```
from google.colab import drive
drive.mount('/content/drive')
```

⮕ Mounted at /content/drive

▾ Obligatorio de Deep Learning

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Problema

Se presenta un dataset que contiene información de alojamientos publicados en AirBnB con sus respectivos precios. El tamaño del dataset de train es de 1.5 Gb aproximadamente, y 0.5 Gb el de test. Este cuenta con 84 variables predictoras que se podrán utilizar como consideren adecuado.

El objetivo es asignar el precio correcto a los alojamientos listados.

Además del dataset se les provee esta notebook conteniendo el script de carga de datos y un modelo baseline que corresponde a una arquitectura feed forward.

▾ Consigna

A) Participación en Competencia Kaggle:

El objetivo de este punto es participar en la competencia de Kaggle y obtener como mínimo un Mean Absolute Error inferior a 70 puntos. ->Link a la competencia<-.

B) Utilización de Grid Search (o equivalente):

Para cumplir con la busqueda de modelos óptimos se debe realizar un grid search lo más abarcativo y metódico posible. Recomendamos enfáticamente Weights and Biases

C) Se debe a su vez investigar e implementar las siguientes técnicas:

1. Batch Normalization

2. Gradient Normalization y/o Gradient Clipping

Además como en todas las tareas se evaluará la prolijidad de la entrega, el preprocesamiento de datos, visualizaciones y exploración de técnicas alternativas.

▾ 1. Setup

1.1 Imports

```
import pandas as pd
import numpy as np
import tensorflow as tf
import matplotlib.pyplot as plt
import seaborn as sns
from datetime import datetime
from sklearn.preprocessing import StandardScaler
from sklearn.model_selection import train_test_split
```

▾ 1.2 Seteo de seeds

```
np.random.seed(117)
tf.random.set_seed(117)
```

▾ 2. Carga de datos

Datos para predicción

```
from google.colab import drive
drive.mount("/content/drive")
```

```
    Drive already mounted at /content/drive; to attempt to forcibly remount, call drive.mount("/content/drive", force_remount=True).
```

```
import os
```

```
os.listdir('/content/drive/MyDrive/Data/')
```

```
    ['P_2017_Terceros.sav', 'private_data_to_predict.csv', 'public_train_data.csv']
```

```
!cp '/content/drive/MyDrive/Data/public_train_data.csv' '/content/'
```

```
df = pd.read_csv('public_train_data.csv')
```

```
df.shape
```

```
    (326287, 85)
```

```
!cp '/content/drive/My Drive/utils.py' '/content/'
```

```
    cp: cannot stat '/content/drive/My Drive/utils.py': No such file or directory
```

▾ 3. Análisis exploratorio de datos

3.1 Dimensiones

```
df.shape
```

```
    (326287, 85)
```

▾ 3.2 Obtener información sobre las columnas y tipos de datos

```
df.info()
```

```
    29  Host Listings Count          325971 non-null  float64
    30  Host Total Listings Count    325970 non-null  float64
    31  Host Verifications           325751 non-null  object
    32  Street                       326287 non-null  object
    33  Neighbourhood                227447 non-null  object
    34  Neighbourhood Cleansed       326287 non-null  object
    35  Neighbourhood Group Cleansed 68297 non-null   object
    36  City                         326004 non-null  object
    37  State                        294992 non-null  object
    38  Zipcode                      313815 non-null  object
    39  Market                       322672 non-null  object
    40  Smart Location               326286 non-null  object
    41  Country Code                 326286 non-null  object
    42  Country                      326286 non-null  object
    43  Latitude                     326287 non-null  float64
    44  Longitude                    326287 non-null  float64
    45  Property Type                326280 non-null  object
    46  Room Type                    326287 non-null  object
    47  Accommodates                 326244 non-null  float64
    48  Bathrooms                    325300 non-null  float64
    49  Bedrooms                     325873 non-null  float64
    50  Beds                         325693 non-null  float64
```

dtypes: float64(31), int64(2), object(52)
memory usage: 211.6+ MB

▾ 3.3 Visualizar las primeras filas del dataset

`df.head(3)`

	id	Last Scraped	Name	Summary	Space	Description	Experiences Offered	Neighborhood Overview	Notes	Transit	...	Review Scores Location	Review Scores Value	License
0	0	2017-05-12	Grand Loft in the heart of historic Antwerp	Best location for visiting Antwerp!! Beautiful...	Welcome in Antwerp!! The loft is situated on t...	Best location for visiting Antwerp!! Beautiful...	none	NaN	NaN	NaN	...	10.0	9.0	NaN
1	1	2017-05-03	CHARMING, CLEAN & COZY BUNGALOW!	Very centrally located and less than 15 min fr...	Well lit, private entrance with small patio.	Very centrally located and less than 15 min fr...	none	Quiet. Pretty tree lined streets, safe area.	Has dining table and high back desk chair.	Uber, bus line and metro link is less than 5 m...	...	NaN	NaN	NaN
2	2	2017-05-09	la casa di maurizio	nice apartment with view to via veneto , very ...	NaN	nice apartment with view to via veneto , very ...	none	NaN	NaN	NaN	...	NaN	NaN	NaN

3 rows × 85 columns

▾ 3.4 Estadísticas descriptivas

`df.describe()`

	id	Host ID	Host Response Rate	Host Listings Count	Host Total Listings Count	Latitude	Longitude	Accommodates	Bathrooms
count	326287.000000	3.262870e+05	250845.000000	325971.000000	325970.000000	326287.000000	326287.000000	326244.000000	325300.000000
mean	163143.000000	3.236757e+07	93.408264	9.586000	9.586026	38.042816	-15.323924	3.270764	1.239482
std	94191.087979	3.174572e+07	17.536835	57.399711	57.399797	22.910029	70.101677	2.037446	0.574784
min	0.000000	1.900000e+01	0.000000	0.000000	0.000000	-38.224427	-123.218712	1.000000	0.000000
25%	81571.500000	6.869780e+06	98.000000	1.000000	1.000000	38.923154	-73.968081	2.000000	1.000000
50%	163143.000000	2.186737e+07	100.000000	1.000000	1.000000	42.304549	0.090277	2.000000	1.000000
75%	244714.500000	4.799166e+07	100.000000	3.000000	3.000000	50.863658	12.342749	4.000000	1.000000
max	326286.000000	1.350885e+08	100.000000	1114.000000	1114.000000	55.994889	153.637837	18.000000	8.000000

8 rows × 33 columns

`df.columns`

```
Index(['id', 'Last Scraped', 'Name', 'Summary', 'Space', 'Description',
       'Experiences Offered', 'Neighborhood Overview', 'Notes', 'Transit',
       'Access', 'Interaction', 'House Rules', 'Thumbnail Url', 'Medium Url',
       'Picture Url', 'XL Picture Url', 'Host ID', 'Host URL', 'Host Name',
       'Host Since', 'Host Location', 'Host About', 'Host Response Time',
       'Host Response Rate', 'Host Acceptance Rate', 'Host Thumbnail Url',
       'Host Picture Url', 'Host Neighbourhood', 'Host Listings Count',
       'Host Total Listings Count', 'Host Verifications', 'Street',
       'Neighbourhood', 'Neighbourhood Cleansed',
       'Neighbourhood Group Cleansed', 'City', 'State', 'Zipcode', 'Market',
       'Smart Location', 'Country Code', 'Country', 'Latitude', 'Longitude',
```

```
      'Property Type', 'Room Type', 'Accommodates', 'Bathrooms', 'Bedrooms',
      'Beds', 'Bed Type', 'Amenities', 'Square Feet', 'Security Deposit',
      'Cleaning Fee', 'Guests Included', 'Extra People', 'Minimum Nights',
      'Maximum Nights', 'Calendar Updated', 'Has Availability',
      'Availability 30', 'Availability 60', 'Availability 90',
      'Availability 365', 'Calendar last Scraped', 'Number of Reviews',
      'First Review', 'Last Review', 'Review Scores Rating',
      'Review Scores Accuracy', 'Review Scores Cleanliness',
      'Review Scores Checkin', 'Review Scores Communication',
      'Review Scores Location', 'Review Scores Value', 'License',
      'Jurisdiction Names', 'Cancellation Policy',
      'Calculated host listings count', 'Reviews per Month', 'Geolocation',
      'Features', 'Price'],
    dtype='object')
```

▾ 3.5 Análisis de valores Nulos

```python
#Cantidad de nulos
null_count = df.isnull().sum()
#Porcentaje de nulos por columna
null_percentage = (df.isnull().mean()) * 100

null_info = pd.DataFrame({'Col': null_count.index, 'Cant_Nulos': null_count, 'Share_nulos': null_percentage})
```

Revisamos las columnas con mayor porcentaje de valores faltantes.

Se decide eliminar del dataset las columnas con mas de 30% de valores nulos por considerar que es un valor muy elevado para imputar.

```python
null_info[null_info['Share_nulos']>=30].sort_values(by='Share_nulos', ascending=False)
```

	Col	Cant_Nulos	Share_nulos
Has Availability	Has Availability	320038	98.084815
Square Feet	Square Feet	318294	97.550316
License	License	316483	96.995283
Host Acceptance Rate	Host Acceptance Rate	298657	91.531995
Neighbourhood Group Cleansed	Neighbourhood Group Cleansed	257990	79.068427
Jurisdiction Names	Jurisdiction Names	236872	72.596211
Notes	Notes	195558	59.934352
Security Deposit	Security Deposit	190145	58.275383
Interaction	Interaction	157094	48.145957
Access	Access	149179	45.720179
Neighborhood Overview	Neighborhood Overview	133774	40.998875
Host About	Host About	130716	40.061664
House Rules	House Rules	130524	40.002820
Transit	Transit	125638	38.505365
Cleaning Fee	Cleaning Fee	118106	36.196968
Neighbourhood	Neighbourhood	98840	30.292350

```python
cols_eliminar1=null_info[null_info['Share_nulos']>=30]['Col'].to_list()
```

```python
df=df.drop(cols_eliminar1, axis=1)
```

```python
len(cols_eliminar1)
```

```
    16
```

Eliminamos todas las columnas cuya información sea una url (como por ejemplo Host Picture Url o Host Thumbnail Url) por no ser de utilidad para el modelo

```
df[['Host Picture Url','Host Thumbnail Url']].head()
```

	Host Picture Url	Host Thumbnail Url
0	https://a0.muscache.com/im/pictures/5271a897-2...	https://a0.muscache.com/im/pictures/5271a897-2...
1	https://a0.muscache.com/im/pictures/58bde558-c...	https://a0.muscache.com/im/pictures/58bde558-c...
2	https://a0.muscache.com/im/pictures/6272bc04-d...	https://a0.muscache.com/im/pictures/6272bc04-d...
3	https://a0.muscache.com/im/pictures/44ac861d-7...	https://a0.muscache.com/im/pictures/44ac861d-7...
4	https://a0.muscache.com/im/pictures/7a052645-e...	https://a0.muscache.com/im/pictures/7a052645-e...

```
df['Host Picture Url'][0]
```

```
'https://a0.muscache.com/im/pictures/5271a897-245b-41cb-8ef9-7a45f1d1ef91.jpg?aki_policy=profile_x_medium'
```

```
cols_eliminar2 = [col for col in df.columns if 'Url' in col]
df=df.drop(cols_eliminar2,axis=1)
```

```
cols_eliminar3 = [col for col in df.columns if 'URL' in col]
df=df.drop(cols_eliminar3,axis=1)
```

```
#Cantidad de nulos
null_count = df.isnull().sum()
#Porcentaje de nulos por columna
null_percentage = (df.isnull().mean()) * 100

null_info = pd.DataFrame({'Col': null_count.index, 'Cant_Nulos': null_count, 'Share_nulos': null_percentage})
```

País: eliminamos la columna "Country" ya que representa lo mismo que Country Code

```
len(set(df['Country Code']))
```

```
22
```

```
len(set(df['Country']))
```

```
22
```

```
df=df.drop('Country',axis=1)
```

Eliminamos las columnas HostName y Host_Id por no ser útiles para el modelo

```
cols_eliminar4=['Host Name','Host ID']
df=df.drop(cols_eliminar4, axis=1)
```

Location: las columnas Latitude&Longitude representan lo mismo que Geolocation.

Igualmente se decide eliminar las 3 variables del dataset ya que en principio se entiende que el modelo puede performar bien sin esta información.

En caso que sea necesario luego del entrenamiento agregar más variables se evaluará si se vuelven a incluir.

```
df[['Latitude','Longitude','Geolocation']].head(10)
```

	Latitude	Longitude	Geolocation
0	51.219388	4.403444	51.21938762207894, 4.4034442505151885
1	34.189269	-118.419935	34.1892692286356, -118.41993491931177
2	41.908596	12.493518	41.90859623057272, 12.493518028459327

```
df=df.drop(['Geolocation'],axis=1)
```

```
df[['Calendar last Scraped','Calendar Updated','Last Scraped','Last Review']].head(5)
```

	Calendar last Scraped	Calendar Updated	Last Scraped	Last Review
0	2017-05-12	6 weeks ago	2017-05-12	2017-04-26
1	2017-05-02	4 weeks ago	2017-05-03	NaN
2	2017-05-08	18 months ago	2017-05-09	NaN
3	2017-05-08	a week ago	2017-05-09	2017-04-29
4	2017-05-04	today	2017-05-04	2017-05-01

Se decide eliminar las variables Calendar Updated y Calendar last scraped ya que contamos con la variable Last Review que creemos es más útil para el modelo

```
df=df.drop(['Calendar Updated'],axis=1)
```

```
df[['Summary','Description']].head()
```

	Summary	Description
0	Best location for visiting Antwerp!! Beautiful...	Best location for visiting Antwerp!! Beautiful...
1	Very centrally located and less than 15 min fr...	Very centrally located and less than 15 min fr...
2	nice apartment with view to via veneto , very ...	nice apartment with view to via veneto , very ...
3	In un quartiere tranquillo un'accogliente came...	In un quartiere tranquillo un'accogliente came...
4	The apartment is bright, clean and simple in a...	The apartment is bright, clean and simple in a...

Variables Strings En principio no se incluyen las variables como Name / Description por ser strings muy extensos.

