_mean_squared_erro
r: 3.9639 - val_loss: 39.7787 - val_root_mean_squared_error: 6.3070
Epoch 141/300
2/2 [==============================] - 4s 4s/step - loss: 15.7034 - root_mean_squared_erro
r: 3.9627 - val_loss: 39.7617 - val_root_mean_squared_error: 6.3057
Epoch 142/300
2/2 [==============================] - 4s 4s/step - loss: 15.6923 - root_mean_squared_erro
r: 3.9613 - val_loss: 39.7448 - val_root_mean_squared_error: 6.3043
Epoch 143/300
2/2 [==============================] - 5s 5s/step - loss: 15.6806 - root_mean_squared_erro
r: 3.9599 - val_loss: 39.7320 - val_root_mean_squared_error: 6.3033
Epoch 144/300
2/2 [==============================] - 5s 5s/step - loss: 15.6701 - root_mean_squared_erro
r: 3.9585 - val_loss: 39.7138 - val_root_mean_squared_error: 6.3019
Epoch 145/300
2/2 [==============================] - 4s 4s/step - loss: 15.6579 - root_mean_squared_erro
r: 3.9570 - val_loss: 39.6950 - val_root_mean_squared_error: 6.3004
Epoch 146/300
2/2 [==============================] - 5s 4s/step - loss: 15.6463 - root_mean_squared_erro
r: 3.9555 - val_loss: 39.6756 - val_root_mean_squared_error: 6.2989
Epoch 147/300
2/2 [==============================] - 4s 4s/step - loss: 15.6335 - root_mean_squared_erro
r: 3.9539 - val_loss: 39.6560 - val_root_mean_squared_error: 6.2973
Epoch 148/300
2/2 [==============================] - 5s 5s/step - loss: 15.6220 - root_mean_squared_erro
r: 3.9525 - val_loss: 39.6358 - val_root_mean_squared_error: 6.2957
Epoch 149/300
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Epoch 149/300
2/2 [==============================] - 4s 4s/step - loss: 15.6095 - root_mean_squared_erro
r: 3.9509 - val_loss: 39.6153 - val_root_mean_squared_error: 6.2941
Epoch 150/300
2/2 [==============================] - 4s 4s/step - loss: 15.5973 - root_mean_squared_erro
r: 3.9493 - val_loss: 39.5939 - val_root_mean_squared_error: 6.2924
Epoch 151/300
2/2 [==============================] - 4s 4s/step - loss: 15.5847 - root_mean_squared_erro
r: 3.9477 - val_loss: 39.5720 - val_root_mean_squared_error: 6.2906
Epoch 152/300
2/2 [==============================] - 5s 5s/step - loss: 15.5709 - root_mean_squared_erro
r: 3.9460 - val_loss: 39.5499 - val_root_mean_squared_error: 6.2889
Epoch 153/300
2/2 [==============================] - 4s 4s/step - loss: 15.5579 - root_mean_squared_erro
r: 3.9444 - val_loss: 39.5277 - val_root_mean_squared_error: 6.2871
Epoch 154/300
2/2 [==============================] - 4s 4s/step - loss: 15.5450 - root_mean_squared_erro
r: 3.9427 - val_loss: 39.5053 - val_root_mean_squared_error: 6.2853
Epoch 155/300
2/2 [==============================] - 4s 4s/step - loss: 15.5307 - root_mean_squared_erro
r: 3.9409 - val_loss: 39.4828 - val_root_mean_squared_error: 6.2835
Epoch 156/300
2/2 [==============================] - 5s 5s/step - loss: 15.5177 - root_mean_squared_erro
r: 3.9392 - val_loss: 39.4601 - val_root_mean_squared_error: 6.2817
Epoch 157/300
2/2 [==============================] - 5s 5s/step - loss: 15.5039 - root_mean_squared_erro
r: 3.9375 - val_loss: 39.4369 - val_root_mean_squared_error: 6.2799
Epoch 158/300
2/2 [==============================] - 4s 4s/step - loss: 15.4899 - root_mean_squared_erro
r: 3.9357 - val_loss: 39.4135 - val_root_mean_squared_error: 6.2780
Epoch 159/300
2/2 [==============================] - 4s 4s/step - loss: 15.4758 - root_mean_squared_erro
r: 3.9339 - val_loss: 39.3900 - val_root_mean_squared_error: 6.2761
Epoch 160/300
2/2 [==============================] - 5s 5s/step - loss: 15.4608 - root_mean_squared_erro
r: 3.9320 - val_loss: 39.3659 - val_root_mean_squared_error: 6.2742
Epoch 161/300
2/2 [==============================] - 4s 4s/step - loss: 15.4466 - root_mean_squared_erro
r: 3.9302 - val_loss: 39.3414 - val_root_mean_squared_error: 6.2723
Epoch 162/300
2/2 [==============================] - 4s 4s/step - loss: 15.4301 - root_mean_squared_erro
r: 3.9281 - val_loss: 39.3166 - val_root_mean_squared_error: 6.2703
Epoch 163/300
2/2 [==============================] - 5s 5s/step - loss: 15.4140 - root_mean_squared_erro
r: 3.9261 - val_loss: 39.2904 - val_root_mean_squared_error: 6.2682
Epoch 164/300
2/2 [==============================] - 5s 5s/step - loss: 15.3981 - root_mean_squared_erro
r: 3.9240 - val_loss: 39.2635 - val_root_mean_squared_error: 6.2661
Epoch 165/300
2/2 [==============================] - 4s 4s/step - loss: 15.3809 - root_mean_squared_erro
r: 3.9219 - val_loss: 39.2356 - val_root_mean_squared_error: 6.2638
Epoch 166/300
2/2 [==============================] - 5s 4s/step - loss: 15.3641 - root_mean_squared_erro
r: 3.9197 - val_loss: 39.2072 - val_root_mean_squared_error: 6.2616
Epoch 167/300
2/2 [==============================] - 4s 4s/step - loss: 15.3465 - root_mean_squared_erro
r: 3.9175 - val_loss: 39.1777 - val_root_mean_squared_error: 6.2592
Epoch 168/300
2/2 [==============================] - 5s 5s/step - loss: 15.3294 - root_mean_squared_erro
r: 3.9153 - val_loss: 39.1476 - val_root_mean_squared_error: 6.2568
Epoch 169/300
2/2 [==============================] - 4s 4s/step - loss: 15.3104 - root_mean_squared_erro
r: 3.9128 - val_loss: 39.1169 - val_root_mean_squared_error: 6.2543
Epoch 170/300
2/2 [==============================] - 4s 4s/step - loss: 15.2908 - root_mean_squared_erro
r: 3.9103 - val_loss: 39.0857 - val_root_mean_squared_error: 6.2519
Epoch 171/300
2/2 [==============================] - 4s 4s/step - loss: 15.2728 - root_mean_squared_erro
r: 3.9080 - val_loss: 39.0538 - val_root_mean_squared_error: 6.2493
Epoch 172/300
2/2 [==============================] - 5s 5s/step - loss: 15.2521 - root_mean_squared_erro
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2/2 [==============================] - 5s 5s/step - loss: 15.2521 - root_mean_squared_erro
r: 3.9054 - val_loss: 39.0209 - val_root_mean_squared_error: 6.2467
Epoch 173/300
2/2 [==============================] - 4s 4s/step - loss: 15.2324 - root_mean_squared_erro
r: 3.9029 - val_loss: 38.9865 - val_root_mean_squared_error: 6.2439
Epoch 174/300
2/2 [==============================] - 4s 4s/step - loss: 15.2120 - root_mean_squared_erro
r: 3.9003 - val_loss: 38.9514 - val_root_mean_squared_error: 6.2411
Epoch 175/300
2/2 [==============================] - 4s 4s/step - loss: 15.1906 - root_mean_squared_erro
r: 3.8975 - val_loss: 38.9161 - val_root_mean_squared_error: 6.2383
Epoch 176/300
2/2 [==============================] - 5s 5s/step - loss: 15.1692 - root_mean_squared_erro
r: 3.8948 - val_loss: 38.8800 - val_root_mean_squared_error: 6.2354
Epoch 177/300
2/2 [==============================] - 5s 5s/step - loss: 15.1497 - root_mean_squared_erro
r: 3.8923 - val_loss: 38.8438 - val_root_mean_squared_error: 6.2325
Epoch 178/300
2/2 [==============================] - 4s 4s/step - loss: 15.1268 - root_mean_squared_erro
r: 3.8893 - val_loss: 38.8071 - val_root_mean_squared_error: 6.2295
Epoch 179/300
2/2 [==============================] - 4s 4s/step - loss: 15.1068 - root_mean_squared_erro
r: 3.8867 - val_loss: 38.7695 - val_root_mean_squared_error: 6.2265
Epoch 180/300
2/2 [==============================] - 6s 6s/step - loss: 15.0860 - root_mean_squared_erro
r: 3.8841 - val_loss: 38.7308 - val_root_mean_squared_error: 6.2234
Epoch 181/300
2/2 [==============================] - 4s 4s/step - loss: 15.0633 - root_mean_squared_erro
r: 3.8811 - val_loss: 38.6918 - val_root_mean_squared_error: 6.2203
Epoch 182/300
2/2 [==============================] - 4s 4s/step - loss: 15.0441 - root_mean_squared_erro
r: 3.8787 - val_loss: 38.6519 - val_root_mean_squared_error: 6.2171
Epoch 183/300
2/2 [==============================] - 6s 6s/step - loss: 15.0206 - root_mean_squared_erro
r: 3.8756 - val_loss: 38.6115 - val_root_mean_squared_error: 6.2138
Epoch 184/300
2/2 [==============================] - 4s 4s/step - loss: 14.9982 - root_mean_squared_erro
r: 3.8728 - val_loss: 38.5699 - val_root_mean_squared_error: 6.2105
Epoch 185/300
2/2 [==============================] - 4s 4s/step - loss: 14.9757 - root_mean_squared_erro
r: 3.8699 - val_loss: 38.5267 - val_root_mean_squared_error: 6.2070
Epoch 186/300
2/2 [==============================] - 5s 5s/step - loss: 14.9533 - root_mean_squared_erro
r: 3.8669 - val_loss: 38.4823 - val_root_mean_squared_error: 6.2034
Epoch 187/300
2/2 [==============================] - 5s 5s/step - loss: 14.9314 - root_mean_squared_erro
r: 3.8641 - val_loss: 38.4377 - val_root_mean_squared_error: 6.1998
Epoch 188/300
2/2 [==============================] - 5s 4s/step - loss: 14.9081 - root_mean_squared_erro
r: 3.8611 - val_loss: 38.3929 - val_root_mean_squared_error: 6.1962
Epoch 189/300
2/2 [==============================] - 4s 4s/step - loss: 14.8849 - root_mean_squared_erro
r: 3.8581 - val_loss: 38.3474 - val_root_mean_squared_error: 6.1925
Epoch 190/300
2/2 [==============================] - 4s 4s/step - loss: 14.8611 - root_mean_squared_erro
r: 3.8550 - val_loss: 38.3010 - val_root_mean_squared_error: 6.1888
Epoch 191/300
2/2 [==============================] - 6s 6s/step - loss: 14.8373 - root_mean_squared_erro
r: 3.8519 - val_loss: 38.2536 - val_root_mean_squared_error: 6.1850
Epoch 192/300
2/2 [==============================] - 4s 4s/step - loss: 14.8127 - root_mean_squared_erro
r: 3.8487 - val_loss: 38.2056 - val_root_mean_squared_error: 6.1811
Epoch 193/300
2/2 [==============================] - 4s 4s/step - loss: 14.7889 - root_mean_squared_erro
r: 3.8456 - val_loss: 38.1564 - val_root_mean_squared_error: 6.1771
Epoch 194/300
2/2 [==============================] - 4s 4s/step - loss: 14.7648 - root_mean_squared_erro
r: 3.8425 - val_loss: 38.1061 - val_root_mean_squared_error: 6.1730
Epoch 195/300
2/2 [==============================] - 5s 5s/step - loss: 14.7398 - root_mean_squared_erro
r: 3.8392 - val_loss: 38.0541 - val_root_mean_squared_error: 6.1688
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r: 3.8392 - val_loss: 38.0541 - val_root_mean_squared_error: 6.1668
Epoch 196/300
2/2 [==============================] - 4s 4s/step - loss: 14.7172 - root_mean_squared_erro
r: 3.8363 - val_loss: 37.9998 - val_root_mean_squared_error: 6.1644
Epoch 197/300
2/2 [==============================] - 5s 5s/step - loss: 14.6890 - root_mean_squared_erro
r: 3.8326 - val_loss: 37.9456 - val_root_mean_squared_error: 6.1600
Epoch 198/300
2/2 [==============================] - 4s 4s/step - loss: 14.6654 - root_mean_squared_erro
r: 3.8295 - val_loss: 37.8892 - val_root_mean_squared_error: 6.1554
Epoch 199/300
2/2 [==============================] - 5s 5s/step - loss: 14.6376 - root_mean_squared_erro
r: 3.8259 - val_loss: 37.8306 - val_root_mean_squared_error: 6.1507
Epoch 200/300
2/2 [==============================] - 4s 4s/step - loss: 14.6116 - root_mean_squared_erro
r: 3.8225 - val_loss: 37.7694 - val_root_mean_squared_error: 6.1457
Epoch 201/300
2/2 [==============================] - 4s 4s/step - loss: 14.5844 - root_mean_squared_erro
r: 3.8190 - val_loss: 37.7063 - val_root_mean_squared_error: 6.1405
Epoch 202/300
2/2 [==============================] - 4s 4s/step - loss: 14.5561 - root_mean_squared_erro
r: 3.8153 - val_loss: 37.6422 - val_root_mean_squared_error: 6.1353
Epoch 203/300
2/2 [==============================] - 5s 5s/step - loss: 14.5296 - root_mean_squared_erro
r: 3.8118 - val_loss: 37.5751 - val_root_mean_squared_error: 6.1299
Epoch 204/300
2/2 [==============================] - 4s 4s/step - loss: 14.4997 - root_mean_squared_erro
r: 3.8079 - val_loss: 37.5073 - val_root_mean_squared_error: 6.1243
Epoch 205/300
2/2 [==============================] - 5s 4s/step - loss: 14.4709 - root_mean_squared_erro
r: 3.8041 - val_loss: 37.4382 - val_root_mean_squared_error: 6.1187
Epoch 206/300
2/2 [==============================] - 4s 4s/step - loss: 14.4411 - root_mean_squared_erro
r: 3.8001 - val_loss: 37.3682 - val_root_mean_squared_error: 6.1130
Epoch 207/300
2/2 [==============================] - 5s 5s/step - loss: 14.4139 - root_mean_squared_erro
r: 3.7966 - val_loss: 37.2950 - val_root_mean_squared_error: 6.1070
Epoch 208/300
2/2 [==============================] - 5s 5s/step - loss: 14.3814 - root_mean_squared_erro
r: 3.7923 - val_loss: 37.2210 - val_root_mean_squared_error: 6.1009
Epoch 209/300
2/2 [==============================] - 4s 4s/step - loss: 14.3489 - root_mean_squared_erro
r: 3.7880 - val_loss: 37.1455 - val_root_mean_squared_error: 6.0947
Epoch 210/300
2/2 [==============================] - 4s 4s/step - loss: 14.3209 - root_mean_squared_erro
r: 3.7843 - val_loss: 37.0675 - val_root_mean_squared_error: 6.0883
Epoch 211/300
2/2 [==============================] - 6s 6s/step - loss: 14.2887 - root_mean_squared_erro
r: 3.7800 - val_loss: 36.9888 - val_root_mean_squared_error: 6.0818
Epoch 212/300
2/2 [==============================] - 4s 4s/step - loss: 14.2525 - root_mean_squared_erro
r: 3.7753 - val_loss: 36.9093 - val_root_mean_squared_error: 6.0753
Epoch 213/300
2/2 [==============================] - 4s 4s/step - loss: 14.2229 - root_mean_squared_erro
r: 3.7713 - val_loss: 36.8269 - val_root_mean_squared_error: 6.0685
Epoch 214/300
2/2 [==============================] - 5s 5s/step - loss: 14.1867 - root_mean_squared_erro
r: 3.7665 - val_loss: 36.7439 - val_root_mean_squared_error: 6.0617
Epoch 215/300
2/2 [==============================] - 5s 5s/step - loss: 14.1528 - root_mean_squared_erro
r: 3.7620 - val_loss: 36.6593 - val_root_mean_squared_error: 6.0547
Epoch 216/300
2/2 [==============================] - 4s 4s/step - loss: 14.1170 - root_mean_squared_erro
r: 3.7573 - val_loss: 36.5732 - val_root_mean_squared_error: 6.0476
Epoch 217/300
2/2 [==============================] - 4s 4s/step - loss: 14.0809 - root_mean_squared_erro
r: 3.7525 - val_loss: 36.4862 - val_root_mean_squared_error: 6.0404
Epoch 218/300
2/2 [==============================] - 4s 4s/step - loss: 14.0445 - root_mean_squared_erro
r: 3.7476 - val_loss: 36.3973 - val_root_mean_squared_error: 6.0330
Epoch 219/300
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2/2 [==============================] - 5s 5s/step - loss: 14.0112 - root_mean_squared_erro
r: 3.7432 - val_loss: 36.3061 - val_root_mean_squared_error: 6.0255
Epoch 220/300
2/2 [==============================] - 4s 4s/step - loss: 13.9716 - root_mean_squared_erro
r: 3.7379 - val_loss: 36.2144 - val_root_mean_squared_error: 6.0178
Epoch 221/300
2/2 [==============================] - 4s 4s/step - loss: 13.9358 - root_mean_squared_erro
r: 3.7331 - val_loss: 36.1208 - val_root_mean_squared_error: 6.0101
Epoch 222/300
2/2 [==============================] - 4s 4s/step - loss: 13.8972 - root_mean_squared_erro
r: 3.7279 - val_loss: 36.0265 - val_root_mean_squared_error: 6.0022
Epoch 223/300
2/2 [==============================] - 5s 5s/step - loss: 13.8600 - root_mean_squared_erro
r: 3.7229 - val_loss: 35.9306 - val_root_mean_squared_error: 5.9942
Epoch 224/300
2/2 [==============================] - 4s 4s/step - loss: 13.8220 - root_mean_squared_erro
r: 3.7178 - val_loss: 35.8331 - val_root_mean_squared_error: 5.9861
Epoch 225/300
2/2 [==============================] - 5s 5s/step - loss: 13.7826 - root_mean_squared_erro
r: 3.7125 - val_loss: 35.7347 - val_root_mean_squared_error: 5.9778
Epoch 226/300
2/2 [==============================] - 4s 4s/step - loss: 13.7419 - root_mean_squared_erro
r: 3.7070 - val_loss: 35.6353 - val_root_mean_squared_error: 5.9695
Epoch 227/300
2/2 [==============================] - 5s 5s/step - loss: 13.6992 - root_mean_squared_erro
r: 3.7012 - val_loss: 35.5343 - val_root_mean_squared_error: 5.9611
Epoch 228/300
2/2 [==============================] - 5s 5s/step - loss: 13.6632 - root_mean_squared_erro
r: 3.6964 - val_loss: 35.4292 - val_root_mean_squared_error: 5.9522
Epoch 229/300
2/2 [==============================] - 4s 4s/step - loss: 13.6207 - root_mean_squared_erro
r: 3.6906 - val_loss: 35.3235 - val_root_mean_squared_error: 5.9434
Epoch 230/300
2/2 [==============================] - 4s 4s/step - loss: 13.5782 - root_mean_squared_erro
r: 3.6849 - val_loss: 35.2165 - val_root_mean_squared_error: 5.9343
Epoch 231/300
2/2 [==============================] - 5s 5s/step - loss: 13.5368 - root_mean_squared_erro
r: 3.6792 - val_loss: 35.1076 - val_root_mean_squared_error: 5.9252
Epoch 232/300
2/2 [==============================] - 4s 4s/step - loss: 13.4927 - root_mean_squared_erro
r: 3.6732 - val_loss: 34.9975 - val_root_mean_squared_error: 5.9159
Epoch 233/300
2/2 [==============================] - 4s 4s/step - loss: 13.4505 - root_mean_squared_erro
r: 3.6675 - val_loss: 34.8852 - val_root_mean_squared_error: 5.9064
Epoch 234/300
2/2 [==============================] - 4s 4s/step - loss: 13.4097 - root_mean_squared_erro
r: 3.6619 - val_loss: 34.7705 - val_root_mean_squared_error: 5.8967
Epoch 235/300
2/2 [==============================] - 5s 5s/step - loss: 13.3608 - root_mean_squared_erro
r: 3.6552 - val_loss: 34.6570 - val_root_mean_squared_error: 5.8870
Epoch 236/300
2/2 [==============================] - 4s 4s/step - loss: 13.3199 - root_mean_squared_erro
r: 3.6496 - val_loss: 34.5398 - val_root_mean_squared_error: 5.8771
Epoch 237/300
2/2 [==============================] - 5s 4s/step - loss: 13.2721 - root_mean_squared_erro
r: 3.6431 - val_loss: 34.4215 - val_root_mean_squared_error: 5.8670
Epoch 238/300
2/2 [==============================] - 4s 4s/step - loss: 13.2279 - root_mean_squared_erro
r: 3.6370 - val_loss: 34.3003 - val_root_mean_squared_error: 5.8566
Epoch 239/300
2/2 [==============================] - 6s 6s/step - loss: 13.1859 - root_mean_squared_erro
r: 3.6312 - val_loss: 34.1762 - val_root_mean_squared_error: 5.8460
Epoch 240/300
2/2 [==============================] - 4s 4s/step - loss: 13.1350 - root_mean_squared_erro
r: 3.6242 - val_loss: 34.0529 - val_root_mean_squared_error: 5.8355
Epoch 241/300
2/2 [==============================] - 4s 4s/step - loss: 13.0908 - root_mean_squared_erro
r: 3.6181 - val_loss: 33.9272 - val_root_mean_squared_error: 5.8247
Epoch 242/300
2/2 [==============================] - 5s 5s/step - loss: 13.0394 - root_mean_squared_erro
```