En caso que el modelo no performe bien y sea necesario incluir más variables se evaluará de incluirlas.

```
df[['Name','Summary','Space','Description']].head()
```

	Name	Summary	Space	Description
0	Grand Loft in the heart of historic Antwerp	Best location for visiting Antwerp!! Beautiful...	Welcome in Antwerp!! The loft is situated on t...	Best location for visiting Antwerp!! Beautiful...
1	CHARMING, CLEAN & COZY BUNGALOW!	Very centrally located and less than 15 min fr...	Well lit, private entrance with small patio.	Very centrally located and less than 15 min fr...
2	la casa di maurizio	nice apartment with view to via veneto , very ...	NaN	nice apartment with view to via veneto , very ...
3	Camera a due passi dal Colosseo NEW	In un quartiere tranquillo un'accogliente came...	L'appartamento è nel centro storico di Roma, i...	In un quartiere tranquillo un'accogliente came...
4	Perfectly Located Apartment in Downtown Manhattan	The apartment is bright, clean and simple in a...	No need to waste money on bogus frills. The ha...	The apartment is bright, clean and simple in a...

```
df=df.drop(['Name','Summary','Space','Description'],axis=1)
```

EDA

Realizamos un análisis más profundo de las columnas restantes

Para eso dividimos las columnas en subgrupos que agrupen variables con características similares, esto nos permite un mejor entendimiento de la base de datos, también nos facilita identificar si 2 columnas tienen información muy similar y están correlacionadas.

```
len(df.columns)
```

```
53
```

```
df.columns
```

```
Index(['id', 'Last Scraped', 'Experiences Offered', 'Host Since',
       'Host Location', 'Host Response Time', 'Host Response Rate',
       'Host Neighbourhood', 'Host Listings Count',
       'Host Total Listings Count', 'Host Verifications', 'Street',
       'Neighbourhood Cleansed', 'City', 'State', 'Zipcode', 'Market',
       'Smart Location', 'Country Code', 'Latitude', 'Longitude',
       'Property Type', 'Room Type', 'Accommodates', 'Bathrooms', 'Bedrooms',
       'Beds', 'Bed Type', 'Amenities', 'Guests Included', 'Extra People',
       'Minimum Nights', 'Maximum Nights', 'Availability 30',
       'Availability 60', 'Availability 90', 'Availability 365',
       'Calendar last Scraped', 'Number of Reviews', 'First Review',
       'Last Review', 'Review Scores Rating', 'Review Scores Accuracy',
       'Review Scores Cleanliness', 'Review Scores Checkin',
       'Review Scores Communication', 'Review Scores Location',
       'Review Scores Value', 'Cancellation Policy',
       'Calculated host listings count', 'Reviews per Month', 'Features',
       'Price'],
      dtype='object')
```

```
host = ['Host Response Time','Host Since','Host Verifications','Host Response Rate']
listings=['Calculated host listings count','Host Listings Count','Host Total Listings Count']
availability=['Availability 30','Availability 60','Availability 90','Availability 365']
geo=['Latitude','Longitude','Street','Country','City','State','Zipcode','Smart Location','Neighbourhood Cleansed','Host Neighbourhood','Mar
alojamiento=['Beds','Room Type','Bed Type','Amenities','Guests Included','Extra People','Bathrooms','Bedrooms','Accommodates','Minimum Nigh
reviews=['Last Scraped','Calendar last Scraped','Reviews per Month','Number of Reviews','First Review','Last Review','Review Scores Rating'
```

```
#Check para ver que no estamos olvidando ninguna columna
len(host)+len(listings)+len(availability)+len(geo)+len(alojamiento)+len(reviews)+2
```

```
53
```

▼ Variables relativas al alojamiento

```
df[alojamiento].head()
```

```
df[alojamiento].isnull().sum()
```

```
Beds                    594
Room Type                 0
Bed Type                  0
Amenities              2888
Guests Included           1
Extra People             13
Bathrooms               987
Bedrooms                414
Accommodates             43
Minimum Nights            1
Maximum Nights            1
Features                195
Cancellation Policy       1
Property Type             7
Experiences Offered       0
dtype: int64
```

▾ Variables numéricas

Exact,instant…

```
df[alojamiento].describe()
```

	Beds	Guests Included	Extra People	Bathrooms	Bedrooms	Accommodates	Minimum Nights	Maximum Nights
count	325693.000000	326286.000000	326274.000000	325300.000000	325873.000000	326244.000000	326286.000000	3.262860e+05
mean	1.909587	1.539968	11.243758	1.239482	1.358072	3.270764	3.329631	2.471806e+05
std	1.453753	1.195037	27.060328	0.574784	0.921763	2.037446	24.054478	2.198811e+07
min	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	1.000000	1.000000e+00
25%	1.000000	1.000000	0.000000	1.000000	1.000000	2.000000	1.000000	3.200000e+01
50%	1.000000	1.000000	0.000000	1.000000	1.000000	2.000000	2.000000	1.125000e+03
75%	2.000000	2.000000	15.000000	1.000000	2.000000	4.000000	3.000000	1.125000e+03
max	19.000000	18.000000	999.000000	8.000000	96.000000	18.000000	9999.000000	2.147484e+09

```
corr = df[alojamiento].corr()
mask = np.triu(np.ones_like(corr, dtype=bool))
fig, ax = plt.subplots(figsize=(10, 8))
sns.heatmap(corr, annot=True, cmap='coolwarm', ax=ax, mask=mask)
plt.show()
```

```
<ipython-input-43-17d00ddb44c8>:1: FutureWarning: The default value of numeric_only in DataFrame.corr is deprecated. In a future versio
  corr = df[alojamiento].corr()
```



```
df[['Beds', 'Accommodates','Bedrooms','Price']].corr()['Price']
```

```
Beds            0.293338
Accommodates    0.373885
Bedrooms        0.361354
Price           1.000000
Name: Price, dtype: float64
```

Las variables Accommodates, Bedrooms y Beds están altamente correlacionadas por lo cual se decide conservar únicamente una para evitar problemas de multicolinealidad en el modelo.

Se conserva la variable Accomodates ya que tiene mayor correlación con la variable objetivo (0.37 vs 0.29 y 0.36)

Existen otras correlaciones moderadas como por ejemplo Bathrooms con Beds, pero se mantienen dado que su nivel se entiende que no perjudicarán el modelo por su nivel moderado (~0.5).

```
df=df.drop(['Beds','Bedrooms'],axis=1)
```

```
alojamiento=['Price','Room Type','Bed Type','Amenities','Guests Included','Extra People','Bathrooms','Accommodates','Minimum Nights','Maxim
```

```
df_numeric = df[alojamiento].select_dtypes(include=['int64', 'float64'])
correlation_with_price = df_numeric.corr()['Price']

plt.figure(figsize=(5, 5))
sns.barplot(x=correlation_with_price.index, y=correlation_with_price.values)
plt.xticks(rotation=90)
plt.xlabel("Var. Alojamiento (Numéricas)")
plt.ylabel("Correlación con Price")
plt.title("Correlación con Price")
plt.show()
```

Correlación con Price

Se eliminan las variables Minimum/Maximum Night por no tener correlación con la variable objetivo

```
df=df.drop(['Minimum Nights','Maximum Nights'],axis=1)
```

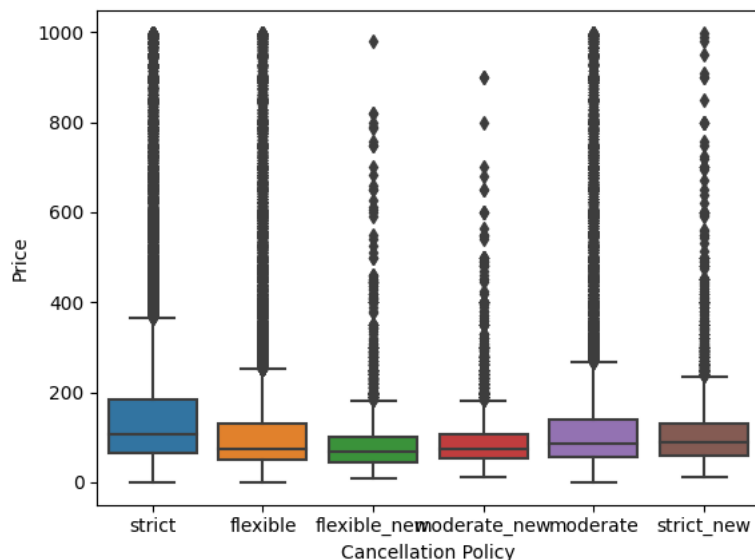## Variables categóricas

▾ Cancellation type

```
df['Cancellation Policy'].value_counts(normalize=True)
```

```
strict              0.368401
flexible            0.315643
moderate            0.247436
moderate_new        0.023875
strict_new          0.020942
flexible_new        0.019320
super_strict_60     0.002446
super_strict_30     0.001790
super_strict_30_new 0.000083
super_strict_60_new 0.000049
no_refunds          0.000012
long_term           0.000003
Name: Cancellation Policy, dtype: float64
```

```
filtered_df = df[df['Cancellation Policy'].isin(['strict', 'flexible', 'moderate','moderate_new','strict_new','flexible_new'])]
sns.boxplot(x='Cancellation Policy', y='Price', data=filtered_df)
```

```
<Axes: xlabel='Cancellation Policy', ylabel='Price'>
```



```
canc_types = ['strict', 'flexible', 'moderate','moderate_new','strict_new','flexible_new']
df.loc[~df['Cancellation Policy'].isin(canc_types), 'Cancellation Policy'] = 'strict'
```

```
df['Cancellation Policy'].value_counts(normalize=True)
```

```
strict          0.372785
flexible        0.315642
moderate        0.247436
moderate_new    0.023875
strict_new      0.020942
flexible_new    0.019320
Name: Cancellation Policy, dtype: float64
```

Se decide limitar las categorias de esta variable ya que son en total 12 pero las primeras 6 acumulan el 99% de las observaciones. En el 1% restante se decide imputar el valor Scrict ya que es el valor con mayor cantidad de observaciones (37%).

```
mapeo = {'flexible_new': 1, 'flexible': 2,'moderate_new':3, 'moderate':4,'strict_new':5,'strict':6}
df['Cancellation Policy'] = df['Cancellation Policy'].map(mapeo)
```

▾ Room type

```
df['Room Type'].value_counts(normalize=True)
```

```
    Entire home/apt     0.629182
    Private room        0.352720
    Shared room         0.018094
    9                   0.000003
    Name: Room Type, dtype: float64
```

```
df['Room Type'].value_counts()
```

```
    Entire home/apt     205294
    Private room        115088
    Shared room           5904
    9                        1
    Name: Room Type, dtype: int64
```

```
sns.boxplot(x='Room Type', y='Price', data=df)
```

```
    <Axes: xlabel='Room Type', ylabel='Price'>
```
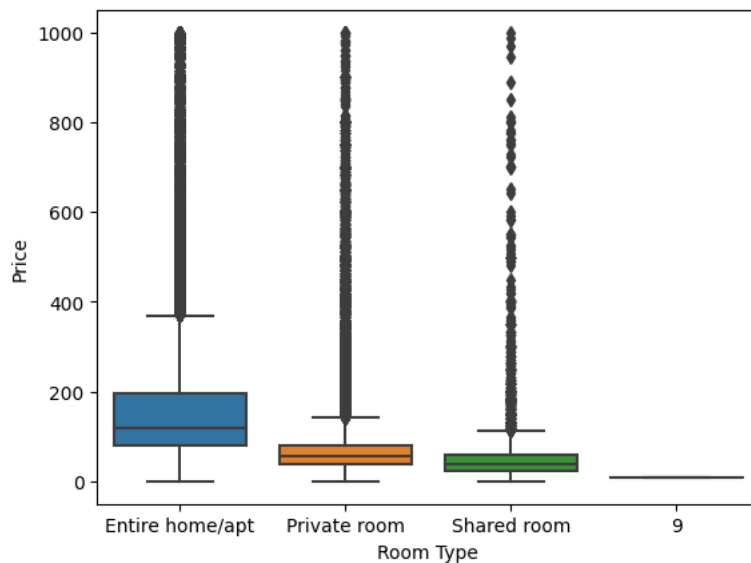

Se elimina la row con el valor "9" en esta columna ya que es 1 sola

```
df = df.drop(df[df['Room Type'] == '9'].index)
```

```
mapeo = {'Shared room': 1, 'Private room': 2,'Entire home/apt':3}
df['Room Type'] = df['Room Type'].map(mapeo)
```

▾ Bed type

```
df['Bed Type'].value_counts(normalize=True)
```

```
    Real Bed         0.965932
    Pull-out Sofa    0.019989
    Futon            0.007285
    Couch            0.004095
    Airbed           0.002700
    Name: Bed Type, dtype: float64
```

Se elimina esta variable ya que 97% de las filas contiene el mismo valor

```
df=df.drop(['Bed Type'],axis=1)
```

▼ Experiences

```
df['Experiences Offered'].value_counts(normalize=True)
```

```
none        0.993536
business    0.002133
social      0.001876
family      0.001600
romantic    0.000855
Name: Experiences Offered, dtype: float64
```

Se elimina esta variable ya que 99% de las filas contiene el mismo valor

```
df=df.drop(['Experiences Offered'],axis=1)
```

▼ Amenities

```
df['Amenities'].head()
```

```
0    TV,Cable TV,Wireless Internet,Kitchen,Elevator...
1    TV,Internet,Wireless Internet,Air conditioning...
2    TV,Wireless Internet,Air conditioning,Breakfas...
3    Breakfast,Elevator in building,Heating,Washer,...
4    Internet,Wireless Internet,Air conditioning,Ki...
Name: Amenities, dtype: object
```

Generamos un split para visualizar la cantidad diferente de valores de amenites que existen.

```
amenities_split = df['Amenities'].str.split(',')
all_amenities = [item for sublist in amenities_split.dropna() for item in sublist]
unique_amenities = set(all_amenities)
```

```
unique_amenities
```

```
      'Stair gates',
      'Step-free access',
      'Stove',
      'Suitable for Events',
      'Suitable for events',
      'TV',
      'Table corner guards',
      'Tub with shower bench',
      'Washer',
      'Washer / Dryer',
      'Waterfront',
      'Wheelchair Accessible',
      'Wheelchair accessible',
      'Wide clearance to bed',
      'Wide clearance to shower and toilet',
      'Wide doorway',
      'Wide hallway clearance',
      'Window guards',
      'Wireless Internet',
      'translation missing: en.hosting_amenity_49',
      'translation missing: en.hosting_amenity_50'}
```