```
r: 3.6110 - val_loss: 33.8017 - val_root_mean_squared_error: 5.8139
Epoch 243/300
2/2 [==============================] - 4s 4s/step - loss: 12.9937 - root_mean_squared_erro
r: 3.6047 - val_loss: 33.6731 - val_root_mean_squared_error: 5.8029
Epoch 244/300
2/2 [==============================] - 4s 4s/step - loss: 12.9482 - root_mean_squared_erro
r: 3.5984 - val_loss: 33.5419 - val_root_mean_squared_error: 5.7915
Epoch 245/300
2/2 [==============================] - 5s 5s/step - loss: 12.8976 - root_mean_squared_erro
r: 3.5913 - val_loss: 33.4103 - val_root_mean_squared_error: 5.7802
Epoch 246/300
2/2 [==============================] - 5s 5s/step - loss: 12.8506 - root_mean_squared_erro
r: 3.5848 - val_loss: 33.2764 - val_root_mean_squared_error: 5.7686
Epoch 247/300
2/2 [==============================] - 4s 4s/step - loss: 12.7960 - root_mean_squared_erro
r: 3.5772 - val_loss: 33.1435 - val_root_mean_squared_error: 5.7570
Epoch 248/300
2/2 [==============================] - 5s 5s/step - loss: 12.7501 - root_mean_squared_erro
r: 3.5707 - val_loss: 33.0063 - val_root_mean_squared_error: 5.7451
Epoch 249/300
2/2 [==============================] - 4s 4s/step - loss: 12.7005 - root_mean_squared_erro
r: 3.5638 - val_loss: 32.8677 - val_root_mean_squared_error: 5.7330
Epoch 250/300
2/2 [==============================] - 5s 5s/step - loss: 12.6500 - root_mean_squared_erro
r: 3.5567 - val_loss: 32.7282 - val_root_mean_squared_error: 5.7209
Epoch 251/300
2/2 [==============================] - 4s 4s/step - loss: 12.5959 - root_mean_squared_erro
r: 3.5491 - val_loss: 32.5885 - val_root_mean_squared_error: 5.7086
Epoch 252/300
2/2 [==============================] - 4s 4s/step - loss: 12.5456 - root_mean_squared_erro
r: 3.5420 - val_loss: 32.4466 - val_root_mean_squared_error: 5.6962
Epoch 253/300
2/2 [==============================] - 4s 4s/step - loss: 12.4951 - root_mean_squared_erro
r: 3.5348 - val_loss: 32.3029 - val_root_mean_squared_error: 5.6836
Epoch 254/300
2/2 [==============================] - 5s 5s/step - loss: 12.4383 - root_mean_squared_erro
r: 3.5268 - val_loss: 32.1593 - val_root_mean_squared_error: 5.6709
Epoch 255/300
2/2 [==============================] - 4s 4s/step - loss: 12.3870 - root_mean_squared_erro
r: 3.5195 - val_loss: 32.0128 - val_root_mean_squared_error: 5.6580
Epoch 256/300
2/2 [==============================] - 4s 4s/step - loss: 12.3378 - root_mean_squared_erro
r: 3.5125 - val_loss: 31.8624 - val_root_mean_squared_error: 5.6447
Epoch 257/300
2/2 [==============================] - 4s 4s/step - loss: 12.2833 - root_mean_squared_erro
r: 3.5048 - val_loss: 31.7116 - val_root_mean_squared_error: 5.6313
Epoch 258/300
2/2 [==============================] - 5s 5s/step - loss: 12.2280 - root_mean_squared_erro
r: 3.4969 - val_loss: 31.5610 - val_root_mean_squared_error: 5.6179
Epoch 259/300
2/2 [==============================] - 5s 4s/step - loss: 12.1725 - root_mean_squared_erro
r: 3.4889 - val_loss: 31.4087 - val_root_mean_squared_error: 5.6043
Epoch 260/300
2/2 [==============================] - 4s 4s/step - loss: 12.1246 - root_mean_squared_erro
r: 3.4820 - val_loss: 31.2522 - val_root_mean_squared_error: 5.5904
Epoch 261/300
2/2 [==============================] - 4s 4s/step - loss: 12.0703 - root_mean_squared_erro
r: 3.4742 - val_loss: 31.0958 - val_root_mean_squared_error: 5.5764
Epoch 262/300
2/2 [==============================] - 5s 5s/step - loss: 12.0151 - root_mean_squared_erro
r: 3.4663 - val_loss: 30.9392 - val_root_mean_squared_error: 5.5623
Epoch 263/300
2/2 [==============================] - 4s 4s/step - loss: 11.9627 - root_mean_squared_erro
r: 3.4587 - val_loss: 30.7815 - val_root_mean_squared_error: 5.5481
Epoch 264/300
2/2 [==============================] - 4s 4s/step - loss: 11.9070 - root_mean_squared_erro
r: 3.4507 - val_loss: 30.6240 - val_root_mean_squared_error: 5.5339
Epoch 265/300
2/2 [==============================] - 4s 4s/step - loss: 11.8508 - root_mean_squared_erro
r: 3.4425 - val_loss: 30.4661 - val_root_mean_squared_error: 5.5196
```