Generamos variales dummies para las variables 'Pool', 'Hot tub', 'Pets Allowed', ya que consideramos que son 3 caracteristicas importantes de alojamiento que pueden incidir en el precio final.

```python
df['Has_Pool'] = df['Amenities'].str.contains('Pool')
df['Amenities'] = df['Amenities'].str.replace('Hot tub', 'Hot_Tub')
df['Amenities'] = df['Amenities'].str.replace('Pets allowed', 'Pets Allowed')
df['Hot_Tub'] = df['Amenities'].str.contains('Hot_Tub')
df['Pets_Allowed'] = df['Amenities'].str.contains('Pets Allowed')
```

```python
df['Has_Pool'].value_counts(normalize=True)
```

```
    False    0.926308
    True     0.073692
    Name: Has_Pool, dtype: float64
```

```python
df['Hot_Tub'].value_counts(normalize=True)
```

```
    False    0.946051
    True     0.053949
    Name: Hot_Tub, dtype: float64
```

```python
df['Pets_Allowed'].value_counts(normalize=True)
```

```
    False    0.865064
    True     0.134936
    Name: Pets_Allowed, dtype: float64
```

```python
sns.boxplot(x='Pets_Allowed', y='Price', data=df)
```

```
    <Axes: xlabel='Pets_Allowed', ylabel='Price'>
```
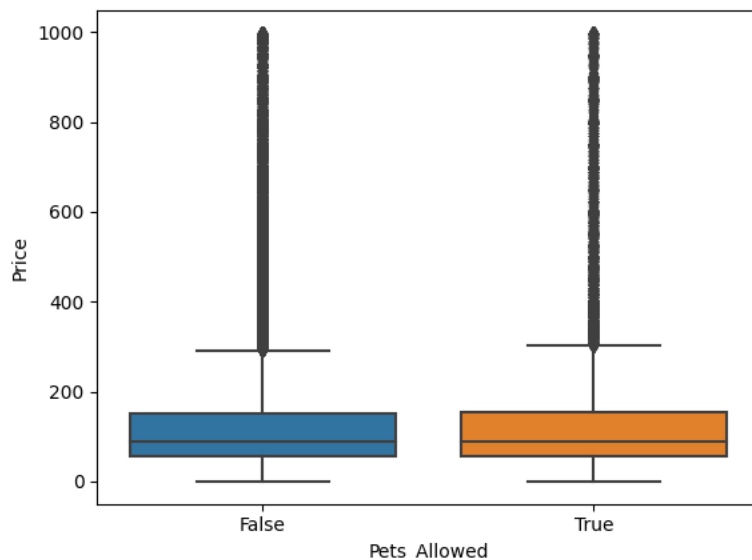
```
sns.boxplot(x='Has_Pool', y='Price', data=df)
```

```
<Axes: xlabel='Has_Pool', ylabel='Price'>
```
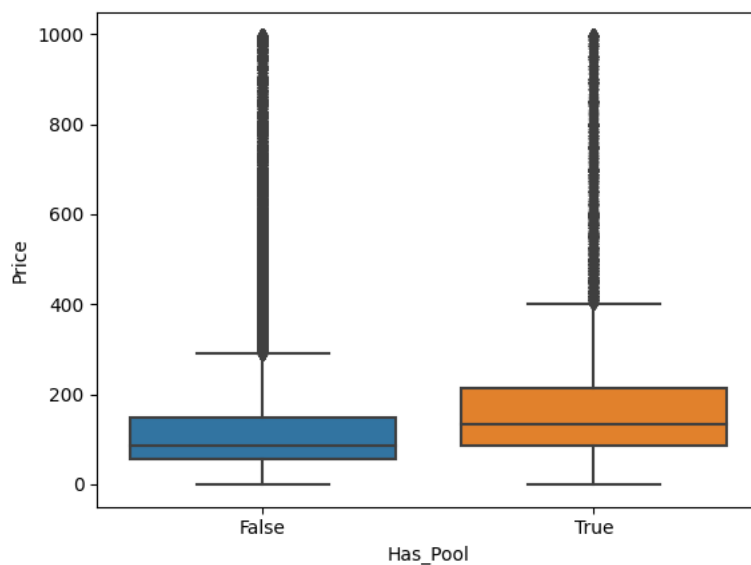


```
sns.boxplot(x='Hot_Tub', y='Price', data=df)
```

```
<Axes: xlabel='Hot_Tub', ylabel='Price'>
```
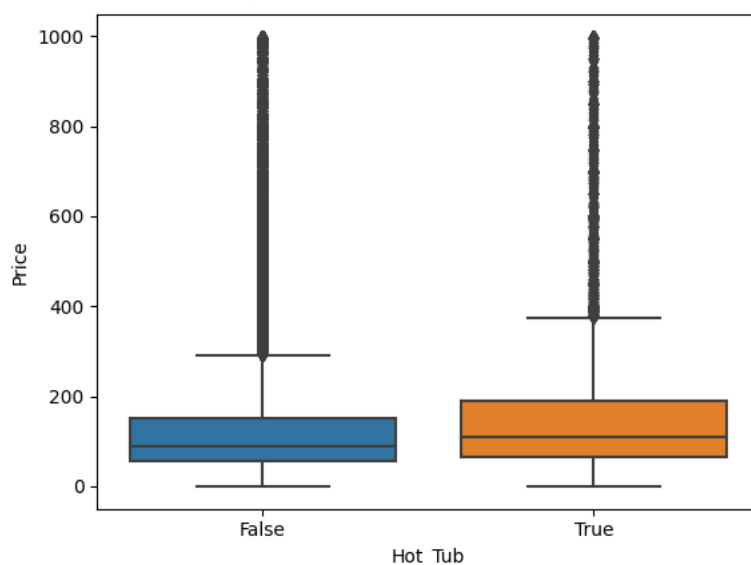

Se cambia la variable Amenities por las variables Dummies Has_Pool y Has_TotTub

```
df=df.drop(['Amenities','Pets_Allowed'],axis=1)
```

▾ Features

```
df['Features'].head(5)
```

```
0               Host Has Profile Pic,Instant Bookable
1               Host Has Profile Pic,Is Location Exact
2               Host Has Profile Pic,Is Location Exact
3    Host Is Superhost,Host Has Profile Pic,Is Loca...
4    Host Has Profile Pic,Is Location Exact,Instant...
Name: Features, dtype: object
```

Generamos un split para visualizar la cantidad diferente de valores de Features que existen.

```
features_split = df['Features'].str.split(',')
all_features = [item for sublist in features_split.dropna() for item in sublist]
unique_features = set(all_features)


unique_features

    {'Host Has Profile Pic',
     'Host Identity Verified',
     'Host Is Superhost',
     'Instant Bookable',
     'Is Location Exact',
     'Require Guest Phone Verification',
     'Require Guest Profile Picture',
     'Requires License'}
```

Generamos variales dummies para las variables 'Superhost', 'Instant', 'Exact', ya que consideramos que son 3 caracteristicas importantes de Features que pueden incidir en el precio final.

```
df['Superhost'] = df['Features'].str.contains('Superhost')
df['Instant Bookable']=df['Features'].str.contains('Instant')
df['Is Location Exact']=df['Features'].str.contains('Exact')


df['Superhost'].value_counts(normalize=True)

    False    0.885471
    True     0.114529
    Name: Superhost, dtype: float64


df['Instant Bookable'].value_counts(normalize=True)

    False    0.751299
    True     0.248701
    Name: Instant Bookable, dtype: float64


df['Is Location Exact'].value_counts(normalize=True)

    True     0.750294
    False    0.249706
    Name: Is Location Exact, dtype: float64


sns.boxplot(x='Superhost', y='Price', data=df)

    <Axes: xlabel='Superhost', ylabel='Price'>
```
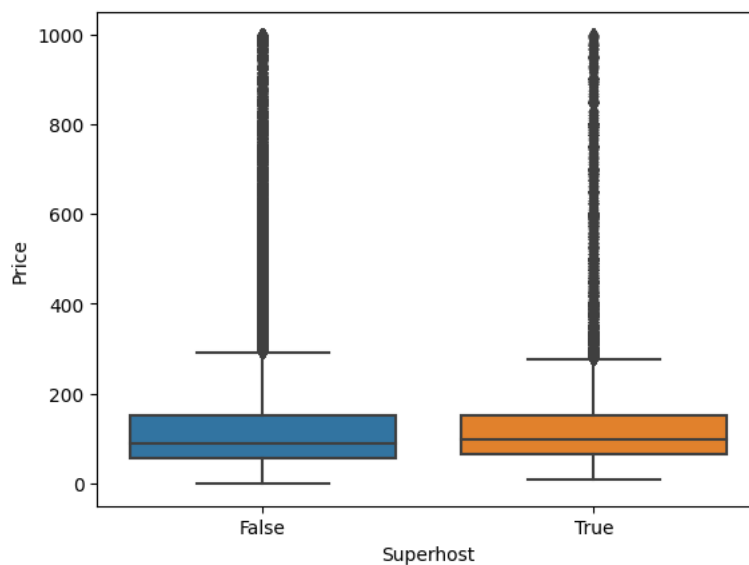


```
sns.boxplot(x='Instant Bookable', y='Price', data=df)
```

```
<Axes: xlabel='Instant Bookable', ylabel='Price'>
```
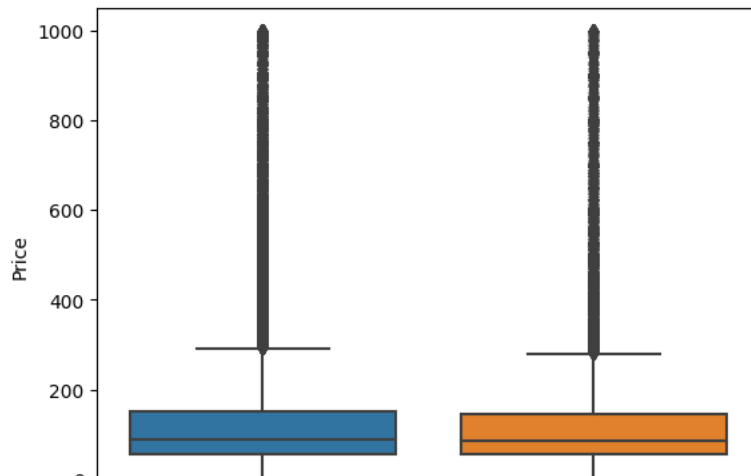


```
sns.boxplot(x='Is Location Exact', y='Price', data=df)
```

```
<Axes: xlabel='Is Location Exact', ylabel='Price'>
```
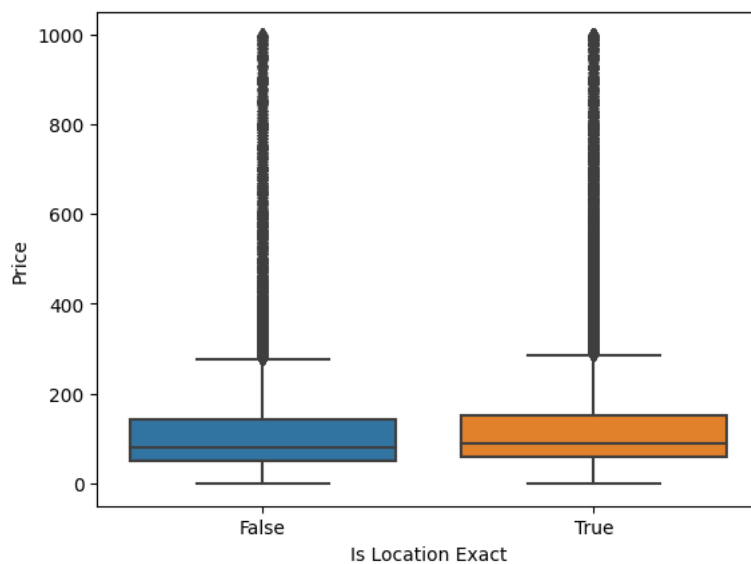


```
df=df.drop(['Features','Superhost','Is Location Exact','Instant Bookable'],axis=1)
```

Se descarta la variable Features, Superhost, Is Location Exact e Instant Bookable ya que no parecen contener información muy relevante para predecir la variable objetivo

▾ Property type

```
df['Property Type'].value_counts()
```

```
Apartment              232146
House                   61321
Bed & Breakfast          8066
Condominium              6778
Loft                     3963
Townhouse                3845
Other                    2114
Villa                    2046
Guesthouse               1067
Bungalow                  826
Dorm                      815
Boat                      626
Cabin                     528
Chalet                    434
Boutique hotel            354
Hostel                    278
Serviced apartment        265
Camper/RV                 247
```

```
        Timeshare              114
        Guest suite             95
        Tent                    67
        Vacation home           48
        Treehouse               42
        Castle                  36
        Earth House             24
        In-law                  24
        Hut                     20
        Yurt                    19
        Tipi                    13
        Entire Floor            11
        Cave                     8
        Nature lodge             8
        Lighthouse               8
        Casa particular          6
        Island                   4
        Train                    4
        Parking Space            3
        Igloo                    2
        Van                      1
        Plane                    1
        Ryokan (Japan)           1
        Car                      1
        Name: Property Type, dtype: int64
```

```python
filtered_df = df[df['Property Type'].isin(['Apartment', 'House', 'Condominium','Loft','Bed & Breakfast','Townhouse'])]
```

```python
sns.boxplot(x='Property Type', y='Price', data=filtered_df)
plt.xticks(rotation=45)
```

```
    (array([0, 1, 2, 3, 4, 5]),
     [Text(0, 0, 'Apartment'),
      Text(1, 0, 'House'),
      Text(2, 0, 'Bed & Breakfast'),
      Text(3, 0, 'Condominium'),
      Text(4, 0, 'Loft'),
      Text(5, 0, 'Townhouse')])
```
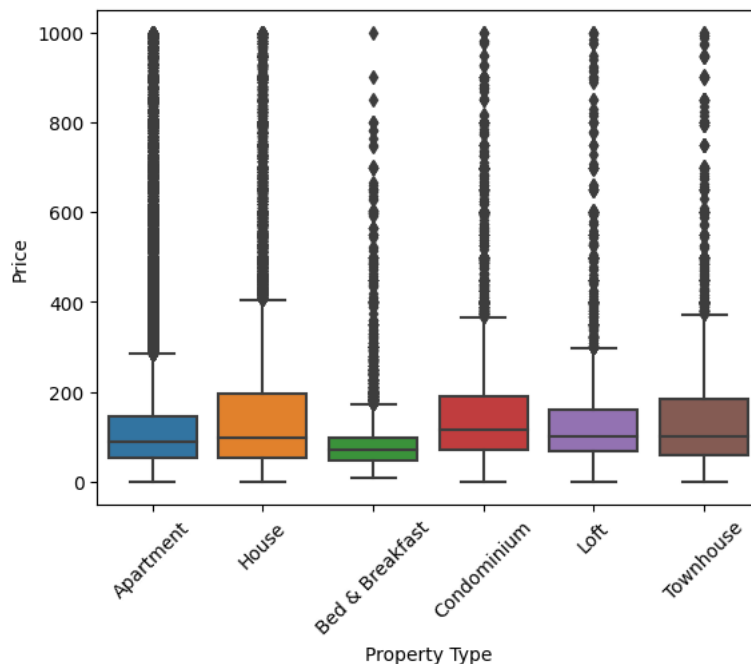

Se decide limitar las categorias de esta variable ya que son en total 42 pero las primeras 6 acumulan el 97% de las observaciones. En el 3% restante se decide imputar el valor Apartment ya que es el valor con mayor cantidad de observaciones (71%).

```python
prop_types = ['Apartment', 'House', 'Condominium', 'Loft', 'Bed & Breakfast', 'Townhouse']
df.loc[~df['Property Type'].isin(prop_types), 'Property Type'] = 'Apartment'
```

```python
len(df.columns)
```

```
    47
```

▾ Availabilty

```
corr = df[availability].corr()
mask = np.triu(np.ones_like(corr, dtype=bool))
fig, ax = plt.subplots(figsize=(5, 5))
sns.heatmap(corr, annot=True, cmap='coolwarm', ax=ax, mask=mask)
plt.show()
```
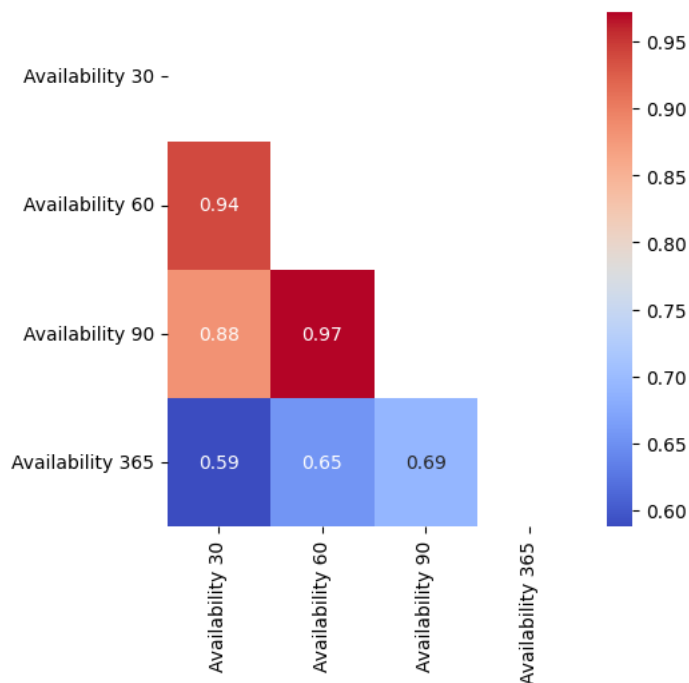


```
df[['Availability 60', 'Availability 90','Availability 30','Availability 365','Price']].corr()['Price']
```

```
Availability 60     -0.004711
Availability 90     -0.022040
Availability 30      0.008635
Availability 365    -0.026208
Price                1.000000
Name: Price, dtype: float64
```

Las columnas Availability 30,60 y 90 están altamente correlacionadas (>=0.88) por lo cual se decide analizar correlación con variable Price para elegir cuál elegir para el modelo.

Al analizar correlación con Price, notamos que ninguna de ellas tiene alta correlación con la variable objetivo.

Por lo cual se decide no utilizar ninguna de ellas.

```
df=df.drop(availability,axis=1)
```

▾ Reviews

```
reviews=['Price','Reviews per Month','Number of Reviews','First Review','Last Review','Review Scores Rating','Review Scores Accuracy','Revi
```

```
corr = df[reviews].corr()
mask = np.triu(np.ones_like(corr, dtype=bool))
fig, ax = plt.subplots(figsize=(10, 5))
sns.heatmap(corr, annot=True, cmap='coolwarm', ax=ax, mask=mask)
plt.show()
```

```
<ipython-input-94-533072ec687f>:1: FutureWarning: The default value of numeric_only in DataFrame.corr is deprecated. In a future versio
  corr = df[reviews].corr()
```
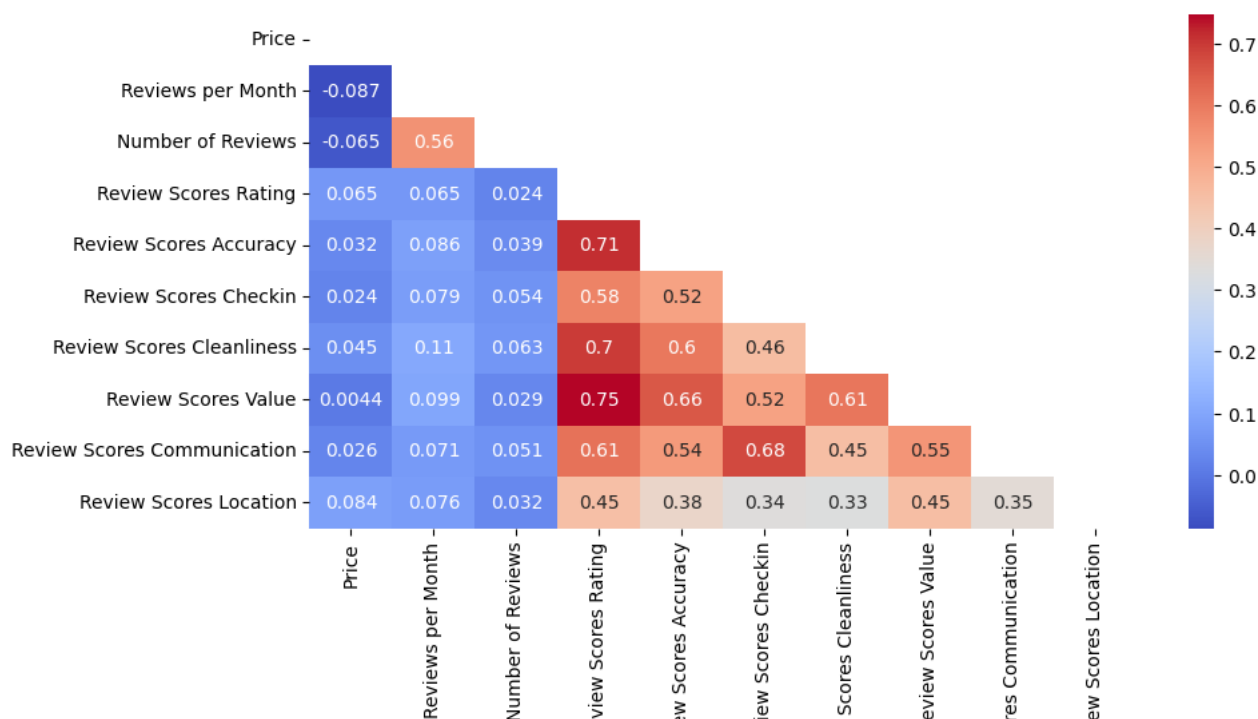


```
df[reviews].corr()['Price']
```

```
<ipython-input-95-3af80103f65c>:1: FutureWarning: The default value of numeric_only in DataFrame.corr is deprecated. In a future versio
  df[reviews].corr()['Price']
Price                        1.000000
Reviews per Month           -0.086557
Number of Reviews           -0.065420
Review Scores Rating         0.064660
Review Scores Accuracy       0.032375
Review Scores Checkin        0.023603
Review Scores Cleanliness    0.045148
Review Scores Value          0.004369
Review Scores Communication  0.026361
Review Scores Location       0.084172
Name: Price, dtype: float64
```

Reviews Score Rating, Scores Value, Cleanliness y Scores Accuracy están altamente correlacionadas (>0.70), se decide mantener la variable Score Rating por tener mayor correlación con la variable objetivo.

Las variables relativas al review de checkin y communication están altamente correlacionadas entre ellas (0.68) por lo cual se analiza cuál de ellas conservar. Al analizar la correlación con Price se decide no conservar ninguna de ellas ya que ambas son bajas (~0.02)

```
cols_elim5=['Review Scores Accuracy','Review Scores Checkin','Review Scores Cleanliness','Review Scores Value','Review Scores Communication
```

```
df=df.drop(cols_elim5, axis=1)
```

First/Last Review

```
null_info[null_info['Col'].isin(['First Review','Last Review'])]
```

	Col	Cant_Nulos	Share_nulos
First Review	First Review	79304	24.304983
Last Review	Last Review	79241	24.285675

Dado que ambas variables tienen un alto share de valores nulos (casi 25%) se decide eliminarlas.

```
df=df.drop(['First Review','Last Review'], axis=1)
```

```
len(df.columns)
```

```
    36
```

```
hoy = datetime.now()
df['Last Scraped'] = pd.to_datetime(df['Last Scraped'])
df['Last Scraped_Days'] = (hoy - df['Last Scraped']).dt.days
```

```
df[['Last Scraped_Days','Price']].corr()['Price']
```

```
    Last Scraped_Days   -0.02173
    Price                1.00000
    Name: Price, dtype: float64
```

```
df=df.drop(['Last Scraped_Days','Last Scraped'],axis=1)
```

```
hoy = datetime.now()
df['Calendar last Scraped'] = pd.to_datetime(df['Calendar last Scraped'])
df['Calendar_Last_Scraped_Days'] = (hoy - df['Calendar last Scraped']).dt.days
```

```
df[['Calendar_Last_Scraped_Days','Price']].corr()['Price']
```

```
    Calendar_Last_Scraped_Days   -0.021815
    Price                         1.000000
    Name: Price, dtype: float64
```

```
df=df.drop(['Calendar_Last_Scraped_Days','Calendar last Scraped'],axis=1)
```

▾ Host

```
df[host].head()
```

	Host Response Time	Host Since	Host Verifications	Host Response Rate
0	within an hour	2015-12-10	email,phone,reviews	100.0
1	within a few hours	2015-11-29	phone	100.0
2	NaN	2015-10-26	email,phone	NaN
3	within an hour	2015-05-10	email,phone,reviews	100.0
4	within an hour	2016-07-27	phone,reviews	70.0

```
null_info[null_info['Col'].isin(host)]
```

	Col	Cant_Nulos	Share_nulos
Host Since	Host Since	317	0.097154
Host Response Time	Host Response Time	75441	23.121056
Host Response Rate	Host Response Rate	75442	23.121362
Host Verifications	Host Verifications	536	0.164273

```
hoy = datetime.now()
df['Host Since'] = pd.to_datetime(df['Host Since'])
df['Host Since_Days'] = (hoy - df['Host Since']).dt.days
```

```
df[['Host Since_Days','Price']].corr()
```

	Host Since_Days	Price
Host Since_Days	1.000000	0.028971
Price	0.028971	1.000000

```
df= df.drop('Host Since_Days', axis=1)
```

Se decide no utilizar ninguna de las variables del grupo "Host" por su alta cantidad de valores nulos y por su baja correlación con la variable objetivo.

```
df=df.drop(host, axis=1)
```

▼ Listings

```
listings=['Calculated host listings count','Host Listings Count','Host Total Listings Count','Price']
```

```
df[listings].corr()['Price']
```

```
    Calculated host listings count    0.041223
    Host Listings Count               0.051946
    Host Total Listings Count         0.051946
    Price                             1.000000
    Name: Price, dtype: float64
```

```
corr = df[listings].corr()
mask = np.triu(np.ones_like(corr, dtype=bool))
fig, ax = plt.subplots(figsize=(10, 5))
sns.heatmap(corr, annot=True, cmap='coolwarm', ax=ax, mask=mask)
plt.show()
```
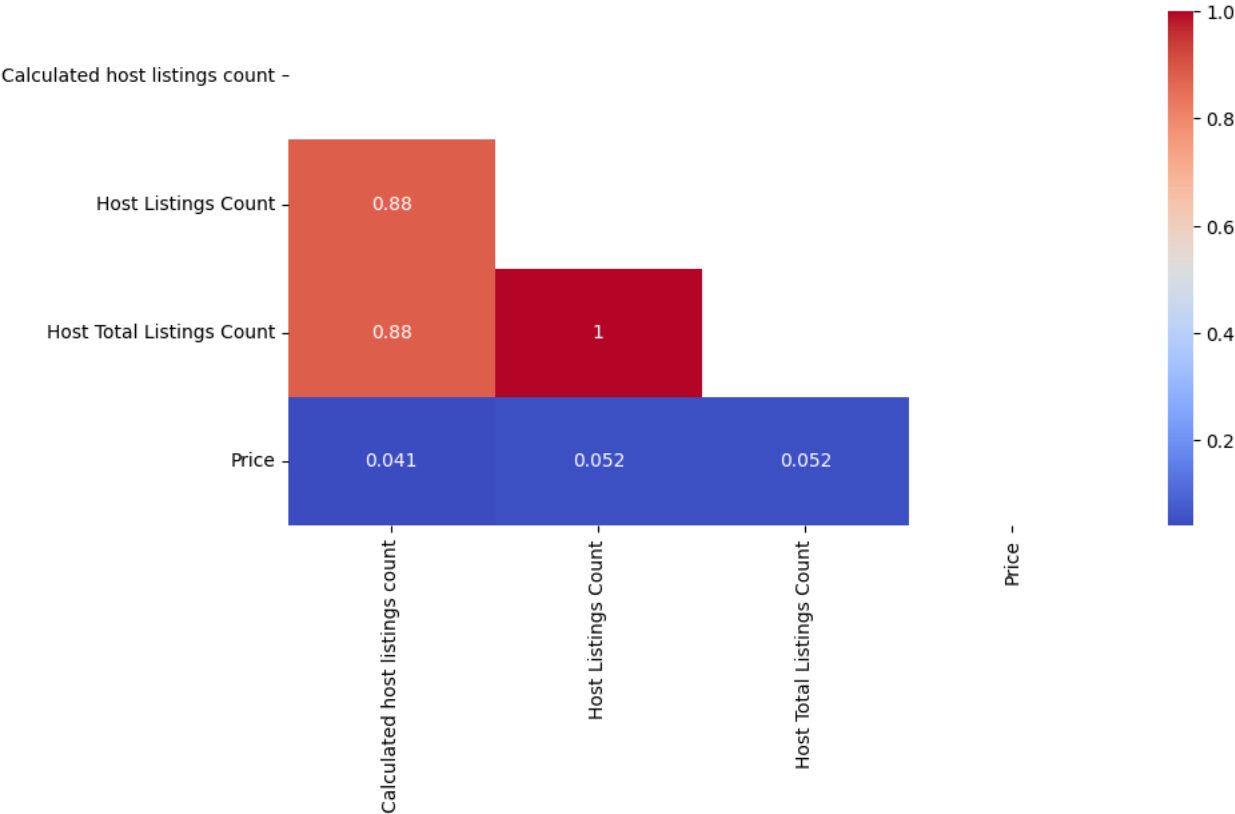


```
null_info[null_info['Col'].isin(listings)]
```

	Col	Cant_Nulos	Share_nulos
Host Listings Count	Host Listings Count	316	0.096847
Host Total Listings Count	Host Total Listings Count	317	0.097154
Calculated host listings count	Calculated host listings count	598	0.183274
Price	Price	0	0.000000

```
df=df.drop(['Calculated host listings count','Host Total Listings Count'], axis=1)
```

Las variables Host Total Listings Count y Host Listings Count son prácticamente la misma por lo cual se elimina una de ellas (correlación 1).