```
Epoch 266/300
2/2 [==============================] - 5s 5s/step - loss: 11.7985 - root_mean_squared_erro
r: 3.4349 - val_loss: 30.3055 - val_root_mean_squared_error: 5.5050
Epoch 267/300
2/2 [==============================] - 4s 4s/step - loss: 11.7439 - root_mean_squared_erro
r: 3.4269 - val_loss: 30.1438 - val_root_mean_squared_error: 5.4903
Epoch 268/300
2/2 [==============================] - 4s 4s/step - loss: 11.6927 - root_mean_squared_erro
r: 3.4195 - val_loss: 29.9796 - val_root_mean_squared_error: 5.4754
Epoch 269/300
2/2 [==============================] - 4s 4s/step - loss: 11.6376 - root_mean_squared_erro
r: 3.4114 - val_loss: 29.8154 - val_root_mean_squared_error: 5.4603
Epoch 270/300
2/2 [==============================] - 5s 5s/step - loss: 11.5820 - root_mean_squared_erro
r: 3.4032 - val_loss: 29.6510 - val_root_mean_squared_error: 5.4453
Epoch 271/300
2/2 [==============================] - 5s 5s/step - loss: 11.5327 - root_mean_squared_erro
r: 3.3960 - val_loss: 29.4844 - val_root_mean_squared_error: 5.4300
Epoch 272/300
2/2 [==============================] - 4s 4s/step - loss: 11.4740 - root_mean_squared_erro
r: 3.3873 - val_loss: 29.3209 - val_root_mean_squared_error: 5.4149
Epoch 273/300
2/2 [==============================] - 4s 4s/step - loss: 11.4212 - root_mean_squared_erro
r: 3.3795 - val_loss: 29.1551 - val_root_mean_squared_error: 5.3995
Epoch 274/300
2/2 [==============================] - 5s 5s/step - loss: 11.3713 - root_mean_squared_erro
r: 3.3721 - val_loss: 28.9875 - val_root_mean_squared_error: 5.3840
Epoch 275/300
2/2 [==============================] - 4s 4s/step - loss: 11.3161 - root_mean_squared_erro
r: 3.3639 - val_loss: 28.8211 - val_root_mean_squared_error: 5.3685
Epoch 276/300
2/2 [==============================] - 4s 4s/step - loss: 11.2610 - root_mean_squared_erro
r: 3.3557 - val_loss: 28.6555 - val_root_mean_squared_error: 5.3531
Epoch 277/300
2/2 [==============================] - 6s 5s/step - loss: 11.2092 - root_mean_squared_erro
r: 3.3480 - val_loss: 28.4882 - val_root_mean_squared_error: 5.3374
Epoch 278/300
2/2 [==============================] - 4s 4s/step - loss: 11.1578 - root_mean_squared_erro
r: 3.3403 - val_loss: 28.3191 - val_root_mean_squared_error: 5.3216
Epoch 279/300
2/2 [==============================] - 4s 4s/step - loss: 11.1054 - root_mean_squared_erro
r: 3.3325 - val_loss: 28.1493 - val_root_mean_squared_error: 5.3056
Epoch 280/300
2/2 [==============================] - 4s 4s/step - loss: 11.0519 - root_mean_squared_erro
r: 3.3244 - val_loss: 27.9795 - val_root_mean_squared_error: 5.2896
Epoch 281/300
2/2 [==============================] - 5s 5s/step - loss: 11.0004 - root_mean_squared_erro
r: 3.3167 - val_loss: 27.8083 - val_root_mean_squared_error: 5.2734
Epoch 282/300
2/2 [==============================] - 5s 4s/step - loss: 10.9517 - root_mean_squared_erro
r: 3.3093 - val_loss: 27.6354 - val_root_mean_squared_error: 5.2569
Epoch 283/300
2/2 [==============================] - 4s 4s/step - loss: 10.8981 - root_mean_squared_erro
r: 3.3012 - val_loss: 27.4640 - val_root_mean_squared_error: 5.2406
Epoch 284/300
2/2 [==============================] - 4s 4s/step - loss: 10.8470 - root_mean_squared_erro
r: 3.2935 - val_loss: 27.2922 - val_root_mean_squared_error: 5.2242
Epoch 285/300
2/2 [==============================] - 5s 5s/step - loss: 10.8005 - root_mean_squared_erro
r: 3.2864 - val_loss: 27.1192 - val_root_mean_squared_error: 5.2076
Epoch 286/300
2/2 [==============================] - 4s 4s/step - loss: 10.7429 - root_mean_squared_erro
r: 3.2776 - val_loss: 26.9505 - val_root_mean_squared_error: 5.1914
Epoch 287/300
2/2 [==============================] - 4s 4s/step - loss: 10.7009 - root_mean_squared_erro
r: 3.2712 - val_loss: 26.7771 - val_root_mean_squared_error: 5.1747
Epoch 288/300
2/2 [==============================] - 5s 5s/step - loss: 10.6471 - root_mean_squared_erro
r: 3.2630 - val_loss: 26.6072 - val_root_mean_squared_error: 5.1582
Epoch 289/300
```

```
2/2 [==============================] - 5s 5s/step - loss: 10.6026 - root_mean_squared_erro
r: 3.2562 - val_loss: 26.4352 - val_root_mean_squared_error: 5.1415
Epoch 290/300
2/2 [==============================] - 4s 4s/step - loss: 10.5463 - root_mean_squared_erro
r: 3.2475 - val_loss: 26.2684 - val_root_mean_squared_error: 5.1253
Epoch 291/300
2/2 [==============================] - 4s 4s/step - loss: 10.5050 - root_mean_squared_erro
r: 3.2411 - val_loss: 26.0964 - val_root_mean_squared_error: 5.1085
Epoch 292/300
2/2 [==============================] - 4s 4s/step - loss: 10.4599 - root_mean_squared_erro
r: 3.2342 - val_loss: 25.9247 - val_root_mean_squared_error: 5.0916
Epoch 293/300
2/2 [==============================] - 5s 5s/step - loss: 10.4092 - root_mean_squared_erro
r: 3.2263 - val_loss: 25.7562 - val_root_mean_squared_error: 5.0751
Epoch 294/300
2/2 [==============================] - 4s 4s/step - loss: 10.3638 - root_mean_squared_erro
r: 3.2193 - val_loss: 25.5876 - val_root_mean_squared_error: 5.0584
Epoch 295/300
2/2 [==============================] - 4s 4s/step - loss: 10.3187 - root_mean_squared_erro
r: 3.2123 - val_loss: 25.4188 - val_root_mean_squared_error: 5.0417
Epoch 296/300
2/2 [==============================] - 4s 4s/step - loss: 10.2772 - root_mean_squared_erro
r: 3.2058 - val_loss: 25.2482 - val_root_mean_squared_error: 5.0248
Epoch 297/300
2/2 [==============================] - 5s 5s/step - loss: 10.2283 - root_mean_squared_erro
r: 3.1982 - val_loss: 25.0817 - val_root_mean_squared_error: 5.0082
Epoch 298/300
2/2 [==============================] - 4s 4s/step - loss: 10.1805 - root_mean_squared_erro
r: 3.1907 - val_loss: 24.9165 - val_root_mean_squared_error: 4.9916
Epoch 299/300
2/2 [==============================] - 4s 4s/step - loss: 10.1457 - root_mean_squared_erro
r: 3.1852 - val_loss: 24.7452 - val_root_mean_squared_error: 4.9745
Epoch 300/300
2/2 [==============================] - 4s 4s/step - loss: 10.1003 - root_mean_squared_erro
r: 3.1781 - val_loss: 24.5777 - val_root_mean_squared_error: 4.9576
```

In [67]:

```
for i, n in enumerate([25, 34, 45, 60]):
  score = min(hists_DeLo[i].history['val_root_mean_squared_error'])

  print(str(score) + " = Default/Long best Val RMSE with samples sized " + str(n))

  error_list.append(score)

  print("\n")
```

```
4.2636590003967285 = Default/Long best Val RMSE with samples sized 25


4.011013031005859 = Default/Long best Val RMSE with samples sized 34


3.8015613555908203 = Default/Long best Val RMSE with samples sized 45


4.957592964172363 = Default/Long best Val RMSE with samples sized 60
```

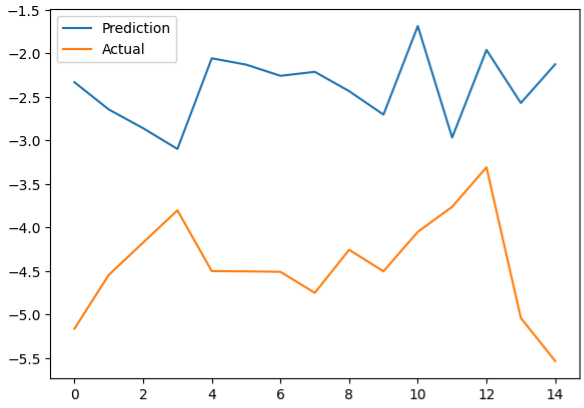
Once again, let's look only at a sample of what's here. The best result, which shows us another reason to be somewhat hopeful, is for the third stock below:

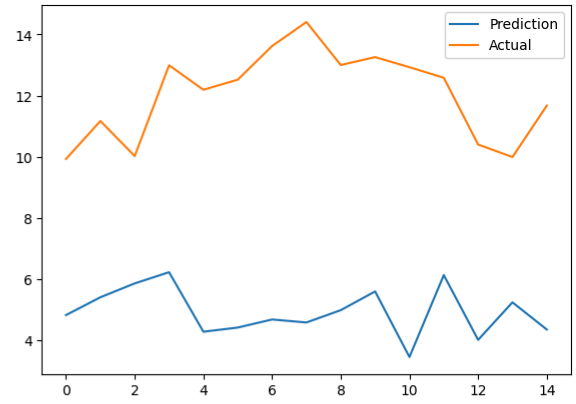
In [66]:

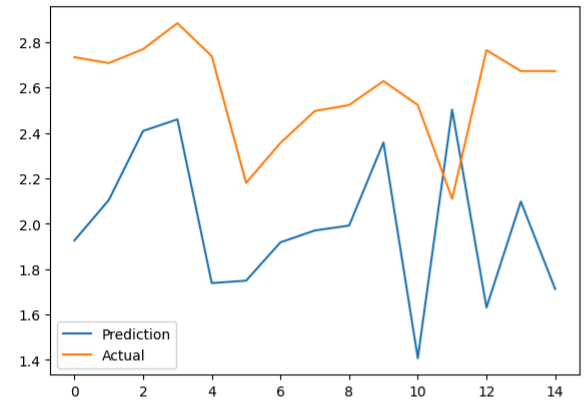
```
pred_plot_all(mod_45_DeLo, X_val45, y_val45)
```

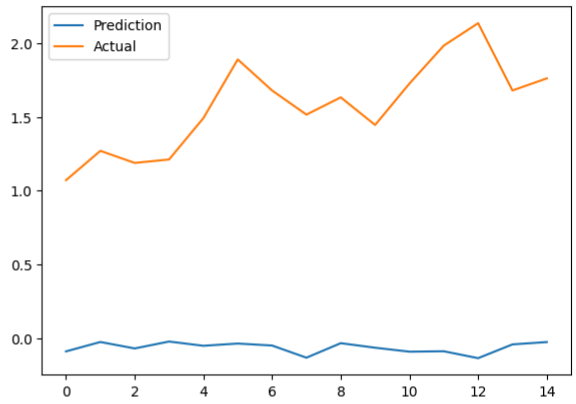
```
1/1 [==============================] - 1s 904ms/step
```

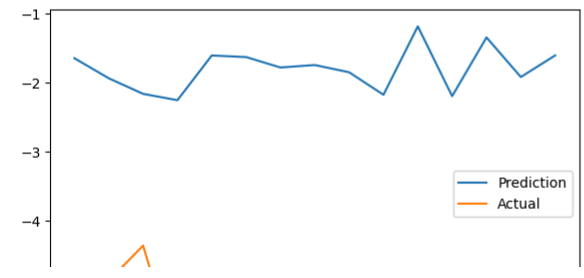
```
WARNING:matplotlib.legend:No artists with labels found to put in legend.  Note that artist
s whose label start with an underscore are ignored when legend() is called with no argumen
t.
1/1 [==============================] - 0s 31ms/step
WARNING:matplotlib.legend:No artists with labels found to put in legend.  Note that artist
s whose label start with an underscore are ignored when legend() is called with no argumen
t.
1/1 [==============================] - 0s 25ms/step
WARNING:matplotlib.legend:No artists with labels found to put in legend.  Note that artist
s whose label start with an underscore are ignored when legend() is called with no argumen
t.
1/1 [==============================] - 0s 42ms/step
WARNING:matplotlib.legend:No artists with labels found to put in legend.  Note that artist
s whose label start with an underscore are ignored when legend() is called with no argumen
t.
1/1 [==============================] - 0s 101ms/step
WARNING:matplotlib.legend:No artists with labels found to put in legend.  Note that artist
s whose label start with an underscore are ignored when legend() is called with no argumen
t.
1/1 [==============================] - 0s 59ms/step
WARNING:matplotlib.legend:No artists with labels found to put in legend.  Note that artist
s whose label start with an underscore are ignored when legend() is called with no argumen
t.
1/1 [==============================] - 0s 52ms/step
WARNING:matplotlib.legend:No artists with labels found to put in legend.  Note that artist
s whose label start with an underscore are ignored when legend() is called with no argumen
t.
```

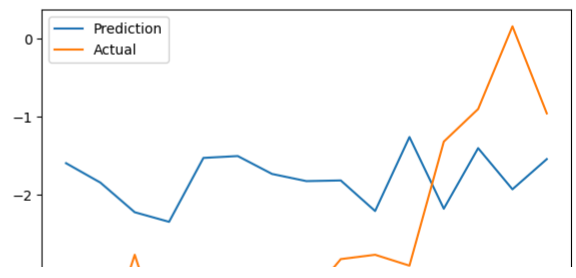


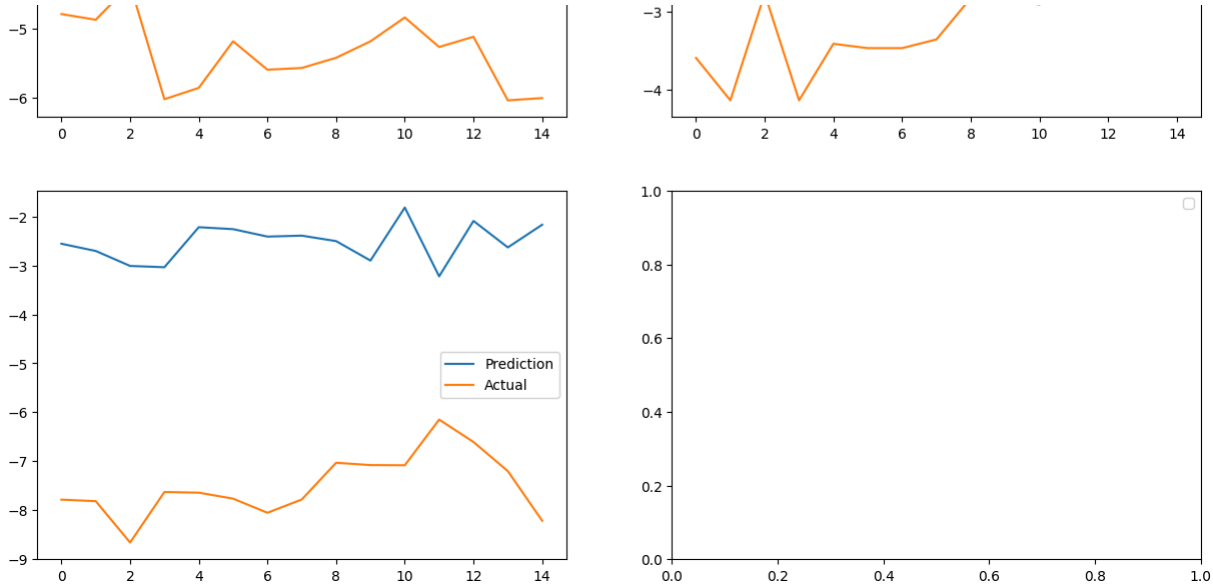












Model Type 3: Fast LR, Short Network

I expected to see a dramatic difference between the fast and slow models. While I did see them in some senses, where I did not see such differences was in the RMSE scores.

In [56]:

```
# Fast and Short models
for i, n in enumerate([25, 34, 45, 60]):
  mods_FaSh[i].add(InputLayer((n,16)))
  mods_FaSh[i].add(GRU(64))
  mods_FaSh[i].add(Dense(16, "relu"))
  mods_FaSh[i].add(Dense(14, "relu"))
  mods_FaSh[i].add(Dense(7, "linear"))

  mods_FaSh[i].compile(loss=MeanSquaredError(),
                       optimizer=Adam(learning_rate=.01),
                       metrics=[RootMeanSquaredError()])

  print("Default and Long, samples = " + str(n))
  hists_FaSh[i] = mods_FaSh[i].fit(the_X_trains[i], the_y_trains[i],
  validation_data=(the_X_vals[i], the_y_vals[i]), epochs = 30,
      callbacks = [cps_FaSh[i], EarlyStopping(patience=4, start_from_epoch=6)])



  print("\n")
  print("\n")
```

```
Default and Long, samples = 25
Epoch 1/30
5/5 [==============================] - 7s 988ms/step - loss: 15.6977 - root_mean_squared_e
rror: 3.9620 - val_loss: 34.1873 - val_root_mean_squared_error: 5.8470
Epoch 2/30
5/5 [==============================] - 3s 864ms/step - loss: 13.0734 - root_mean_squared_e
rror: 3.6157 - val_loss: 26.1225 - val_root_mean_squared_error: 5.1110
Epoch 3/30
5/5 [==============================] - 4s 1s/step - loss: 11.1026 - root_mean_squared_erro
r: 3.3321 - val_loss: 17.5957 - val_root_mean_squared_error: 4.1947
Epoch 4/30
5/5 [==============================] - 4s 1s/step - loss: 10.2534 - root_mean_squared_erro
r: 3.2021 - val_loss: 14.2027 - val_root_mean_squared_error: 3.7686
Epoch 5/30
5/5 [==============================] - 0s 25ms/step - loss: 9.1015 - root_mean_squared_err
or: 3.0169 - val_loss: 17.8214 - val_root_mean_squared_error: 4.2215
Epoch 6/30
5/5 [==============================] - 0s 24ms/step - loss: 8.8687 - root_mean_squared_err
```

```
or: 2.9780 - val_loss: 18.4424 - val_root_mean_squared_error: 4.2945
Epoch 7/30
5/5 [==============================] - 0s 29ms/step - loss: 8.6304 - root_mean_squared_err
or: 2.9378 - val_loss: 16.7116 - val_root_mean_squared_error: 4.0880
Epoch 8/30
5/5 [==============================] - 0s 25ms/step - loss: 8.4519 - root_mean_squared_err
or: 2.9072 - val_loss: 14.2056 - val_root_mean_squared_error: 3.7690
Epoch 9/30
5/5 [==============================] - 4s 876ms/step - loss: 8.3862 - root_mean_squared_er
ror: 2.8959 - val_loss: 12.8197 - val_root_mean_squared_error: 3.5805
Epoch 10/30
5/5 [==============================] - 0s 34ms/step - loss: 8.3008 - root_mean_squared_err
or: 2.8811 - val_loss: 16.5127 - val_root_mean_squared_error: 4.0636
Epoch 11/30
5/5 [==============================] - 0s 33ms/step - loss: 8.5114 - root_mean_squared_err
or: 2.9174 - val_loss: 20.0733 - val_root_mean_squared_error: 4.4803
Epoch 12/30
5/5 [==============================] - 0s 36ms/step - loss: 8.5739 - root_mean_squared_err
or: 2.9281 - val_loss: 16.1745 - val_root_mean_squared_error: 4.0218
Epoch 13/30
5/5 [==============================] - 0s 39ms/step - loss: 8.1594 - root_mean_squared_err
or: 2.8565 - val_loss: 13.2894 - val_root_mean_squared_error: 3.6455



Default and Long, samples = 34
Epoch 1/30
3/3 [==============================] - 7s 2s/step - loss: 12.4585 - root_mean_squared_erro
r: 3.5297 - val_loss: 20.0909 - val_root_mean_squared_error: 4.4823
Epoch 2/30
3/3 [==============================] - 4s 2s/step - loss: 9.4192 - root_mean_squared_erro
r: 3.0691 - val_loss: 12.0567 - val_root_mean_squared_error: 3.4723
Epoch 3/30
3/3 [==============================] - 0s 45ms/step - loss: 8.6075 - root_mean_squared_err
or: 2.9338 - val_loss: 16.3971 - val_root_mean_squared_error: 4.0493
Epoch 4/30
3/3 [==============================] - 0s 46ms/step - loss: 8.5144 - root_mean_squared_err
or: 2.9179 - val_loss: 17.7315 - val_root_mean_squared_error: 4.2109
Epoch 5/30
3/3 [==============================] - 0s 50ms/step - loss: 7.8284 - root_mean_squared_err
or: 2.7979 - val_loss: 15.8729 - val_root_mean_squared_error: 3.9841
Epoch 6/30
3/3 [==============================] - 0s 52ms/step - loss: 7.5679 - root_mean_squared_err
or: 2.7510 - val_loss: 16.2280 - val_root_mean_squared_error: 4.0284
Epoch 7/30
3/3 [==============================] - 0s 44ms/step - loss: 7.5346 - root_mean_squared_err
or: 2.7449 - val_loss: 15.7279 - val_root_mean_squared_error: 3.9658
Epoch 8/30
3/3 [==============================] - 0s 45ms/step - loss: 7.0583 - root_mean_squared_err
or: 2.6567 - val_loss: 17.3987 - val_root_mean_squared_error: 4.1712
Epoch 9/30
3/3 [==============================] - 0s 46ms/step - loss: 6.8218 - root_mean_squared_err
or: 2.6119 - val_loss: 16.9792 - val_root_mean_squared_error: 4.1206
Epoch 10/30
3/3 [==============================] - 0s 48ms/step - loss: 6.8246 - root_mean_squared_err
or: 2.6124 - val_loss: 15.2904 - val_root_mean_squared_error: 3.9103
Epoch 11/30
3/3 [==============================] - 0s 55ms/step - loss: 6.6270 - root_mean_squared_err
or: 2.5743 - val_loss: 17.9071 - val_root_mean_squared_error: 4.2317
Epoch 12/30
3/3 [==============================] - 0s 52ms/step - loss: 6.4106 - root_mean_squared_err
or: 2.5319 - val_loss: 15.4234 - val_root_mean_squared_error: 3.9273
Epoch 13/30
3/3 [==============================] - 0s 44ms/step - loss: 6.1266 - root_mean_squared_err
or: 2.4752 - val_loss: 14.0054 - val_root_mean_squared_error: 3.7424
Epoch 14/30
3/3 [==============================] - 0s 50ms/step - loss: 6.2729 - root_mean_squared_err
or: 2.5046 - val_loss: 18.0273 - val_root_mean_squared_error: 4.2459
Epoch 15/30
```

```
3/3 [==============================] - 4s 2s/step - loss: 6.2938 - root_mean_squared_erro
r: 2.5087 - val_loss: 11.8353 - val_root_mean_squared_error: 3.4402
Epoch 16/30
3/3 [==============================] - 3s 2s/step - loss: 6.3061 - root_mean_squared_erro
r: 2.5112 - val_loss: 10.0295 - val_root_mean_squared_error: 3.1669
Epoch 17/30
3/3 [==============================] - 0s 36ms/step - loss: 6.2814 - root_mean_squared_err
or: 2.5063 - val_loss: 15.2656 - val_root_mean_squared_error: 3.9071
Epoch 18/30
3/3 [==============================] - 0s 39ms/step - loss: 6.1134 - root_mean_squared_err
or: 2.4725 - val_loss: 15.8297 - val_root_mean_squared_error: 3.9787
Epoch 19/30
3/3 [==============================] - 0s 36ms/step - loss: 6.0500 - root_mean_squared_err
or: 2.4597 - val_loss: 11.7103 - val_root_mean_squared_error: 3.4220
Epoch 20/30
3/3 [==============================] - 0s 47ms/step - loss: 5.9942 - root_mean_squared_err
or: 2.4483 - val_loss: 18.6373 - val_root_mean_squared_error: 4.3171
```

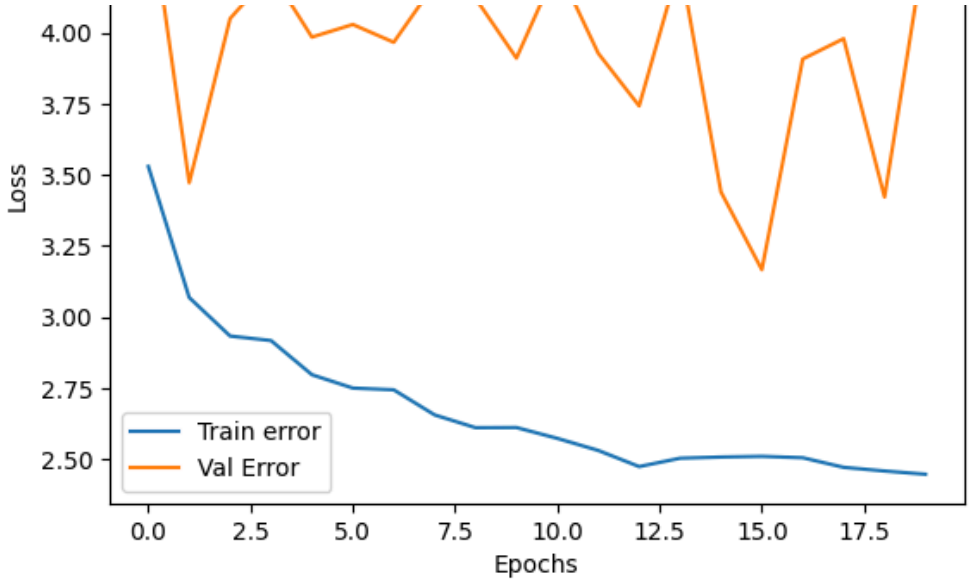
```
Default and Long, samples = 45
Epoch 1/30
3/3 [==============================] - 7s 2s/step - loss: 15.6744 - root_mean_squared_erro
r: 3.9591 - val_loss: 36.0008 - val_root_mean_squared_error: 6.0001
Epoch 2/30
3/3 [==============================] - 5s 2s/step - loss: 13.7010 - root_mean_squared_erro
r: 3.7015 - val_loss: 31.0637 - val_root_mean_squared_error: 5.5735
Epoch 3/30
3/3 [==============================] - 4s 2s/step - loss: 12.3975 - root_mean_squared_erro
r: 3.5210 - val_loss: 26.7329 - val_root_mean_squared_error: 5.1704
Epoch 4/30
3/3 [==============================] - 4s 2s/step - loss: 11.4711 - root_mean_squared_erro
r: 3.3869 - val_loss: 24.0169 - val_root_mean_squared_error: 4.9007
Epoch 5/30
3/3 [==============================] - 4s 2s/step - loss: 10.6434 - root_mean_squared_erro
r: 3.2624 - val_loss: 21.9859 - val_root_mean_squared_error: 4.6889
Epoch 6/30
3/3 [==============================] - 3s 2s/step - loss: 9.8918 - root_mean_squared_erro
r: 3.1451 - val_loss: 19.9874 - val_root_mean_squared_error: 4.4707
Epoch 7/30
3/3 [==============================] - 5s 3s/step - loss: 9.1864 - root_mean_squared_erro
r: 3.0309 - val_loss: 19.1347 - val_root_mean_squared_error: 4.3743
Epoch 8/30
3/3 [==============================] - 4s 2s/step - loss: 8.7359 - root_mean_squared_erro
r: 2.9556 - val_loss: 18.2592 - val_root_mean_squared_error: 4.2731
Epoch 9/30
3/3 [==============================] - 4s 2s/step - loss: 8.3838 - root_mean_squared_erro
r: 2.8955 - val_loss: 16.7900 - val_root_mean_squared_error: 4.0976
Epoch 10/30
3/3 [==============================] - 4s 2s/step - loss: 8.1800 - root_mean_squared_erro
r: 2.8601 - val_loss: 15.1756 - val_root_mean_squared_error: 3.8956
Epoch 11/30
3/3 [==============================] - 4s 2s/step - loss: 7.9242 - root_mean_squared_erro
r: 2.8150 - val_loss: 14.5912 - val_root_mean_squared_error: 3.8198
Epoch 12/30
3/3 [==============================] - 0s 47ms/step - loss: 7.7279 - root_mean_squared_err
or: 2.7799 - val_loss: 15.2836 - val_root_mean_squared_error: 3.9094
Epoch 13/30
3/3 [==============================] - 0s 47ms/step - loss: 7.6718 - root_mean_squared_err
or: 2.7698 - val_loss: 17.0705 - val_root_mean_squared_error: 4.1316
Epoch 14/30
3/3 [==============================] - 0s 53ms/step - loss: 7.4959 - root_mean_squared_err
or: 2.7379 - val_loss: 16.1307 - val_root_mean_squared_error: 4.0163
Epoch 15/30
3/3 [==============================] - 5s 2s/step - loss: 7.4074 - root_mean_squared_erro
r: 2.7216 - val_loss: 13.8968 - val_root_mean_squared_error: 3.7278
Epoch 16/30
3/3 [==============================] - 0s 57ms/step - loss: 7.2197 - root_mean_squared_err
or: 2.6869 - val_loss: 14.4359 - val_root_mean_squared_error: 3.7995
Epoch 17/30
```