También se elimina la variable Calculated host listings count por alta correlación con Host Listings Count y tener mayor cantidad de nulos asi como menor correlación con la variable objetivo.

▾ Info geográfica

```
geo=['Latitude','Longitude','Price','Street','Country Code','City','State','Zipcode','Smart Location','Neighbourhood Cleansed','Host Neighb
```

```
df[geo].head(10)
```

	Latitude	Longitude	Price	Street	Country Code	City	State	Zipcode	Smart Location	Neighbourhood Cleansed	Host Neighbourhood	Market	Lo
0	51.219388	4.403444	159.0	Antwerp, Flanders, Belgium	BE	Antwerp	Flanders	NaN	Antwerp, Belgium	Historisch Centrum	NaN	Antwerp	A Fl E
1	34.189269	-118.419935	49.0	Valley Glen, Los Angeles, CA 91401, United States	US	Los Angeles	CA	91401	Los Angeles, CA	Valley Glen	Valley Glen	Los Angeles	A Ca
2	41.908596	12.493518	75.0	Ludovisi, Roma, Lazio 00187, Italy	IT	Roma	Lazio	00187	Roma, Italy	I Centro Storico	Ludovisi	Rome	
3	41.883985	12.499185	55.0	Monti, Roma, Lazio 00184, Italy	IT	Roma	Lazio	00184	Roma, Italy	I Centro Storico	Monti	Rome	
4	40.720983	-73.997836	177.0	Soho, New York, NY 10013, United States	US	New York	NY	10013	New York, NY	SoHo	Soho	New York	Ne Ne
5	48.859354	2.308245	47.0	Tour Eiffel - Champ de Mars, Paris, Île-de-Fra...	FR	Paris	Île-de-France	75007	Paris, France	Palais-Bourbon	Tour Eiffel - Champ de Mars	Paris	Pa
6	48.879162	2.371675	70.0	Buttes-Chaumont - Belleville, Paris, Île-de-Fr...	FR	Paris	Île-de-France	75010	Paris, France	Buttes-Chaumont	Buttes-Chaumont - Belleville	Paris	Pa
7	40.816603	-73.937020	57.0	Harlem, New York, NY 10037, United States	US	New York	NY	10037	New York, NY	Harlem	Harlem	New York	Ne Ne
8	-37.809188	144.986107	275.0	East Melbourne, East Melbourne, VIC 3002, Aust...	AU	East Melbourne	VIC	3002	East Melbourne, Australia	Yarra	East Melbourne	Melbourne	V A
9	51.430897	-0.119824	30.0	Harborough Road, London, SW16, United Kingdom	GB	London	NaN	SW16	London, United Kingdom	Lambeth	Streatham	London	

Las columnas que son texto se pasan todas a mayúsculas para evitar tener categorías duplicadas (ej "NY, ny")

```
df['Smart Location']=df['Smart Location'].str.upper()
df['Neighbourhood Cleansed']=df['Neighbourhood Cleansed'].str.upper()
```

```
df[geo].head(10)
```

	Latitude	Longitude	Price	Street	Country Code	City	State	Zipcode	Smart Location	Neighbourhood Cleansed	Host Neighbourhood	Market
0	51.219388	4.403444	159.0	Antwerp, Flanders, Belgium	BE	Antwerp	Flanders	NaN	ANTWERP, BELGIUM	HISTORISCH CENTRUM	NaN	Antwerp
1	34.189269	-118.419935	49.0	Valley Glen, Los Angeles, CA 91401, United States	US	Los Angeles	CA	91401	LOS ANGELES, CA	VALLEY GLEN	Valley Glen	Los Angeles
2	41.908596	12.493518	75.0	Ludovisi, Roma, Lazio 00187, Italy	IT	Roma	Lazio	00187	ROMA, ITALY	I CENTRO STORICO	Ludovisi	Rome
3	41.883985	12.499185	55.0	Monti, Roma, Lazio 00184, Italy	IT	Roma	Lazio	00184	ROMA, ITALY	I CENTRO STORICO	Monti	Rome
4	40.720983	-73.997836	177.0	Soho, New York, NY 10013, United States	US	New York	NY	10013	NEW YORK, NY	SOHO	Soho	New York
5	48.859354	2.308245	47.0	Tour Eiffel - Champ de Mars, Paris, Île-de-Fra...	FR	Paris	Île-de-France	75007	PARIS, FRANCE	PALAIS-BOURBON	Tour Eiffel - Champ de Mars	Paris
6	48.879162	2.371675	70.0	Buttes-Chaumont - Belleville, Paris, Île-de-Fr...	FR	Paris	Île-de-France	75010	PARIS, FRANCE	BUTTES-CHAUMONT	Buttes-Chaumont - Belleville	Paris
7	40.816603	-73.937020	57.0	Harlem, New York, NY 10037, United States	US	New York	NY	10037	NEW YORK, NY	HARLEM	Harlem	New York
8	-37.809188	144.986107	275.0	East Melbourne, East Melbourne, VIC 3002, Aust...	AU	East Melbourne	VIC	3002	EAST MELBOURNE, AUSTRALIA	YARRA	East Melbourne	Melbourne
9	51.430897	-0.119824	30.0	Harborough Road, London, SW16, United Kingdom	GB	London	NaN	SW16	LONDON, UNITED KINGDOM	LAMBETH	Streatham	London

▾ País

```
df['Country Code'].value_counts()
```

```
    US    88605
    GB    40854
    FR    37975
    ES    30777
    AU    26828
    IT    22180
    CA    20509
    DE    13739
    DK    11143
```

```
     NL    10168
     AT     5309
     BE     4970
     IE     4576
     HK     3575
     GR     3441
     CH     1596
     CN       36
     MX        2
     It        1
     UY        1
     VU        1
     Name: Country Code, dtype: int64
```

Se decide eliminar los países que tienen menos de 1000 observaciones para que el modelo performe mejor.

```
df = df[~df['Country Code'].isin(['CN', 'MX', 'It','UY','VU'])]
```

```
sns.boxplot(x='Country Code', y='Price', data=df)
plt.xticks(rotation=45)
```

```
     (array([ 0,  1,  2,  3,  4,  5,  6,  7,  8,  9, 10, 11, 12, 13, 14, 15]),
      [Text(0, 0, 'BE'),
       Text(1, 0, 'US'),
       Text(2, 0, 'IT'),
       Text(3, 0, 'FR'),
       Text(4, 0, 'AU'),
       Text(5, 0, 'GB'),
       Text(6, 0, 'CA'),
       Text(7, 0, 'ES'),
       Text(8, 0, 'DE'),
       Text(9, 0, 'IE'),
       Text(10, 0, 'DK'),
       Text(11, 0, 'NL'),
       Text(12, 0, 'GR'),
       Text(13, 0, 'AT'),
       Text(14, 0, 'HK'),
       Text(15, 0, 'CH')])
```
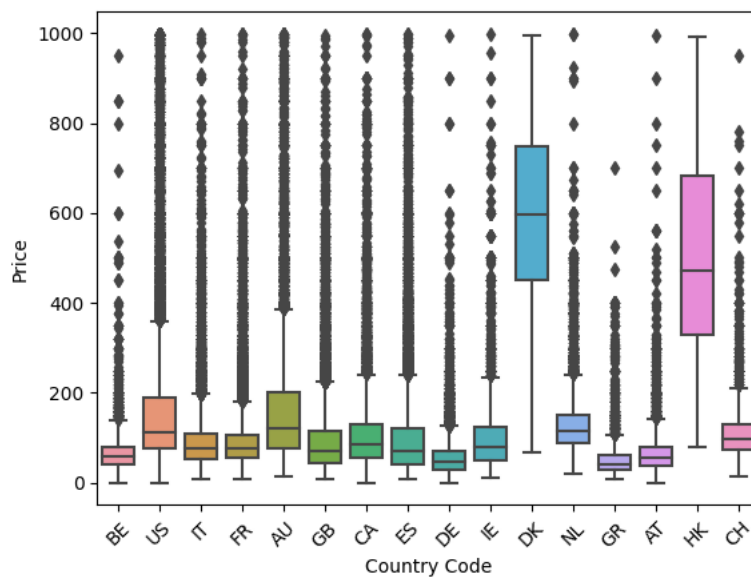


```
null_info[null_info['Col'].isin(geo)]
```

	Col	Cant_Nulos	Share_nulos
Host Location	Host Location	1486	0.455427
Host Neighbourhood	Host Neighbourhood	82080	25.155768
Street	Street	0	0.000000
Neighbourhood Cleansed	Neighbourhood Cleansed	0	0.000000
City	City	283	0.086733
State	State	31295	9.591249

Se pasan las columnas a códigos para poder calcular correlación con Price

| Market | Market | 3615 | 1.107020 |

```python
paises_unicos = df['Country Code'].unique()
codigo_pais = {pais: codigo for codigo, pais in enumerate(paises_unicos)}
df['Country_Code'] = df['Country Code'].map(codigo_pais)


smart_loc_unico = df['Smart Location'].unique()
codigo_loc = {loc: codigo for codigo, loc in enumerate(smart_loc_unico)}
df['Smart_Loc_Code'] = df['Smart Location'].map(codigo_loc)


barrio_unico = df['Neighbourhood Cleansed'].unique()
barrio = {bar: codigo for codigo, bar in enumerate(barrio_unico)}
df['Barrio_Code'] = df['Neighbourhood Cleansed'].map(barrio)


city = df['City'].unique()
city_ = {bar: codigo for codigo, bar in enumerate(city)}
df['City_Code'] = df['City'].map(city_)


geo2=['Smart_Loc_Code','Country_Code','Barrio_Code','City_Code','Zipcode','Price']
```

Correlación de País, Smart Location (Pais+Ciudad) y Barrio con Price

```python
df[geo2].corr()['Price']
```

```
<ipython-input-131-ad381f35d343>:1: FutureWarning: The default value of numeric_only in DataFrame.corr is deprecated. In a future versi
  df[geo2].corr()['Price']
Smart_Loc_Code    0.024234
Country_Code      0.153133
Barrio_Code      -0.096683
City_Code         0.025801
Price             1.000000
Name: Price, dtype: float64
```

Barrios: Notamos que hay mucha cantidad de Barrios distintos, algunos con muy pocas observaciones. Lo mismo se aplica a Estado y Zipcode.

Considerando esto En principio se mantiene unicamente el dato del pais, al evaluar los resultados del modelo en caso que sea necesario se sumarán otras variables.

```python
df[df['Country_Code']==2]['Neighbourhood Cleansed'].value_counts()
```

```
I CENTRO STORICO            8159
VII SAN GIOVANNI/CINECITTÀ  1565
II PARIOLI/NOMENTANO        1425
XIII AURELIA                1230
TRENTINO                    1096
                            ...
ISOLA SAN GIORGIO IN ALGA      1
ASSEGGIANO                     1
CAMPALTO BAGARON               1
DESE                           1
CAMPALTO CEP                   1
Name: Neighbourhood Cleansed, Length: 71, dtype: int64
```

```python
geo=['Smart_Loc_Code','City_Code','Barrio_Code','Street','Country Code','City','State','Zipcode','Smart Location','Neighbourhood Cleansed',
```

```
df=df.drop(geo, axis=1)
```

▾ Preparación final de los datos

One-hot-encoding, dummies, Datos faltantes, estandarización, correlación con variable objetivo, último check de correlación entre ellas

```
df.columns
```

```
Index(['id', 'Host Listings Count', 'Latitude', 'Longitude', 'Property Type',
       'Room Type', 'Accommodates', 'Bathrooms', 'Guests Included',
       'Extra People', 'Number of Reviews', 'Review Scores Rating',
       'Review Scores Location', 'Cancellation Policy', 'Reviews per Month',
       'Price', 'Has_Pool', 'Hot_Tub', 'Country_Code'],
      dtype='object')
```

▾ Imputación de valores nulos

```
columnas_con_nulos = df.columns[df.isnull().any()]

for col in columnas_con_nulos:
    valor_mas_frecuente = df[col].mode().iloc[0]
    porcentaje_nulos = (df[col].isnull().sum() / len(df)) * 100
    porcentaje_valor_mas_frecuente = (df[col].value_counts()[valor_mas_frecuente] / len(df)) * 100
    print(f"{col} tiene {porcentaje_nulos:.2f}% nulos, el valor más frecuente es {valor_mas_frecuente}, y representa {porcentaje_valor_mas_
```

```
Host Listings Count tiene 0.10% nulos, el valor más frecuente es 1.0, y representa 58.53% de todas las observaciones.
Accommodates tiene 0.01% nulos, el valor más frecuente es 2.0, y representa 43.13% de todas las observaciones.
Bathrooms tiene 0.30% nulos, el valor más frecuente es 1.0, y representa 76.88% de todas las observaciones.
Extra People tiene 0.00% nulos, el valor más frecuente es 0.0, y representa 59.08% de todas las observaciones.
Review Scores Rating tiene 25.47% nulos, el valor más frecuente es 100.0, y representa 19.12% de todas las observaciones.
Review Scores Location tiene 25.70% nulos, el valor más frecuente es 10.0, y representa 44.86% de todas las observaciones.
Reviews per Month tiene 24.30% nulos, el valor más frecuente es 1.0, y representa 1.88% de todas las observaciones.
Has_Pool tiene 0.88% nulos, el valor más frecuente es False, y representa 91.81% de todas las observaciones.
Hot_Tub tiene 0.88% nulos, el valor más frecuente es False, y representa 93.77% de todas las observaciones.
```

▾ Imputación de valores nulos

Se utiliza el valor más frecuente en todos los casos para imputar los valores nulos considerando que corresponde un alto porcentaje del total de observaciones en todos los casos.