```
Epoch 17/30
3/3 [==============================] - 0s 55ms/step - loss: 7.0999 - root_mean_squared_err
or: 2.6646 - val_loss: 16.0653 - val_root_mean_squared_error: 4.0082
Epoch 18/30
3/3 [==============================] - 0s 50ms/step - loss: 6.8863 - root_mean_squared_err
or: 2.6242 - val_loss: 16.2728 - val_root_mean_squared_error: 4.0340
Epoch 19/30
3/3 [==============================] - 0s 57ms/step - loss: 6.8730 - root_mean_squared_err
or: 2.6216 - val_loss: 17.8134 - val_root_mean_squared_error: 4.2206



Default and Long, samples = 60
Epoch 1/30
2/2 [==============================] - 7s 5s/step - loss: 17.8609 - root_mean_squared_erro
r: 4.2262 - val_loss: 38.5109 - val_root_mean_squared_error: 6.2057
Epoch 2/30
2/2 [==============================] - 3s 3s/step - loss: 15.5458 - root_mean_squared_erro
r: 3.9428 - val_loss: 36.0984 - val_root_mean_squared_error: 6.0082
Epoch 3/30
2/2 [==============================] - 4s 3s/step - loss: 14.3145 - root_mean_squared_erro
r: 3.7835 - val_loss: 32.7428 - val_root_mean_squared_error: 5.7221
Epoch 4/30
2/2 [==============================] - 5s 5s/step - loss: 12.9622 - root_mean_squared_erro
r: 3.6003 - val_loss: 28.2308 - val_root_mean_squared_error: 5.3133
Epoch 5/30
2/2 [==============================] - 4s 4s/step - loss: 11.6195 - root_mean_squared_erro
r: 3.4087 - val_loss: 22.6871 - val_root_mean_squared_error: 4.7631
Epoch 6/30
2/2 [==============================] - 4s 4s/step - loss: 10.5763 - root_mean_squared_erro
r: 3.2521 - val_loss: 17.3338 - val_root_mean_squared_error: 4.1634
Epoch 7/30
2/2 [==============================] - 4s 4s/step - loss: 9.6903 - root_mean_squared_erro
r: 3.1129 - val_loss: 13.2073 - val_root_mean_squared_error: 3.6342
Epoch 8/30
2/2 [==============================] - 3s 3s/step - loss: 9.6713 - root_mean_squared_erro
r: 3.1099 - val_loss: 11.2789 - val_root_mean_squared_error: 3.3584
Epoch 9/30
2/2 [==============================] - 0s 80ms/step - loss: 9.5084 - root_mean_squared_err
or: 3.0836 - val_loss: 11.4046 - val_root_mean_squared_error: 3.3771
Epoch 10/30
2/2 [==============================] - 0s 64ms/step - loss: 9.1838 - root_mean_squared_err
or: 3.0305 - val_loss: 13.0781 - val_root_mean_squared_error: 3.6164
Epoch 11/30
2/2 [==============================] - 0s 77ms/step - loss: 8.7999 - root_mean_squared_err
or: 2.9665 - val_loss: 14.6516 - val_root_mean_squared_error: 3.8277
Epoch 12/30
2/2 [==============================] - 0s 77ms/step - loss: 8.6404 - root_mean_squared_err
or: 2.9395 - val_loss: 15.9338 - val_root_mean_squared_error: 3.9917
```

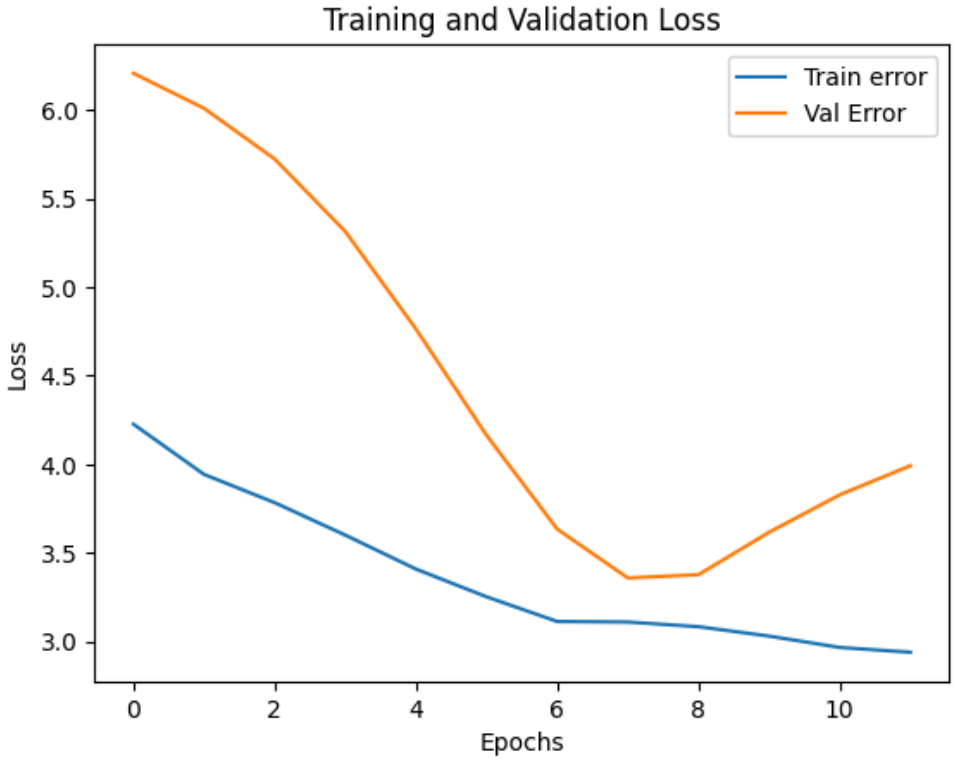
The validation loss curve showed pretty messy behavior in the fast models, either by bouncing away from a path of steady improvement repeatedly or by diverging sharply all at once.

In [81]:

```
# The early patience params I set allowed the model to try to improve
# despite finding a local minima very early on
plot_error(hists_FaSh[1])
```



In [78]:
```
plot_error(hists_FaSh[3])
```



In [68]:
```
for i, n in enumerate([25, 34, 45, 60]):
  score = min(hists_FaSh[i].history['val_root_mean_squared_error'])

  print(str(score) + " = Fast/Short best Val RMSE with samples sized " + str(n))

  error_list.append(score)

  print("\n")
```

```
3.580456018447876 = Fast/Short best Val RMSE with samples sized 25


3.1669328212738037 = Fast/Short best Val RMSE with samples sized 34


3.7278451919555664 = Fast/Short best Val RMSE with samples sized 45
```

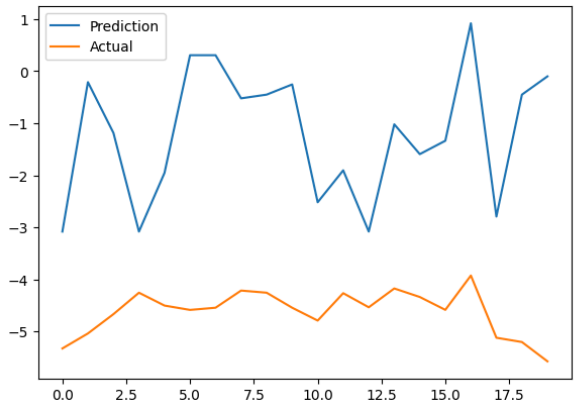
3.727845191955064 = Fast/Short best Val RMSE with samples sized 45

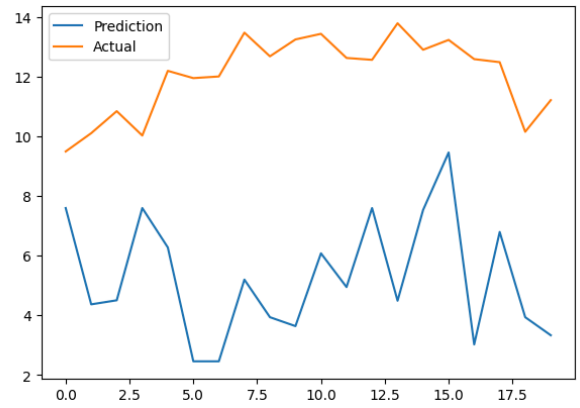
3.358412981033325 = Fast/Short best Val RMSE with samples sized 60

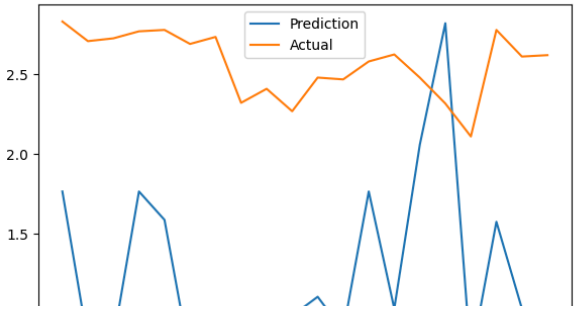
These are still quite far away from being useful on the whole. Let's again look at the best of these, which in this case is the 34 minute model.

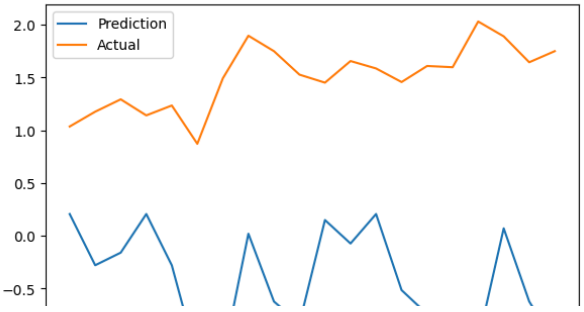
In [82]:
```
pred_plot_all(mod_34_FaSh, X_val34, y_val34)
```

```
1/1 [==============================] - 0s 45ms/step
WARNING:matplotlib.legend:No artists with labels found to put in legend.  Note that artist
s whose label start with an underscore are ignored when legend() is called with no argumen
t.
1/1 [==============================] - 0s 38ms/step
WARNING:matplotlib.legend:No artists with labels found to put in legend.  Note that artist
s whose label start with an underscore are ignored when legend() is called with no argumen
t.
1/1 [==============================] - 0s 43ms/step
WARNING:matplotlib.legend:No artists with labels found to put in legend.  Note that artist
s whose label start with an underscore are ignored when legend() is called with no argumen
t.
1/1 [==============================] - 0s 60ms/step
WARNING:matplotlib.legend:No artists with labels found to put in legend.  Note that artist
s whose label start with an underscore are ignored when legend() is called with no argumen
t.
1/1 [==============================] - 0s 103ms/step
WARNING:matplotlib.legend:No artists with labels found to put in legend.  Note that artist
s whose label start with an underscore are ignored when legend() is called with no argumen
t.
1/1 [==============================] - 0s 98ms/step
WARNING:matplotlib.legend:No artists with labels found to put in legend.  Note that artist
s whose label start with an underscore are ignored when legend() is called with no argumen
t.
1/1 [==============================] - 0s 93ms/step
WARNING:matplotlib.legend:No artists with labels found to put in legend.  Note that artist
s whose label start with an underscore are ignored when legend() is called with no argumen
t.
```









There's something that's both troubling and funny in these graphs. Look at the predictions for the last three stocks: they appear to be identical! I was worried about the models getting lazy and trying to predict the prices to be the same as the last data point in X_val, but I didn't expect it to be lazy and plagairize itself!

Model Type 4: Fast LR and Long Network

By now it should be clear that (at least on our scale) this is not a fruitful endeavor. But I may as well have that fruitlessness quantified.

In [62]:

```
# Fast and Long models
for i, n in enumerate([25, 34, 45, 60]):
  mods_FaLo[i].add(InputLayer((n,16)))
  mods_FaLo[i].add(GRU(64))
  mods_FaLo[i].add(Dense(16, "relu"))
  mods_FaLo[i].add(Dense(16, "relu"))
  mods_FaLo[i].add(Dense(15, "relu"))
  mods_FaLo[i].add(Dense(14, "relu"))
  mods_FaLo[i].add(Dense(7, "linear"))

  mods_FaLo[i].compile(loss=MeanSquaredError(),
                       optimizer=Adam(learning_rate=.01),
                       metrics=[RootMeanSquaredError()])

  print("Default and Long, samples = " + str(n))
  hists_FaLo[i] = mods_FaLo[i].fit(the_X_trains[i], the_y_trains[i],
  validation_data=(the_X_vals[i], the_y_vals[i]), epochs = 30,
      callbacks = [cps_FaLo[i], EarlyStopping(patience=4, start_from_epoch=6)])
```

```
    print("\n")
    print("\n")
```

```
Default and Long, samples = 25
Epoch 1/30
5/5 [==============================] - 7s 1s/step - loss: 13.4422 - root_mean_squared_erro
r: 3.6664 - val_loss: 22.0102 - val_root_mean_squared_error: 4.6915
Epoch 2/30
5/5 [==============================] - 5s 1s/step - loss: 9.9910 - root_mean_squared_erro
r: 3.1608 - val_loss: 17.6162 - val_root_mean_squared_error: 4.1972
Epoch 3/30
5/5 [==============================] - 0s 34ms/step - loss: 8.9459 - root_mean_squared_err
or: 2.9910 - val_loss: 22.4650 - val_root_mean_squared_error: 4.7397
Epoch 4/30
5/5 [==============================] - 4s 937ms/step - loss: 9.3141 - root_mean_squared_er
ror: 3.0519 - val_loss: 15.8657 - val_root_mean_squared_error: 3.9832
Epoch 5/30
5/5 [==============================] - 4s 935ms/step - loss: 8.6880 - root_mean_squared_er
ror: 2.9475 - val_loss: 8.3665 - val_root_mean_squared_error: 2.8925
Epoch 6/30
5/5 [==============================] - 0s 27ms/step - loss: 9.4225 - root_mean_squared_err
or: 3.0696 - val_loss: 12.2641 - val_root_mean_squared_error: 3.5020
Epoch 7/30
5/5 [==============================] - 0s 24ms/step - loss: 8.7275 - root_mean_squared_err
or: 2.9542 - val_loss: 11.7900 - val_root_mean_squared_error: 3.4337
Epoch 8/30
5/5 [==============================] - 0s 23ms/step - loss: 9.2361 - root_mean_squared_err
or: 3.0391 - val_loss: 11.4785 - val_root_mean_squared_error: 3.3880
Epoch 9/30
5/5 [==============================] - 0s 28ms/step - loss: 8.3816 - root_mean_squared_err
or: 2.8951 - val_loss: 18.2116 - val_root_mean_squared_error: 4.2675
Epoch 10/30
5/5 [==============================] - 0s 24ms/step - loss: 8.7606 - root_mean_squared_err
or: 2.9598 - val_loss: 22.2618 - val_root_mean_squared_error: 4.7182
Epoch 11/30
5/5 [==============================] - 0s 24ms/step - loss: 9.1491 - root_mean_squared_err
or: 3.0247 - val_loss: 20.6822 - val_root_mean_squared_error: 4.5478
Epoch 12/30
5/5 [==============================] - 0s 25ms/step - loss: 8.3928 - root_mean_squared_err
or: 2.8970 - val_loss: 11.0445 - val_root_mean_squared_error: 3.3233
Epoch 13/30
5/5 [==============================] - 0s 23ms/step - loss: 9.1150 - root_mean_squared_err
or: 3.0191 - val_loss: 13.1352 - val_root_mean_squared_error: 3.6242
Epoch 14/30
5/5 [==============================] - 0s 27ms/step - loss: 8.2706 - root_mean_squared_err
or: 2.8759 - val_loss: 20.8424 - val_root_mean_squared_error: 4.5653
Epoch 15/30
5/5 [==============================] - 0s 29ms/step - loss: 8.8697 - root_mean_squared_err
or: 2.9782 - val_loss: 22.2677 - val_root_mean_squared_error: 4.7189
Epoch 16/30
5/5 [==============================] - 0s 28ms/step - loss: 8.6422 - root_mean_squared_err
or: 2.9398 - val_loss: 17.3802 - val_root_mean_squared_error: 4.1690
```

```
Default and Long, samples = 34
Epoch 1/30
3/3 [==============================] - 8s 2s/step - loss: 13.7646 - root_mean_squared_erro
r: 3.7101 - val_loss: 26.5008 - val_root_mean_squared_error: 5.1479
Epoch 2/30
3/3 [==============================] - 5s 2s/step - loss: 10.7965 - root_mean_squared_erro
r: 3.2858 - val_loss: 19.5714 - val_root_mean_squared_error: 4.4240
Epoch 3/30
3/3 [==============================] - 0s 64ms/step - loss: 9.7728 - root_mean_squared_err
or: 3.1262 - val_loss: 20.7789 - val_root_mean_squared_error: 4.5584
Epoch 4/30
3/3 [==============================] - 0s 70ms/step - loss: 8.9951 - root_mean_squared_err
or: 2.9992 - val_loss: 24.0575 - val_root_mean_squared_error: 4.9048
Epoch 5/30
```

```
3/3 [==============================] - 0s 71ms/step - loss: 8.6335 - root_mean_squared_err
or: 2.9383 - val_loss: 21.2277 - val_root_mean_squared_error: 4.6074
Epoch 6/30
3/3 [==============================] - 4s 2s/step - loss: 7.9906 - root_mean_squared_erro
r: 2.8268 - val_loss: 16.3447 - val_root_mean_squared_error: 4.0429
Epoch 7/30
3/3 [==============================] - 0s 36ms/step - loss: 7.8061 - root_mean_squared_err
or: 2.7939 - val_loss: 16.5860 - val_root_mean_squared_error: 4.0726
Epoch 8/30
3/3 [==============================] - 0s 46ms/step - loss: 7.4967 - root_mean_squared_err
or: 2.7380 - val_loss: 19.9159 - val_root_mean_squared_error: 4.4627
Epoch 9/30
3/3 [==============================] - 0s 44ms/step - loss: 7.2432 - root_mean_squared_err
or: 2.6913 - val_loss: 17.2756 - val_root_mean_squared_error: 4.1564
Epoch 10/30
3/3 [==============================] - 4s 2s/step - loss: 6.8812 - root_mean_squared_erro
r: 2.6232 - val_loss: 16.3204 - val_root_mean_squared_error: 4.0399
Epoch 11/30
3/3 [==============================] - 4s 2s/step - loss: 7.3093 - root_mean_squared_erro
r: 2.7036 - val_loss: 15.3487 - val_root_mean_squared_error: 3.9177
Epoch 12/30
3/3 [==============================] - 0s 64ms/step - loss: 6.9781 - root_mean_squared_err
or: 2.6416 - val_loss: 19.8067 - val_root_mean_squared_error: 4.4505
Epoch 13/30
3/3 [==============================] - 0s 66ms/step - loss: 6.9922 - root_mean_squared_err
or: 2.6443 - val_loss: 16.7818 - val_root_mean_squared_error: 4.0966
Epoch 14/30
3/3 [==============================] - 0s 53ms/step - loss: 6.5596 - root_mean_squared_err
or: 2.5612 - val_loss: 18.0691 - val_root_mean_squared_error: 4.2508
Epoch 15/30
3/3 [==============================] - 0s 65ms/step - loss: 6.3130 - root_mean_squared_err
or: 2.5126 - val_loss: 22.5266 - val_root_mean_squared_error: 4.7462



Default and Long, samples = 45
Epoch 1/30
3/3 [==============================] - 9s 3s/step - loss: 15.8988 - root_mean_squared_erro
r: 3.9873 - val_loss: 37.9653 - val_root_mean_squared_error: 6.1616
Epoch 2/30
3/3 [==============================] - 5s 2s/step - loss: 15.3273 - root_mean_squared_erro
r: 3.9150 - val_loss: 35.8744 - val_root_mean_squared_error: 5.9895
Epoch 3/30
3/3 [==============================] - 4s 2s/step - loss: 14.3168 - root_mean_squared_erro
r: 3.7837 - val_loss: 31.3064 - val_root_mean_squared_error: 5.5952
Epoch 4/30
3/3 [==============================] - 4s 2s/step - loss: 12.3868 - root_mean_squared_erro
r: 3.5195 - val_loss: 22.1485 - val_root_mean_squared_error: 4.7062
Epoch 5/30
3/3 [==============================] - 4s 2s/step - loss: 10.9772 - root_mean_squared_erro
r: 3.3132 - val_loss: 14.3874 - val_root_mean_squared_error: 3.7931
Epoch 6/30
3/3 [==============================] - 0s 63ms/step - loss: 9.7288 - root_mean_squared_err
or: 3.1191 - val_loss: 15.3595 - val_root_mean_squared_error: 3.9191
Epoch 7/30
3/3 [==============================] - 0s 70ms/step - loss: 9.3210 - root_mean_squared_err
or: 3.0530 - val_loss: 14.9845 - val_root_mean_squared_error: 3.8710
Epoch 8/30
3/3 [==============================] - 0s 67ms/step - loss: 8.6279 - root_mean_squared_err
or: 2.9373 - val_loss: 14.8604 - val_root_mean_squared_error: 3.8549
Epoch 9/30
3/3 [==============================] - 0s 62ms/step - loss: 8.4447 - root_mean_squared_err
or: 2.9060 - val_loss: 14.9396 - val_root_mean_squared_error: 3.8652
Epoch 10/30
3/3 [==============================] - 0s 63ms/step - loss: 8.4667 - root_mean_squared_err
or: 2.9098 - val_loss: 14.8089 - val_root_mean_squared_error: 3.8482
Epoch 11/30
3/3 [==============================] - 0s 46ms/step - loss: 8.1687 - root_mean_squared_err
or: 2.8581 - val_loss: 17.8223 - val_root_mean_squared_error: 4.2217
```

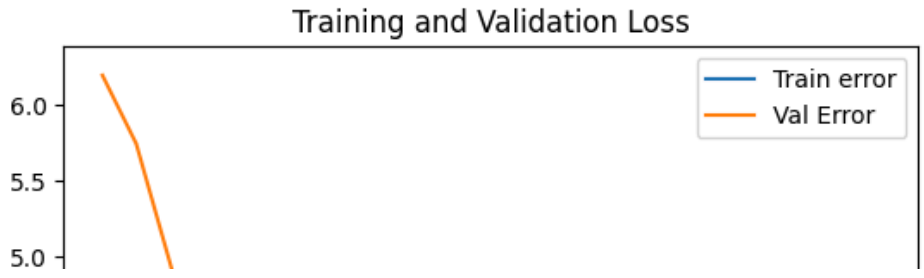
```
Epoch 12/30
3/3 [==============================] - 5s 3s/step - loss: 7.9618 - root_mean_squared_erro
r: 2.8217 - val_loss: 12.9804 - val_root_mean_squared_error: 3.6028
Epoch 13/30
3/3 [==============================] - 0s 55ms/step - loss: 7.3801 - root_mean_squared_err
or: 2.7166 - val_loss: 14.7067 - val_root_mean_squared_error: 3.8349
Epoch 14/30
3/3 [==============================] - 0s 52ms/step - loss: 7.4701 - root_mean_squared_err
or: 2.7332 - val_loss: 13.9227 - val_root_mean_squared_error: 3.7313
Epoch 15/30
3/3 [==============================] - 4s 2s/step - loss: 6.9131 - root_mean_squared_erro
r: 2.6293 - val_loss: 9.5489 - val_root_mean_squared_error: 3.0901
Epoch 16/30
3/3 [==============================] - 0s 49ms/step - loss: 6.7153 - root_mean_squared_err
or: 2.5914 - val_loss: 14.5156 - val_root_mean_squared_error: 3.8099
Epoch 17/30
3/3 [==============================] - 0s 48ms/step - loss: 6.6672 - root_mean_squared_err
or: 2.5821 - val_loss: 10.0392 - val_root_mean_squared_error: 3.1685
Epoch 18/30
3/3 [==============================] - 4s 2s/step - loss: 6.9583 - root_mean_squared_erro
r: 2.6379 - val_loss: 8.7981 - val_root_mean_squared_error: 2.9662
Epoch 19/30
3/3 [==============================] - 0s 41ms/step - loss: 6.3115 - root_mean_squared_err
or: 2.5123 - val_loss: 18.0148 - val_root_mean_squared_error: 4.2444
Epoch 20/30
3/3 [==============================] - 0s 39ms/step - loss: 6.6381 - root_mean_squared_err
or: 2.5765 - val_loss: 14.6687 - val_root_mean_squared_error: 3.8300
Epoch 21/30
3/3 [==============================] - 4s 2s/step - loss: 6.2413 - root_mean_squared_erro
r: 2.4983 - val_loss: 8.6575 - val_root_mean_squared_error: 2.9424
Epoch 22/30
3/3 [==============================] - 0s 52ms/step - loss: 5.5725 - root_mean_squared_err
or: 2.3606 - val_loss: 14.5559 - val_root_mean_squared_error: 3.8152
Epoch 23/30
3/3 [==============================] - 0s 48ms/step - loss: 5.9325 - root_mean_squared_err
or: 2.4357 - val_loss: 13.8869 - val_root_mean_squared_error: 3.7265
Epoch 24/30
3/3 [==============================] - 0s 39ms/step - loss: 5.4680 - root_mean_squared_err
or: 2.3384 - val_loss: 9.6081 - val_root_mean_squared_error: 3.0997
Epoch 25/30
3/3 [==============================] - 0s 46ms/step - loss: 5.1065 - root_mean_squared_err
or: 2.2597 - val_loss: 12.8168 - val_root_mean_squared_error: 3.5801
```

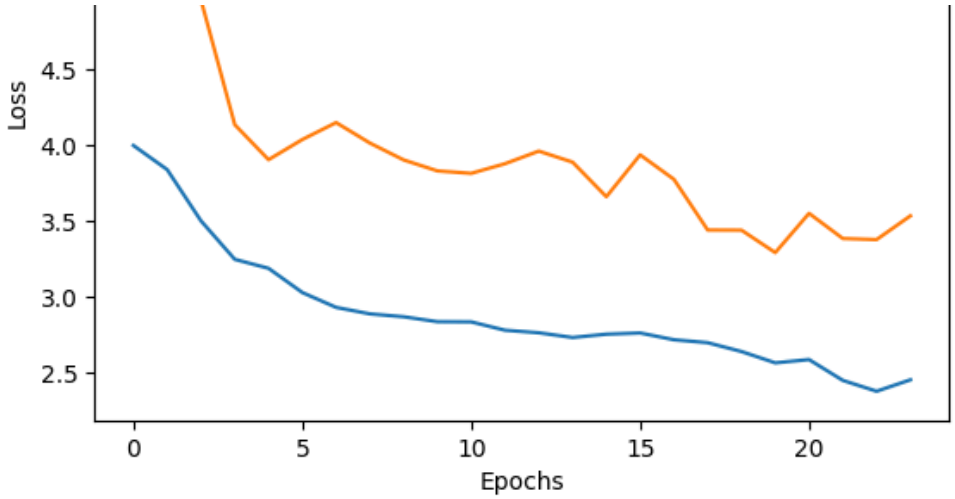
```
Default and Long, samples = 60
Epoch 1/30
2/2 [==============================] - 8s 5s/step - loss: 15.9762 - root_mean_squared_erro
r: 3.9970 - val_loss: 38.3907 - val_root_mean_squared_error: 6.1960
Epoch 2/30
2/2 [==============================] - 5s 5s/step - loss: 14.7258 - root_mean_squared_erro
r: 3.8374 - val_loss: 33.0033 - val_root_mean_squared_error: 5.7448
Epoch 3/30
2/2 [==============================] - 4s 4s/step - loss: 12.2459 - root_mean_squared_erro
r: 3.4994 - val_loss: 24.5807 - val_root_mean_squared_error: 4.9579
Epoch 4/30
2/2 [==============================] - 4s 4s/step - loss: 10.5338 - root_mean_squared_erro
r: 3.2456 - val_loss: 17.0924 - val_root_mean_squared_error: 4.1343
Epoch 5/30
2/2 [==============================] - 4s 4s/step - loss: 10.1520 - root_mean_squared_erro
r: 3.1862 - val_loss: 15.2350 - val_root_mean_squared_error: 3.9032
Epoch 6/30
2/2 [==============================] - 0s 76ms/step - loss: 9.1593 - root_mean_squared_err
or: 3.0264 - val_loss: 16.2915 - val_root_mean_squared_error: 4.0363
Epoch 7/30
2/2 [==============================] - 0s 67ms/step - loss: 8.5754 - root_mean_squared_err
or: 2.9284 - val_loss: 17.2070 - val_root_mean_squared_error: 4.1481
Epoch 8/30
2/2 [==============================] - 0s 88ms/step - loss: 8.3263 - root_mean_squared_err
```