Accomodates es el unico caso donde el valor mas frecuente representa menos del 50% de las observaciones, pero dado que son solo 42 observaciones con valores nulos, se entiende que no ocasionará problemas en el modelo

```
df['Hot_Tub'].fillna(False, inplace=True)
df['Has_Pool'].fillna(False, inplace=True)
df['Bathrooms'].fillna(1,inplace=True)
df['Host Listings Count'].fillna(1,inplace=True)
df['Accommodates'].fillna(2,inplace=True)
df['Extra People'].fillna(0,inplace=True)
```

```
df.isnull().sum()
```

```
id                          0
Host Listings Count         0
Latitude                    0
Longitude                   0
Property Type               0
Room Type                   0
Accommodates                0
Bathrooms                   0
Guests Included             0
Extra People                0
Number of Reviews           0
Review Scores Rating    83100
Review Scores Location  83837
Cancellation Policy         0
Reviews per Month       79277
Price                       0
Has_Pool                    0
Hot_Tub                     0
Country_Code                0
dtype: int64
```

```
df=df.drop(['Review Scores Rating','Review Scores Location','Reviews per Month'],axis=1)
```

Se eliminan las variables Review Scores Rating, Review Scores Location y Reviews per Month ya que presentan gran cantidad de nulos.

```
df.head()
```

	id	Host Listings Count	Latitude	Longitude	Property Type	Room Type	Accommodates	Bathrooms	Guests Included	Extra People	Number of Reviews	Cancellation Policy	Price	Has_Pool
0	0	2.0	51.219388	4.403444	Apartment	3	6.0	1.0	6.0	25.0	9.0	6	159.0	False
1	1	1.0	34.189269	-118.419935	House	2	2.0	1.0	1.0	0.0	0.0	2	49.0	False
2	2	1.0	41.908596	12.493518	Apartment	2	2.0	1.0	1.0	0.0	0.0	1	75.0	False
3	3	1.0	41.883985	12.499185	Apartment	2	2.0	1.0	1.0	0.0	55.0	3	55.0	False
4	4	2.0	40.720983	-73.997836	Apartment	3	2.0	1.0	2.0	20.0	28.0	6	177.0	False

```
df = pd.get_dummies(df, columns=['Property Type'], drop_first=True)
df = pd.get_dummies(df, columns=['Has_Pool'], drop_first=True)
df = pd.get_dummies(df, columns=['Hot_Tub'], drop_first=True)
```

```
df.info()

    <class 'pandas.core.frame.DataFrame'>
    Int64Index: 326245 entries, 0 to 326286
    Data columns (total 20 columns):
     #   Column                         Non-Null Count   Dtype
    ---  ------                         --------------   -----
     0   id                             326245 non-null  int64
     1   Host Listings Count            326245 non-null  float64
     2   Latitude                       326245 non-null  float64
     3   Longitude                      326245 non-null  float64
     4   Room Type                      326245 non-null  int64
     5   Accommodates                   326245 non-null  float64
     6   Bathrooms                      326245 non-null  float64
     7   Guests Included                326245 non-null  float64
     8   Extra People                   326245 non-null  float64
     9   Number of Reviews              326245 non-null  float64
     10  Cancellation Policy            326245 non-null  int64
     11  Price                          326245 non-null  float64
     12  Country_Code                   326245 non-null  int64
     13  Property Type_Bed & Breakfast  326245 non-null  uint8
     14  Property Type_Condominium      326245 non-null  uint8
     15  Property Type_House            326245 non-null  uint8
     16  Property Type_Loft             326245 non-null  uint8
     17  Property Type_Townhouse        326245 non-null  uint8
     18  Has_Pool_True                  326245 non-null  uint8
     19  Hot_Tub_True                   326245 non-null  uint8
    dtypes: float64(9), int64(4), uint8(7)
    memory usage: 37.0 MB
```

```
features=[col for col in df.columns if col != 'id']
df[features].corr()['Price']

    Host Listings Count             0.051957
    Latitude                       -0.066953
    Longitude                       0.049467
    Room Type                       0.301767
    Accommodates                    0.374042
    Bathrooms                       0.260150
    Guests Included                 0.193094
    Extra People                    0.274735
    Number of Reviews              -0.065386
    Cancellation Policy             0.096834
    Price                           1.000000
    Country_Code                    0.153133
    Property Type_Bed & Breakfast  -0.054538
    Property Type_Condominium       0.015955
    Property Type_House             0.063074
    Property Type_Loft              0.001125
    Property Type_Townhouse         0.009058
    Has_Pool_True                   0.088011
    Hot_Tub_True                    0.028203
    Name: Price, dtype: float64
```

```python
df=df.drop('Property Type_Townhouse',axis=1)

features=[col for col in df.columns if col != 'id']
features=[col for col in features if col != 'Price']

corr = df[features].corr()
mask = np.triu(np.ones_like(corr, dtype=bool))
fig, ax = plt.subplots(figsize=(17, 5))
sns.heatmap(corr, annot=True, cmap='coolwarm', ax=ax, mask=mask)
plt.show()
```
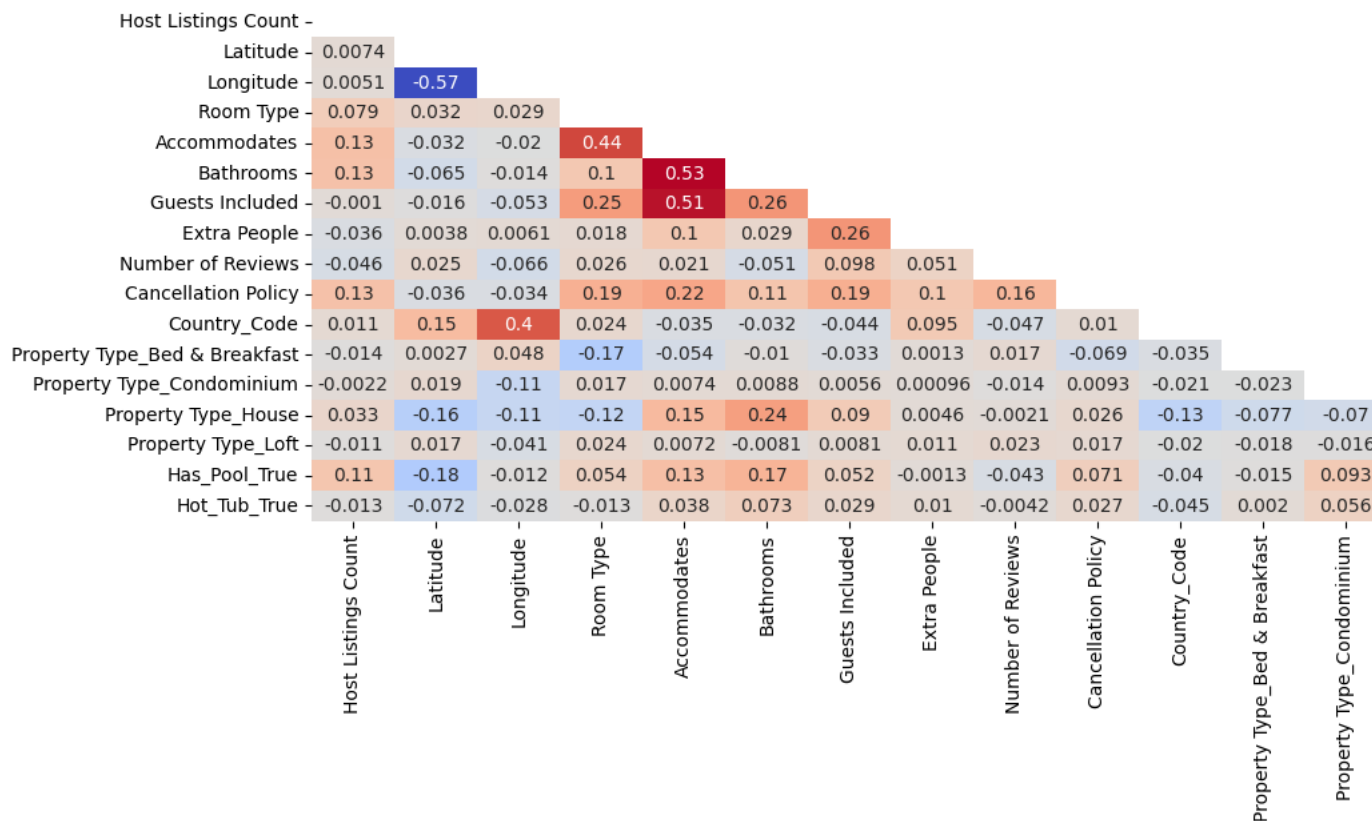


```python
df[features].isnull().sum()
```

```
Host Listings Count             0
Latitude                        0
Longitude                       0
Room Type                       0
Accommodates                    0
Bathrooms                       0
Guests Included                 0
Extra People                    0
Number of Reviews               0
Cancellation Policy             0
Country_Code                    0
Property Type_Bed & Breakfast   0
Property Type_Condominium       0
Property Type_House             0
Property Type_Loft              0
Has_Pool_True                   0
Hot_Tub_True                    0
dtype: int64
```

▾ Escalado de variables

Dado que tenemos variables con diferentes escalas (ejemplo : Baños y Number of Reviews), se decide escalar para que la performance del modelo sea mejor.

```python
df.head()
```

	id	Host Listings Count	Latitude	Longitude	Room Type	Accommodates	Bathrooms	Guests Included	Extra People	Number of Reviews	Cancellation Policy	Price	Country_Code	Pro Typ Brea
0	0	2.0	51.219388	4.403444	3	6.0	1.0	6.0	25.0	9.0	6	159.0	0	
1	1	1.0	34.189269	-118.419935	2	2.0	1.0	1.0	0.0	0.0	2	49.0	1	
2	2	1.0	41.908596	12.493518	2	2.0	1.0	1.0	0.0	0.0	1	75.0	2	
3	3	1.0	41.883985	12.499185	2	2.0	1.0	1.0	0.0	55.0	3	55.0	2	
4	4	2.0	40.720983	-73.997836	3	2.0	1.0	2.0	20.0	28.0	6	177.0	1	

```
var_escalar = ['Host Listings Count','Accommodates','Number of Reviews','Bathrooms','Extra People','Guests Included','Cancellation Policy',
scaler = StandardScaler()
df[var_escalar] = scaler.fit_transform(df[var_escalar])
```

```
df.head()
```

	id	Host Listings Count	Latitude	Longitude	Room Type	Accommodates	Bathrooms	Guests Included	Extra People	Number of Reviews	Cancellation Policy	Price	Country_Cod
0	0	-0.132086	0.575045	0.281640	0.743134	1.339686	-0.415924	3.731894	0.508341	-0.242541	1.129569	159.0	-1.312800
1	1	-0.149515	-0.168278	-1.470675	-1.167903	-0.623711	-0.415924	-0.451872	-0.415510	-0.520720	-1.191680	49.0	-1.018573
2	2	-0.149515	0.168652	0.397061	-1.167903	-0.623711	-0.415924	-0.451872	-0.415510	-0.520720	-1.771993	75.0	-0.724340
3	3	-0.149515	0.167578	0.397141	-1.167903	-0.623711	-0.415924	-0.451872	-0.415510	1.179263	-0.611368	55.0	-0.724340
4	4	-0.132086	0.116815	-0.836907	0.743134	-0.623711	-0.415924	0.384882	0.323571	0.344726	1.129569	177.0	-1.018573

```
df.corr()['Price']
```

```
id                               0.001705
Host Listings Count              0.051957
Latitude                        -0.066953
Longitude                        0.049467
Room Type                        0.301767
Accommodates                     0.374042
Bathrooms                        0.260150
Guests Included                  0.193094
Extra People                     0.274735
Number of Reviews               -0.065386
Cancellation Policy              0.096834
Price                            1.000000
Country_Code                     0.153133
Property Type_Bed & Breakfast   -0.054538
Property Type_Condominium        0.015955
Property Type_House              0.063074
Property Type_Loft               0.001125
Has_Pool_True                    0.088011
Hot_Tub_True                     0.028203
Name: Price, dtype: float64
```

4. Modelo Baseline

4.1 Seleccionar características relevantes

```
target = 'Price'
features = [c for c in df.columns if c != 'id' and c != 'Price']
features
```

```
['Host Listings Count',
 'Latitude',
 'Longitude',
 'Room Type',
 'Accommodates',
 'Bathrooms',
```

```
            'Guests Included',
            'Extra People',
            'Number of Reviews',
            'Cancellation Policy',
            'Country_Code',
            'Property Type_Bed & Breakfast',
            'Property Type_Condominium',
            'Property Type_House',
            'Property Type_Loft',
            'Has_Pool_True',
            'Hot_Tub_True']
```

```
X = df[features]
y = df[target]
```

▾ 4.2 Dividir los datos en conjuntos de entrenamiento y prueba

```
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state=42)
```

▾ 4.3 Definir el modelo

```python
from tensorflow.keras.layers import Dropout
from tensorflow.keras.optimizers import Adam

def get_model(neurons, optimizer, dropout):
    layers = []
    input_shape = (X_train.shape[1],)
    for n in neurons:
        layers.append(Dense(n, activation = "relu", input_shape = input_shape))
        layers.append(Dropout(dropout))
        input_shape = (n,)

    model = Sequential(layers)
    model.summary()
    model.compile(optimizer = optimizer, loss='mean_squared_error', metrics=['mae'])
    return model
```

```
!pip install wandb
```

```
Collecting wandb
  Downloading wandb-0.16.0-py3-none-any.whl (2.1 MB)
  ──────────────────────────────────── 2.1/2.1 MB 22.1 MB/s eta 0:00:00
Requirement already satisfied: Click!=8.0.0,>=7.1 in /usr/local/lib/python3.10/dist-packages (from wandb) (8.1.7)
Collecting GitPython!=3.1.29,>=1.0.0 (from wandb)
  Downloading GitPython-3.1.40-py3-none-any.whl (190 kB)
  ──────────────────────────────────── 190.6/190.6 kB 18.5 MB/s eta 0:00:00
Requirement already satisfied: requests<3,>=2.0.0 in /usr/local/lib/python3.10/dist-packages (from wandb) (2.31.0)
Requirement already satisfied: psutil>=5.0.0 in /usr/local/lib/python3.10/dist-packages (from wandb) (5.9.5)
Collecting sentry-sdk>=1.0.0 (from wandb)
  Downloading sentry_sdk-1.36.0-py2.py3-none-any.whl (249 kB)
  ──────────────────────────────────── 249.2/249.2 kB 24.4 MB/s eta 0:00:00
Collecting docker-pycreds>=0.4.0 (from wandb)
  Downloading docker_pycreds-0.4.0-py2.py3-none-any.whl (9.0 kB)
Requirement already satisfied: PyYAML in /usr/local/lib/python3.10/dist-packages (from wandb) (6.0.1)
Collecting setproctitle (from wandb)
  Downloading setproctitle-1.3.3-cp310-cp310-manylinux_2_5_x86_64.manylinux1_x86_64.manylinux_2_17_x86_64.manylinux2014_x86_64.whl (30
Requirement already satisfied: setuptools in /usr/local/lib/python3.10/dist-packages (from wandb) (67.7.2)
Requirement already satisfied: appdirs>=1.4.3 in /usr/local/lib/python3.10/dist-packages (from wandb) (1.4.4)
Requirement already satisfied: protobuf!=4.21.0,<5,>=3.19.0 in /usr/local/lib/python3.10/dist-packages (from wandb) (3.20.3)
Requirement already satisfied: six>=1.4.0 in /usr/local/lib/python3.10/dist-packages (from docker-pycreds>=0.4.0->wandb) (1.16.0)
Collecting gitdb<5,>=4.0.1 (from GitPython!=3.1.29,>=1.0.0->wandb)
  Downloading gitdb-4.0.11-py3-none-any.whl (62 kB)
  ──────────────────────────────────── 62.7/62.7 kB 7.0 MB/s eta 0:00:00
Requirement already satisfied: charset-normalizer<4,>=2 in /usr/local/lib/python3.10/dist-packages (from requests<3,>=2.0.0->wandb) (3.
Requirement already satisfied: idna<4,>=2.5 in /usr/local/lib/python3.10/dist-packages (from requests<3,>=2.0.0->wandb) (3.4)
Requirement already satisfied: urllib3<3,>=1.21.1 in /usr/local/lib/python3.10/dist-packages (from requests<3,>=2.0.0->wandb) (2.0.7)
Requirement already satisfied: certifi>=2017.4.17 in /usr/local/lib/python3.10/dist-packages (from requests<3,>=2.0.0->wandb) (2023.7.2
Collecting smmap<6,>=3.0.1 (from gitdb<5,>=4.0.1->GitPython!=3.1.29,>=1.0.0->wandb)
  Downloading smmap-5.0.1-py3-none-any.whl (24 kB)
Installing collected packages: smmap, setproctitle, sentry-sdk, docker-pycreds, gitdb, GitPython, wandb
Successfully installed GitPython-3.1.40 docker-pycreds-0.4.0 gitdb-4.0.11 sentry-sdk-1.36.0 setproctitle-1.3.3 smmap-5.0.1 wandb-0.16.0
```

```
import wandb

wandb.login()

#Creamos un proyecto en WandB a través de su interfaz
project = "obligatorio-deep-learning"
entity = "ort-martin"
```

```
wandb: Logging into wandb.ai. (Learn how to deploy a W&B server locally: https://wandb.me/wandb-server)
wandb: You can find your API key in your browser here: https://wandb.ai/authorize
wandb: Paste an API key from your profile and hit enter, or press ctrl+c to quit: ··········
wandb: Appending key for api.wandb.ai to your netrc file: /root/.netrc
```

```
import traceback
from os import sys
from tensorflow import keras
from tensorflow.keras.layers import Dense
from tensorflow.keras import Sequential
from tensorflow.keras.layers import Dropout
from keras.callbacks import EarlyStopping

def run_train():
    try:
        with wandb.init(config = None, project = project, entity=entity):
            # initialize model
            config = wandb.config
            print(config)
            model= get_model(config.neurons, config.optimizer, config.dropout)
            tf.keras.backend.clear_session()
            wandb_callback = wandb.keras.WandbCallback()
            model.fit(X_train, y_train, epochs=config.epochs, batch_size=config.batch_size, validation_split=0.2, callbacks=[wandb_callback],
            print("epochs: ",config.epochs)
            print("batch_size: ",config.batch_size)
            print("neurons: ", config.neurons)
            print("optimizer: ", config.optimizer)


    except Exception as e:
        # exit gracefully, so wandb logs the problem
        print(traceback.print_exc(), file=sys.stderr)
        exit(1)


from tensorflow import keras


from tensorflow.keras import Sequential


import pprint



sweep_config = {
'name': 'sweep_example',
'method': 'grid',
'metric': {
    'name': 'val_loss',
    'goal': 'minimize'
},
'parameters': {
    'dropout':{'value': 0.1},
    'neurons':{
        'values': [[64, 1], [64, 32, 1]]
        },
'optimizer': {
        'values': ['adam', 'sgd']
        },
'batch_size': {
        'values': [128, 64, 32]
        },
'epochs': {
        'values': [35, 25]
        }
}}

pprint.pprint(sweep_config)
```

```
{'method': 'grid',
 'metric': {'goal': 'minimize', 'name': 'val_loss'},
 'name': 'sweep_example',
 'parameters': {'batch_size': {'values': [128, 64, 32]},
                'dropout': {'value': 0.1},
                'epochs': {'values': [35, 25]},
                'neurons': {'values': [[64, 1], [64, 32, 1]]},
                'optimizer': {'values': ['adam', 'sgd']}}}
```

```
sweep_id = wandb.sweep(sweep_config, project = project, entity = entity)
```

```
Create sweep with ID: 0af3wbjy
Sweep URL: https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
```

```
wandb.agent(sweep_id, function = run_train, count=36, project = project, entity = entity)
```

Agent Starting Run: 4n4o2mwu with config:
 batch_size: 128
 dropout: 0.1
 epochs: 35
 neurons: [64, 1]
 optimizer: adam
Currently logged in as: martin-martinez-fontoura (ort-martin). Use `wandb login --relogin` to force relogin
WARNING Ignored wandb.init() arg project when running a sweep.
WARNING Ignored wandb.init() arg entity when running a sweep.
run with wandb version 0.16.0
a is saved locally in /content/wandb/run-20231122_001611-4n4o2mwu
run **magic-sweep-1** to Weights & Biases (docs)
page: https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
ject at https://wandb.ai/ort-martin/obligatorio-deep-learning
eep at https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
n at https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/4n4o2mwu
_size': 128, 'dropout': 0.1, 'epochs': 35, 'neurons': [64, 1], 'optimizer': 'adam'}
"sequential"

(type)	Output Shape	Param #
(Dense)	(None, 64)	1152
t (Dropout)	(None, 64)	0
_1 (Dense)	(None, 1)	65
t_1 (Dropout)	(None, 1)	0

arams: 1217 (4.75 KB)
le params: 1217 (4.75 KB)
inable params: 0 (0.00 Byte)

WARNING The save_model argument by default saves the model in the HDF5 format that cannot save custom objects like subclassed models an
/35
32 [==============================] - ETA: 0s - loss: 23971.5000 - mae: 92.2175/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_001611-4n4o2mwu/files/model-best)... Done. 0.1s
32 [==============================] - 23s 13ms/step - loss: 23971.5000 - mae: 92.2175 - val_loss: 15211.3047 - val_mae: 68.7622
/35
32 [==============================>.] - ETA: 0s - loss: 16970.6348 - mae: 77.1478/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_001611-4n4o2mwu/files/model-best)... Done. 0.0s
32 [==============================] - 11s 7ms/step - loss: 16974.3730 - mae: 77.1497 - val_loss: 14172.9541 - val_mae: 65.9339
/35
32 [==============================>.] - ETA: 0s - loss: 16319.9697 - mae: 75.5107/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_001611-4n4o2mwu/files/model-best)... Done. 0.0s
32 [==============================] - 7s 4ms/step - loss: 16319.4102 - mae: 75.5167 - val_loss: 13575.8359 - val_mae: 65.1410
/35
32 [==============================>.] - ETA: 0s - loss: 15859.2656 - mae: 74.6734/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_001611-4n4o2mwu/files/model-best)... Done. 0.0s
32 [==============================] - 7s 4ms/step - loss: 15858.9512 - mae: 74.6738 - val_loss: 13190.8711 - val_mae: 64.1908
/35
32 [==============================>.] - ETA: 0s - loss: 15501.5762 - mae: 74.0258/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_001611-4n4o2mwu/files/model-best)... Done. 0.0s
32 [==============================] - 9s 6ms/step - loss: 15500.5283 - mae: 74.0266 - val_loss: 12888.6543 - val_mae: 63.0652
/35
32 [==============================>.] - ETA: 0s - loss: 15222.6631 - mae: 73.3293/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_001611-4n4o2mwu/files/model-best)... Done. 0.0s
32 [==============================] - 6s 4ms/step - loss: 15221.5732 - mae: 73.3267 - val_loss: 12588.3799 - val_mae: 62.4408
/35
32 [==============================>.] - ETA: 0s - loss: 14948.2656 - mae: 72.8081/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_001611-4n4o2mwu/files/model-best)... Done. 0.0s
32 [==============================] - 8s 5ms/step - loss: 14944.0928 - mae: 72.8096 - val_loss: 12251.4346 - val_mae: 61.9084
/35
32 [==============================>.] - ETA: 0s - loss: 14703.6924 - mae: 72.2940/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_001611-4n4o2mwu/files/model-best)... Done. 0.0s
32 [==============================] - 8s 5ms/step - loss: 14685.7471 - mae: 72.2641 - val_loss: 11962.9365 - val_mae: 61.4170
/35
32 [==============================>.] - ETA: 0s - loss: 14437.2510 - mae: 71.8144/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_001611-4n4o2mwu/files/model-best)... Done. 0.0s
32 [==============================] - 6s 4ms/step - loss: 14430.7256 - mae: 71.7816 - val_loss: 11783.5117 - val_mae: 60.7326
10/35
32 [==============================>.] - ETA: 0s - loss: 14175.8457 - mae: 71.2206/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_001611-4n4o2mwu/files/model-best)... Done. 0.0s

```
532 [==============================] - 11s 7ms/step - loss: 14175.8457 - mae: 71.2206 - val_loss: 11471.7217 - val_mae: 60.4308
11/35
532 [============================>.] - ETA: 0s - loss: 14096.3545 - mae: 70.9211/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_001611-4n4o2mwu/files/model-best)... Done. 0.0s
532 [==============================] - 11s 6ms/step - loss: 14089.3652 - mae: 70.9105 - val_loss: 11296.9609 - val_mae: 59.7842
12/35
532 [============================>.] - ETA: 0s - loss: 13898.3086 - mae: 70.3272/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_001611-4n4o2mwu/files/model-best)... Done. 0.0s
532 [==============================] - 9s 5ms/step - loss: 13899.7051 - mae: 70.3386 - val_loss: 11074.7305 - val_mae: 59.4011
13/35
532 [============================>.] - ETA: 0s - loss: 13772.9629 - mae: 69.8706/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_001611-4n4o2mwu/files/model-best)... Done. 0.0s
532 [==============================] - 7s 4ms/step - loss: 13779.4668 - mae: 69.8891 - val_loss: 10808.0010 - val_mae: 59.0059
14/35
532 [============================>.] - ETA: 0s - loss: 13500.5703 - mae: 69.2572/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_001611-4n4o2mwu/files/model-best)... Done. 0.0s
532 [==============================] - 11s 7ms/step - loss: 13498.2236 - mae: 69.2447 - val_loss: 10652.3252 - val_mae: 58.2724
15/35
532 [============================>.] - ETA: 0s - loss: 13338.8857 - mae: 68.6720/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_001611-4n4o2mwu/files/model-best)... Done. 0.0s
532 [==============================] - 6s 4ms/step - loss: 13338.5039 - mae: 68.6700 - val_loss: 10648.4307 - val_mae: 57.6741
16/35
532 [============================>.] - ETA: 0s - loss: 13303.7539 - mae: 68.2667/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_001611-4n4o2mwu/files/model-best)... Done. 0.0s
532 [==============================] - 8s 5ms/step - loss: 13295.6260 - mae: 68.2378 - val_loss: 10340.1191 - val_mae: 57.2103
17/35
532 [============================>.] - ETA: 0s - loss: 13019.6895 - mae: 67.7655/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_001611-4n4o2mwu/files/model-best)... Done. 0.0s
532 [==============================] - 9s 5ms/step - loss: 13020.6680 - mae: 67.7585 - val_loss: 10132.0830 - val_mae: 56.8994
18/35
532 [============================>.] - ETA: 0s - loss: 12876.1992 - mae: 67.3026/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_001611-4n4o2mwu/files/model-best)... Done. 0.0s
532 [==============================] - 5s 3ms/step - loss: 12897.1748 - mae: 67.3185 - val_loss: 10038.1250 - val_mae: 56.3707
19/35
532 [============================>.] - ETA: 0s - loss: 12800.8750 - mae: 66.7933/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_001611-4n4o2mwu/files/model-best)... Done. 0.0s
532 [==============================] - 9s 5ms/step - loss: 12795.4990 - mae: 66.7924 - val_loss: 9949.3076 - val_mae: 56.1418
20/35
532 [============================>.] - ETA: 0s - loss: 12653.9424 - mae: 66.5573/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_001611-4n4o2mwu/files/model-best)... Done. 0.0s
532 [==============================] - 7s 4ms/step - loss: 12653.2666 - mae: 66.5558 - val_loss: 9718.7549 - val_mae: 55.6548
21/35
532 [============================>.] - ETA: 0s - loss: 12590.4902 - mae: 66.1566/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_001611-4n4o2mwu/files/model-best)... Done. 0.0s
532 [==============================] - 7s 4ms/step - loss: 12600.9668 - mae: 66.1727 - val_loss: 9574.3438 - val_mae: 55.1866
22/35
532 [============================>.] - ETA: 0s - loss: 12478.0625 - mae: 65.9034/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_001611-4n4o2mwu/files/model-best)... Done. 0.0s
532 [==============================] - 9s 6ms/step - loss: 12480.4189 - mae: 65.9073 - val_loss: 9429.8193 - val_mae: 55.0786
23/35
532 [============================>.] - ETA: 0s - loss: 12388.5664 - mae: 65.6382/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_001611-4n4o2mwu/files/model-best)... Done. 0.0s
532 [==============================] - 6s 4ms/step - loss: 12391.1074 - mae: 65.6376 - val_loss: 9330.6260 - val_mae: 54.5675
24/35
532 [============================>.] - ETA: 0s - loss: 12171.4131 - mae: 65.0835/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_001611-4n4o2mwu/files/model-best)... Done. 0.0s
532 [==============================] - 8s 5ms/step - loss: 12168.7725 - mae: 65.0790 - val_loss: 9235.5918 - val_mae: 54.1285
25/35
532 [============================>.] - ETA: 0s - loss: 12016.0967 - mae: 64.7189/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_001611-4n4o2mwu/files/model-best)... Done. 0.0s
532 [==============================] - 8s 5ms/step - loss: 12014.6279 - mae: 64.7118 - val_loss: 9098.8955 - val_mae: 53.8336
26/35
532 [============================>.] - ETA: 0s - loss: 12043.5645 - mae: 64.5242/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_001611-4n4o2mwu/files/model-best)... Done. 0.0s
532 [==============================] - 6s 4ms/step - loss: 12051.8555 - mae: 64.5428 - val_loss: 8917.5488 - val_mae: 53.3860
27/35
532 [============================>.] - ETA: 0s - loss: 11891.7852 - mae: 64.1307/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_001611-4n4o2mwu/files/model-best)... Done. 0.0s
```

```
532 [==============================] - 11s 7ms/step - loss: 11888.8213 - mae: 64.1393 - val_loss: 8813.7988 - val_mae: 52.9291
28/35
532 [==============================>.] - ETA: 0s - loss: 11777.6172 - mae: 63.8146/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_001611-4n4o2mwu/files/model-best)... Done. 0.0s
532 [==============================] - 7s 4ms/step - loss: 11774.0088 - mae: 63.7961 - val_loss: 8687.3916 - val_mae: 52.5025
29/35
532 [==============================>.] - ETA: 0s - loss: 11713.2158 - mae: 63.4601/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_001611-4n4o2mwu/files/model-best)... Done. 0.0s
532 [==============================] - 9s 6ms/step - loss: 11722.5869 - mae: 63.4758 - val_loss: 8647.2637 - val_mae: 52.1191
30/35
532 [==============================>.] - ETA: 0s - loss: 11471.3936 - mae: 63.0296/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_001611-4n4o2mwu/files/model-best)... Done. 0.0s
532 [==============================] - 7s 4ms/step - loss: 11471.3936 - mae: 63.0296 - val_loss: 8530.5508 - val_mae: 51.8600
31/35
532 [==============================>.] - ETA: 0s - loss: 11485.0645 - mae: 62.7309/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_001611-4n4o2mwu/files/model-best)... Done. 0.0s
532 [==============================] - 7s 4ms/step - loss: 11485.6953 - mae: 62.7351 - val_loss: 8384.3965 - val_mae: 51.7251
32/35
532 [==============================>.] - ETA: 0s - loss: 11351.2139 - mae: 62.4295/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_001611-4n4o2mwu/files/model-best)... Done. 0.0s
532 [==============================] - 9s 6ms/step - loss: 11350.7129 - mae: 62.4244 - val_loss: 8301.2656 - val_mae: 51.2024
33/35
532 [==============================>.] - ETA: 0s - loss: 11431.0625 - mae: 62.3086/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_001611-4n4o2mwu/files/model-best)... Done. 0.0s
532 [==============================] - 6s 3ms/step - loss: 11431.0625 - mae: 62.3086 - val_loss: 8225.7695 - val_mae: 50.8790
34/35
532 [==============================>.] - ETA: 0s - loss: 11188.0771 - mae: 61.8765/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_001611-4n4o2mwu/files/model-best)... Done. 0.0s
532 [==============================] - 8s 5ms/step - loss: 11187.1436 - mae: 61.8754 - val_loss: 8186.8066 - val_mae: 50.6778
35/35
532 [==============================>.] - ETA: 0s - loss: 11219.9404 - mae: 61.6530/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_001611-4n4o2mwu/files/model-best)... Done. 0.0s
532 [==============================] - 8s 5ms/step - loss: 11215.6162 - mae: 61.6587 - val_loss: 8069.6309 - val_mae: 50.2663
  35
size:  128
:  [64, 1]
er:  adam
```