```
or: 2.8855 - val_loss: 16.1044 - val_root_mean_squared_error: 4.0130
Epoch 9/30
2/2 [==============================] - 5s 5s/step - loss: 8.2165 - root_mean_squared_erro
r: 2.8664 - val_loss: 15.2223 - val_root_mean_squared_error: 3.9016
Epoch 10/30
2/2 [==============================] - 4s 4s/step - loss: 8.0311 - root_mean_squared_erro
r: 2.8339 - val_loss: 14.6617 - val_root_mean_squared_error: 3.8291
Epoch 11/30
2/2 [==============================] - 4s 4s/step - loss: 8.0241 - root_mean_squared_erro
r: 2.8327 - val_loss: 14.5395 - val_root_mean_squared_error: 3.8131
Epoch 12/30
2/2 [==============================] - 0s 67ms/step - loss: 7.7150 - root_mean_squared_err
or: 2.7776 - val_loss: 15.0283 - val_root_mean_squared_error: 3.8766
Epoch 13/30
2/2 [==============================] - 0s 68ms/step - loss: 7.6219 - root_mean_squared_err
or: 2.7608 - val_loss: 15.6800 - val_root_mean_squared_error: 3.9598
Epoch 14/30
2/2 [==============================] - 0s 91ms/step - loss: 7.4508 - root_mean_squared_err
or: 2.7296 - val_loss: 15.1081 - val_root_mean_squared_error: 3.8869
Epoch 15/30
2/2 [==============================] - 4s 4s/step - loss: 7.5711 - root_mean_squared_erro
r: 2.7516 - val_loss: 13.3870 - val_root_mean_squared_error: 3.6588
Epoch 16/30
2/2 [==============================] - 0s 79ms/step - loss: 7.6149 - root_mean_squared_err
or: 2.7595 - val_loss: 15.4858 - val_root_mean_squared_error: 3.9352
Epoch 17/30
2/2 [==============================] - 0s 81ms/step - loss: 7.3700 - root_mean_squared_err
or: 2.7148 - val_loss: 14.2401 - val_root_mean_squared_error: 3.7736
Epoch 18/30
2/2 [==============================] - 4s 4s/step - loss: 7.2648 - root_mean_squared_erro
r: 2.6953 - val_loss: 11.8264 - val_root_mean_squared_error: 3.4390
Epoch 19/30
2/2 [==============================] - 6s 6s/step - loss: 6.9536 - root_mean_squared_erro
r: 2.6370 - val_loss: 11.8205 - val_root_mean_squared_error: 3.4381
Epoch 20/30
2/2 [==============================] - 4s 4s/step - loss: 6.5654 - root_mean_squared_erro
r: 2.5623 - val_loss: 10.8240 - val_root_mean_squared_error: 3.2900
Epoch 21/30
2/2 [==============================] - 0s 99ms/step - loss: 6.6766 - root_mean_squared_err
or: 2.5839 - val_loss: 12.5962 - val_root_mean_squared_error: 3.5491
Epoch 22/30
2/2 [==============================] - 0s 88ms/step - loss: 5.9855 - root_mean_squared_err
or: 2.4465 - val_loss: 11.4444 - val_root_mean_squared_error: 3.3830
Epoch 23/30
2/2 [==============================] - 0s 74ms/step - loss: 5.6404 - root_mean_squared_err
or: 2.3749 - val_loss: 11.3964 - val_root_mean_squared_error: 3.3759
Epoch 24/30
2/2 [==============================] - 0s 85ms/step - loss: 6.0042 - root_mean_squared_err
or: 2.4503 - val_loss: 12.4791 - val_root_mean_squared_error: 3.5326
```

The train-val loss curves have the wibbildy-wobbeldy quality like the previous batch. The learning rate is presumably jumping over the local minima, unable to converge.

In [74]:
```
plot_error(hists_FaLo[3])
```





In [77]:
```
plot_error(hists_FaLo[0])
```

In [70]:
```
for i, n in enumerate([25, 34, 45, 60]):
  score = min(hists_FaLo[i].history['val_root_mean_squared_error'])

  print(str(score) + " = Fast/Long best Val RMSE with samples sized " + str(n))

  error_list.append(score)

  print("\n")
```

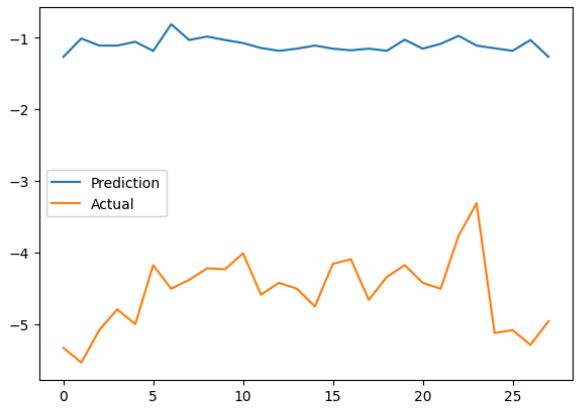
```
2.8924918174743652 = Fast/Long best Val RMSE with samples sized 25