B of 4.012 MB uploaded (0.282 MB deduped)

nc reduced upload amount by 7.0%

history:

Run summary:

best_epoch	34
best_val_loss	8069.63086
epoch	34
loss	11215.61621
mae	61.65866
val_loss	8069.63086
val_mae	50.26625

```
 magic-sweep-1 at: https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/4n4o2mwu
5 W&B file(s), 1 media file(s), 175 artifact file(s) and 1 other file(s)
s at: ./wandb/run-20231122_001611-4n4o2mwu/logs
 Agent Starting Run: a5s4prys with config:
  batch_size: 128
  dropout: 0.1
  epochs: 35
  neurons: [64, 1]
  optimizer: sgd
 WARNING Ignored wandb.init() arg project when running a sweep.
 WARNING Ignored wandb.init() arg entity when running a sweep.
 run with wandb version 0.16.0
 a is saved locally in /content/wandb/run-20231122_002200-a5s4prys
 run cerulean-sweep-2 to Weights & Biases (docs)
 age: https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
 ject at https://wandb.ai/ort-martin/obligatorio-deep-learning
 eep at https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
 n at https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/a5s4prys
 _size': 128, 'dropout': 0.1, 'epochs': 35, 'neurons': [64, 1], 'optimizer': 'sgd'}
 "sequential"
```

```
 (type)              Output Shape           Param #
:===========================================================
 (Dense)             (None, 64)             1152

 t (Dropout)         (None, 64)             0

 1 (Dense)           (None, 1)              65

 t_1 (Dropout)       (None, 1)              0

:===========================================================
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 le params: 1217 (4.75 KB)
 inable params: 0 (0.00 Byte)
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/35
632 [===========================>.] - ETA: 0s - loss: 24246.9531 - mae: 101.6993/usr/local/lib/python3.10/dist-packages/keras/src/engine
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_002200-a5s4prys/files/model-best)... Done. 0.0s
632 [=============================] - 11s 6ms/step - loss: 24226.4160 - mae: 101.6642 - val_loss: 20366.5312 - val_mae: 93.3312
2/35
632 [===========================>.] - ETA: 0s - loss: 20680.6973 - mae: 98.1286/usr/local/lib/python3.10/dist-packages/keras/src/engine
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_002200-a5s4prys/files/model-best)... Done. 0.0s
632 [=============================] - 6s 4ms/step - loss: 20693.5000 - mae: 98.1466 - val_loss: 19183.1113 - val_mae: 95.4526
3/35
632 [===========================>.] - ETA: 0s - loss: 20543.8008 - mae: 97.7292/usr/local/lib/python3.10/dist-packages/keras/src/engine
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_002200-a5s4prys/files/model-best)... Done. 0.0s
632 [=============================] - 8s 5ms/step - loss: 20543.2012 - mae: 97.7254 - val_loss: 17840.8496 - val_mae: 86.6310
4/35
632 [=============================] - 7s 4ms/step - loss: 20245.7734 - mae: 96.7805 - val_loss: 18048.8457 - val_mae: 88.2768
5/35
632 [=============================] - 4s 3ms/step - loss: 20240.7578 - mae: 97.3256 - val_loss: 19812.3730 - val_mae: 94.7506
6/35
632 [=============================] - 5s 3ms/step - loss: 20284.7344 - mae: 97.2514 - val_loss: 17937.9121 - val_mae: 83.9246
7/35
632 [=============================] - 7s 4ms/step - loss: 20284.8066 - mae: 96.6714 - val_loss: 17878.3379 - val_mae: 88.0531
8/35
632 [===========================>.] - ETA: 0s - loss: 20128.2715 - mae: 96.6795/usr/local/lib/python3.10/dist-packages/keras/src/engine
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_002200-a5s4prys/files/model-best)... Done. 0.0s
632 [=============================] - 5s 3ms/step - loss: 20127.7051 - mae: 96.6784 - val_loss: 17724.5566 - val_mae: 85.7692
9/35
632 [=============================] - 6s 3ms/step - loss: 20216.2031 - mae: 97.0154 - val_loss: 22648.2285 - val_mae: 104.5099
10/35
632 [=============================] - 8s 5ms/step - loss: 20137.1406 - mae: 96.8987 - val_loss: 17993.4766 - val_mae: 87.2442
11/35
632 [===========================>.] - ETA: 0s - loss: 20151.0742 - mae: 96.4300/usr/local/lib/python3.10/dist-packages/keras/src/engine
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_002200-a5s4prys/files/model-best)... Done. 0.0s
632 [=============================] - 6s 3ms/step - loss: 20147.7285 - mae: 96.4325 - val_loss: 17535.3906 - val_mae: 86.9453
12/35
632 [=============================] - 6s 4ms/step - loss: 20178.7871 - mae: 96.6690 - val_loss: 18137.2812 - val_mae: 90.4665
13/35
632 [=============================] - 8s 5ms/step - loss: 20284.5332 - mae: 96.9739 - val_loss: 18843.0918 - val_mae: 86.1681
14/35
632 [=============================] - 5s 3ms/step - loss: 20130.1113 - mae: 96.4641 - val_loss: 19455.8672 - val_mae: 94.5051
15/35
632 [=============================] - 5s 3ms/step - loss: 20321.3496 - mae: 96.8817 - val_loss: 18130.0215 - val_mae: 87.6584
16/35
632 [=============================] - 6s 4ms/step - loss: 20265.0547 - mae: 96.0391 - val_loss: 18603.2793 - val_mae: 88.4456
17/35
632 [=============================] - 6s 4ms/step - loss: 20172.2754 - mae: 96.5575 - val_loss: 18855.6348 - val_mae: 92.4102
18/35
632 [=============================] - 5s 3ms/step - loss: 20222.7246 - mae: 97.0578 - val_loss: 20799.4219 - val_mae: 99.6133
19/35
632 [=============================] - 6s 4ms/step - loss: 20339.5176 - mae: 97.0544 - val_loss: 18231.3887 - val_mae: 86.7537
20/35
632 [=============================] - 7s 4ms/step - loss: 20156.5430 - mae: 96.7229 - val_loss: 18053.4551 - val_mae: 88.3922
21/35
632 [=============================] - 4s 3ms/step - loss: 20186.0586 - mae: 96.8322 - val_loss: 22556.2676 - val_mae: 106.1863
22/35
632 [===========================>.] - ETA: 0s - loss: 20127.3730 - mae: 96.6806/usr/local/lib/python3.10/dist-packages/keras/src/engine
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_002200-a5s4prys/files/model-best)... Done. 0.0s
632 [=============================] - 5s 3ms/step - loss: 20128.1113 - mae: 96.6907 - val_loss: 17064.7754 - val_mae: 89.6024
23/35
632 [=============================] - 8s 5ms/step - loss: 20315.8926 - mae: 96.4205 - val_loss: 18735.4160 - val_mae: 88.7627
24/35
632 [=============================] - 5s 3ms/step - loss: 20266.4746 - mae: 96.4529 - val_loss: 18392.3926 - val_mae: 88.7253
25/35
632 [=============================] - 4s 3ms/step - loss: 20039.9688 - mae: 96.2749 - val_loss: 18224.3906 - val_mae: 91.6937
26/35
632 [=============================] - 6s 4ms/step - loss: 20231.1895 - mae: 96.5756 - val_loss: 19484.0332 - val_mae: 91.5406
```

```
27/35
.32 [==============================] - 6s 4ms/step - loss: 20170.7070 - mae: 96.8118 - val_loss: 19014.4336 - val_mae: 94.9196
28/35
.32 [==============================] - 5s 3ms/step - loss: 20164.3926 - mae: 96.7565 - val_loss: 20434.8730 - val_mae: 97.5800
29/35
.32 [==============================] - 5s 3ms/step - loss: 20140.9707 - mae: 96.4248 - val_loss: 19240.7988 - val_mae: 95.1306
30/35
.32 [==============================] - 7s 4ms/step - loss: 20207.4375 - mae: 96.6874 - val_loss: 17630.3242 - val_mae: 84.7873
31/35
.32 [==============================] - 5s 3ms/step - loss: 20209.5996 - mae: 96.5719 - val_loss: 18264.9844 - val_mae: 88.8748
32/35
.32 [==============================] - 5s 3ms/step - loss: 20126.7812 - mae: 96.7154 - val_loss: 18014.2324 - val_mae: 83.8540
33/35
.32 [==============================] - 7s 4ms/step - loss: 20268.7656 - mae: 96.8069 - val_loss: 18103.5723 - val_mae: 88.3634
34/35
.32 [==============================] - 7s 4ms/step - loss: 20267.5547 - mae: 96.4764 - val_loss: 17783.8652 - val_mae: 85.4611
35/35
.32 [==============================] - 5s 3ms/step - loss: 20354.6523 - mae: 96.8141 - val_loss: 18957.4863 - val_mae: 89.3507
:  35
.ize:  128
:  [64, 1]
.er:  sgd
```

B of 0.649 MB uploaded (0.041 MB deduped)

nc reduced upload amount by 6.4%

history: **Run summary:**

best_epoch	21
best_val_loss	17064.77539
epoch	34
loss	20354.65234
mae	96.81409
val_loss	18957.48633
val_mae	89.35072

n **cerulean-sweep-2** at: https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/a5s4prys
5 W&B file(s), 1 media file(s), 30 artifact file(s) and 1 other file(s)
s at: ./wandb/run-20231122_002200-a5s4prys/logs
Agent Starting Run: ar1c7j8s with config:
  batch_size: 128
  dropout: 0.1
  epochs: 35
  neurons: [64, 