3.917736053466797 = Fast/Long best Val RMSE with samples sized 34


2.942361831665039 = Fast/Long best Val RMSE with samples sized 45


3.2899811267852783 = Fast/Long best Val RMSE with samples sized 60
```

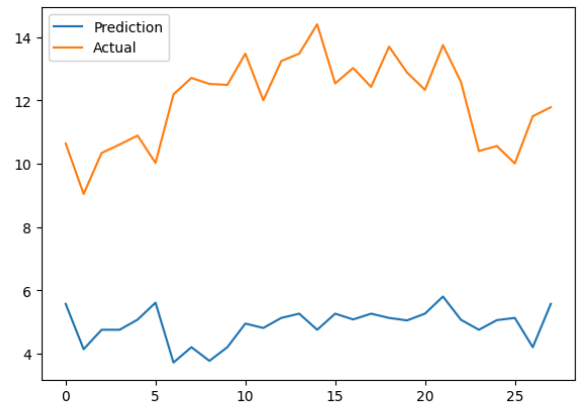
3.2899811207852785 = Fast/Long best Val RMSE with samples sized 60

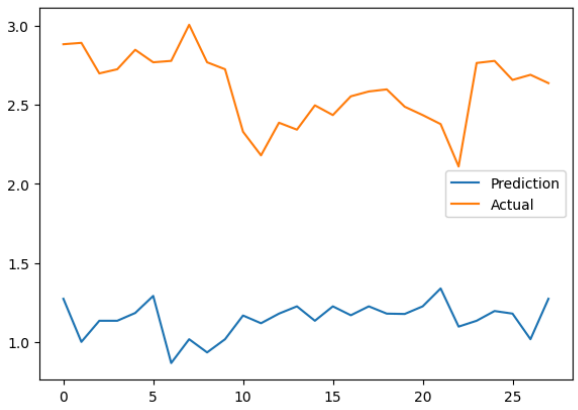
On the bright side, this class was our first to have a RMSE in the 2s.

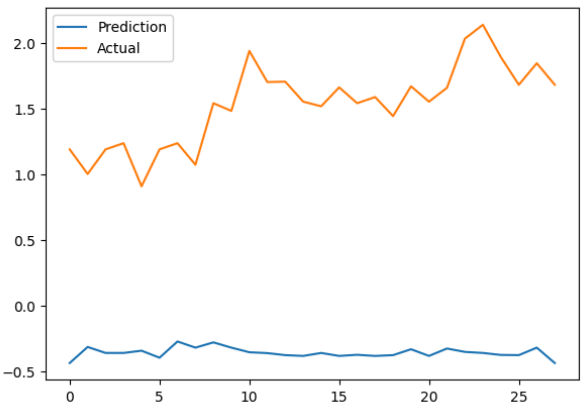
In [65]:
```
pred_plot_all(mod_25_FaLo, X_val25, y_val25)
```

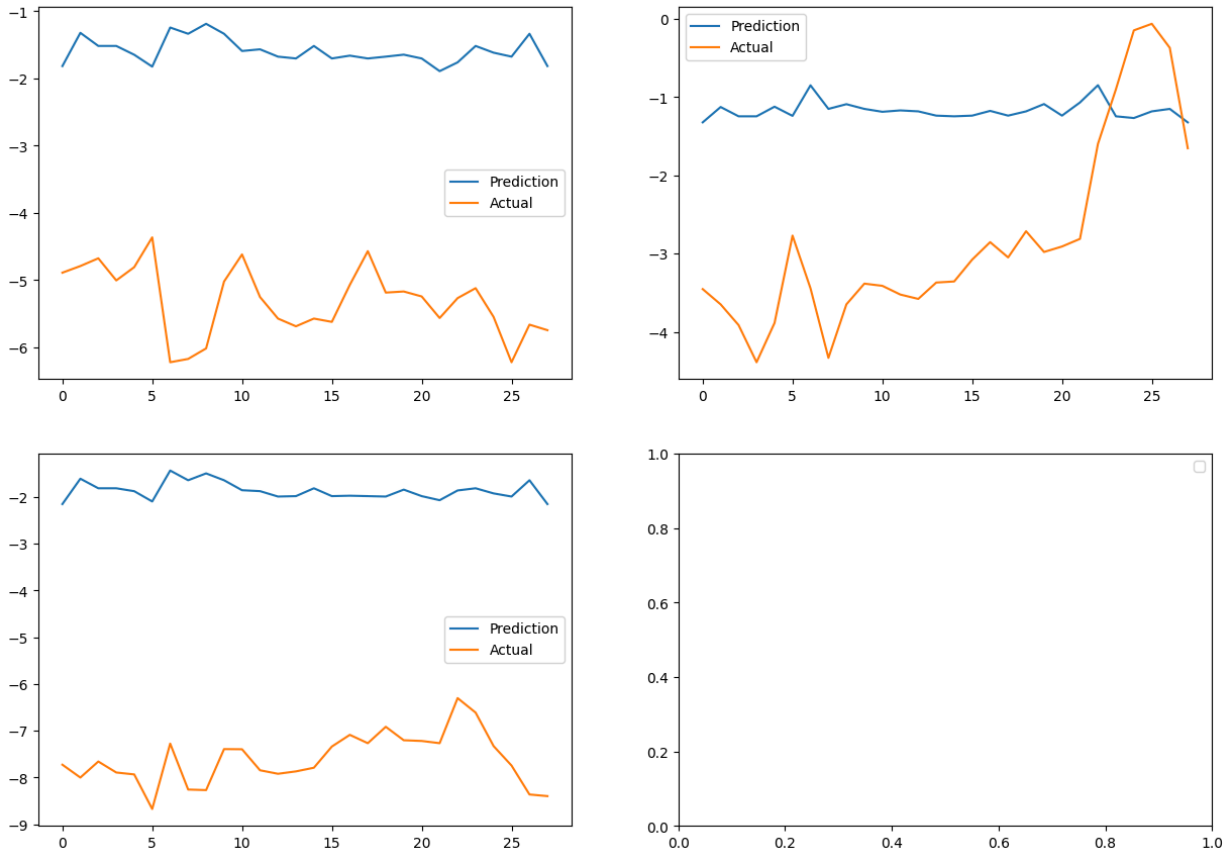
```
1/1 [==============================] - 0s 452ms/step
WARNING:matplotlib.legend:No artists with labels found to put in legend.  Note that artist
s whose label start with an underscore are ignored when legend() is called with no argumen
t.
1/1 [==============================] - 0s 27ms/step
WARNING:matplotlib.legend:No artists with labels found to put in legend.  Note that artist
s whose label start with an underscore are ignored when legend() is called with no argumen
t.
1/1 [==============================] - 0s 26ms/step
WARNING:matplotlib.legend:No artists with labels found to put in legend.  Note that artist
s whose label start with an underscore are ignored when legend() is called with no argumen
t.
1/1 [==============================] - 0s 27ms/step
WARNING:matplotlib.legend:No artists with labels found to put in legend.  Note that artist
s whose label start with an underscore are ignored when legend() is called with no argumen
t.
1/1 [==============================] - 0s 29ms/step
WARNING:matplotlib.legend:No artists with labels found to put in legend.  Note that artist
s whose label start with an underscore are ignored when legend() is called with no argumen
t.
1/1 [==============================] - 0s 27ms/step
WARNING:matplotlib.legend:No artists with labels found to put in legend.  Note that artist
s whose label start with an underscore are ignored when legend() is called with no argumen
t.
1/1 [==============================] - 0s 25ms/step
WARNING:matplotlib.legend:No artists with labels found to put in legend.  Note that artist
s whose label start with an underscore are ignored when legend() is called with no argumen
t.
```











But that was not accompanied by any predictions that seemed to follow the flow of the data, as was once seen in even the much worse De/Lo 45-min model.

In [83]:
```
# Veryfying that this was indeed the best choice
min(error_list)
```

Out[83]: 2.8924918174743652

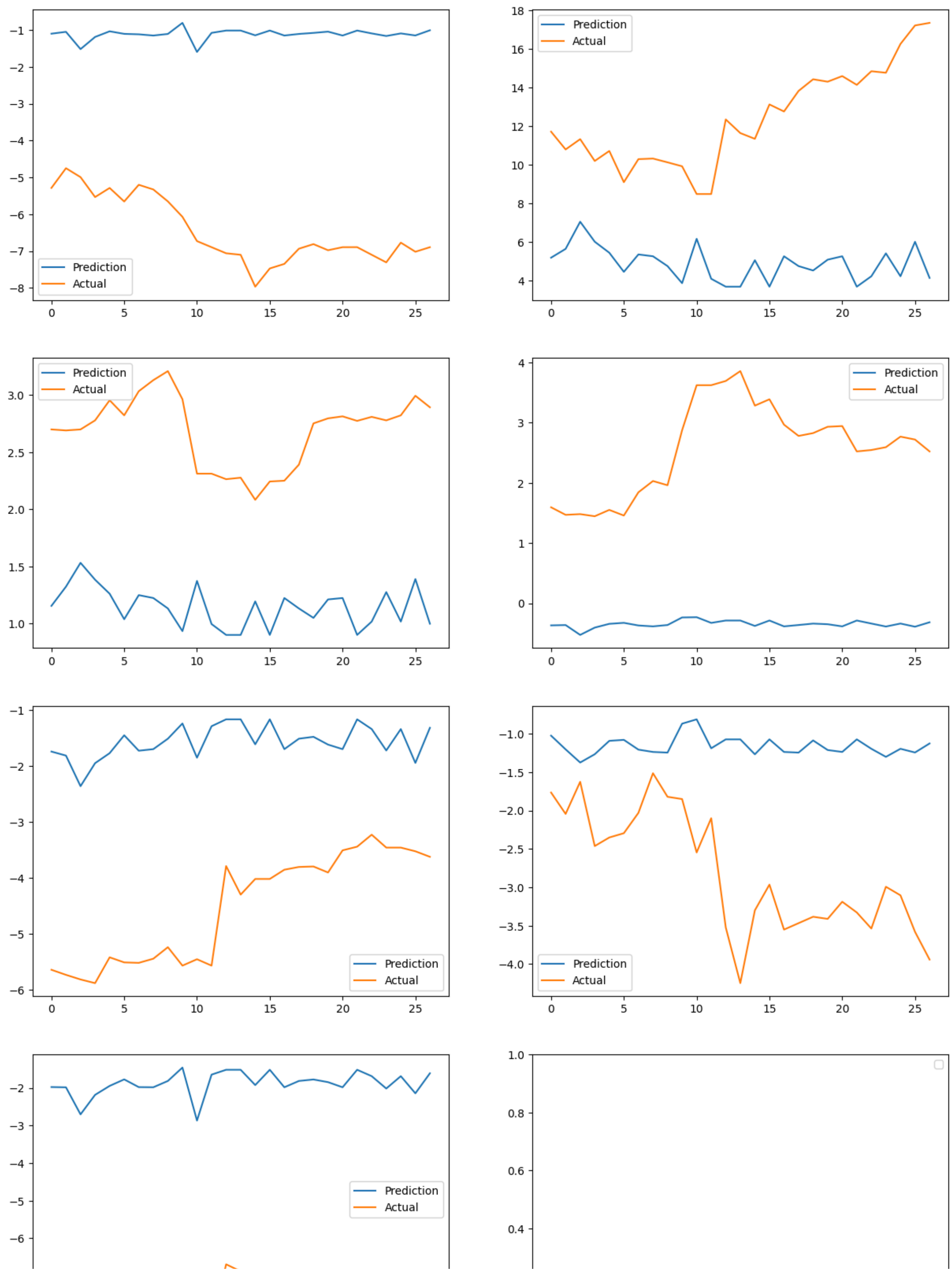
Alright, time to face our fate with the test data.

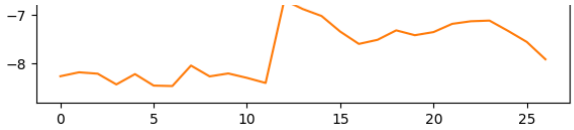
Final Results and Conlcusions

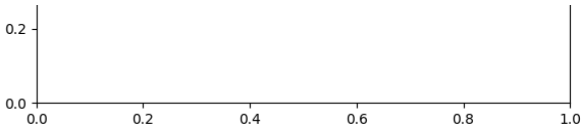
In [84]:
```
pred_plot_all(mod_25_FaLo, X_test25, y_test25)
```

```
1/1 [==============================] - 0s 43ms/step
WARNING:matplotlib.legend:No artists with labels found to put in legend.  Note that artist
s whose label start with an underscore are ignored when legend() is called with no argumen
t.
1/1 [==============================] - 0s 42ms/step
WARNING:matplotlib.legend:No artists with labels found to put in legend.  Note that artist
s whose label start with an underscore are ignored when legend() is called with no argumen
t.
1/1 [==============================] - 0s 42ms/step
WARNING:matplotlib.legend:No artists with labels found to put in legend.  Note that artist
s whose label start with an underscore are ignored when legend() is called with no argumen
t.
1/1 [==============================] - 0s 46ms/step
WARNING:matplotlib.legend:No artists with labels found to put in legend.  Note that artist
s whose label start with an underscore are ignored when legend() is called with no argumen
t.
1/1 [==============================] - 0s 43ms/step
```

```
WARNING:matplotlib.legend:No artists with labels found to put in legend.  Note that artist
s whose label start with an underscore are ignored when legend() is called with no argumen
t.
1/1 [==============================] - 0s 45ms/step
WARNING:matplotlib.legend:No artists with labels found to put in legend.  Note that artist
s whose label start with an underscore are ignored when legend() is called with no argumen
t.
1/1 [==============================] - 0s 46ms/step
WARNING:matplotlib.legend:No artists with labels found to put in legend.  Note that artist
s whose label start with an underscore are ignored when legend() is called with no argumen
t.
```







In [88]:
```
np.sqrt(mse(y_test25, mod_25_FaLo.predict(X_test25)))
```

```
1/1 [==============================] - 0s 51ms/step
```

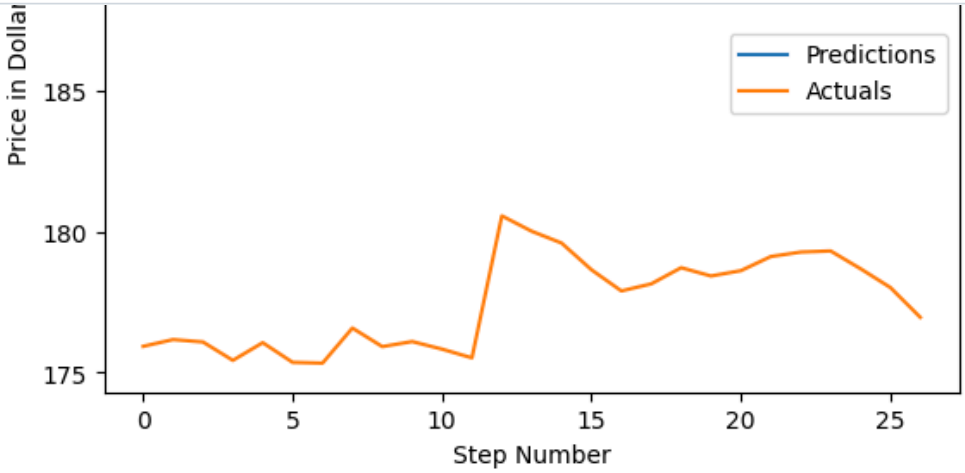
Out[88]: 4.6588097

Truly, these are some ghastly results. Here I sit, at age 34, about to use a phrase for the first (and hopefully last time). In italics, below:

One of the predictions seemed to on average be ***wrong by six standard deviations***

In [89]:
```
pred_plot_real(mod_25_FaLo, X_test25, y_test25, 6)
```

```
1/1 [==============================] - 0s 142ms/step
```



In [97]:
```
print("Tesla's max price over these 11 days")
print(all_dfs[6]["open"].max())
print("Tesla's min price over that time")
print(all_dfs[6]["open"].min())
```

```
Tesla's max price over these 11 days
205.18
Tesla's min price over that time
172.2
```

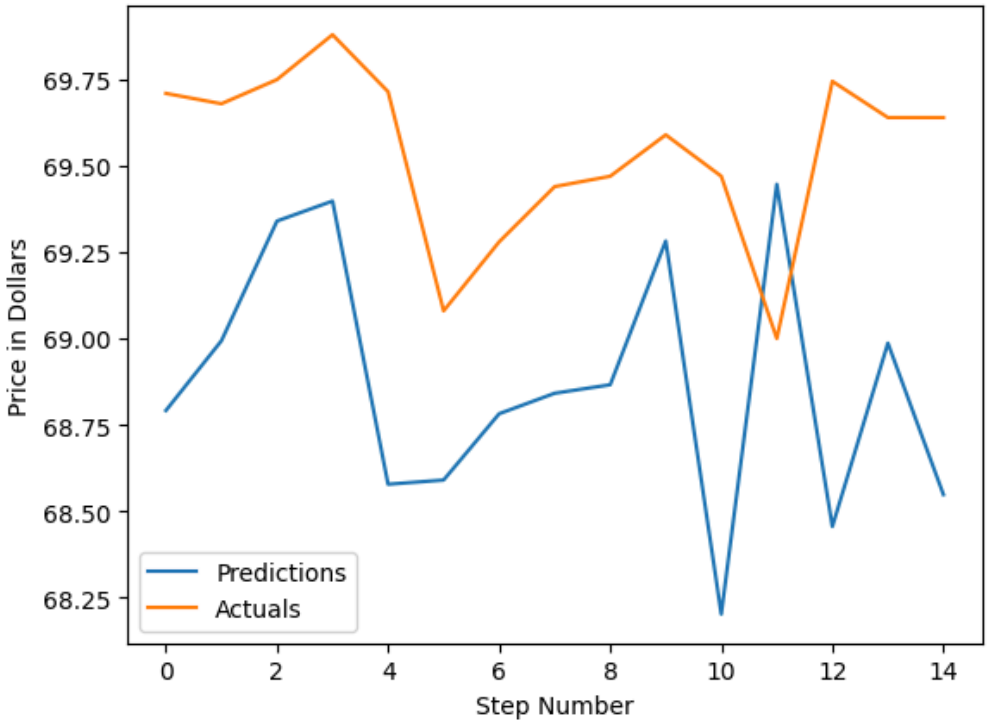
Strangely, the model predicted prices very near to the lowest price seen at all over that time, while the current prices were very nearly the highest they had ever been.

I'm tempted to say that this exercise confirms the well-held belief that this is in fact a fool's errand. It may in fact very well be. But I can't help but look back at this one graph, the one where the peaks and valleys seemed to follow so precisely with both prediction and reality... at least for a little while.

In [102…
```
pred_plot_real(mod_45_DeLo, X_val45, y_val45, 2)
```

```
pred_plot_feat(mod_45_DeLo, X_val45, y_val45, 2)
```

```
1/1 [==============================] - 0s 44ms/step
```



I've never looked at a graph and wondered "what could have been" before. I suppose that's two firsts in one day.

Conclusions

Ultimately, we must accept the null hypothesis. At this scale, with this computing power, the stocks may as well be noise.

However I did learn something about modeling that I didn't expect: Here at the 11th hour of my time here at flatiron, I saw firsthand two competing models provide roughly equivalent results, despite one (the Default LR) taking about 50 times longer to train. That's an emotional lesson, delivered in numbers, that I can take with me long after I'm done here.

Recommendations

Don't day trade! Besides, gambling is bad for you. Probably.

It may be boring, but it appears you should stick with the established long-term investment strategies and not think you're so clever.

Next Steps

But if you must, have your team gather mountains more data. Probably so much you may have to pay for it.

If you can, hire someone who can automatically scrape the internet for sentiments on the companies you're looking at. Apparently, tweets are good enough. And if you're interested, I may know someone who just did such a thing for his last (and more successful) project.

In [ ]: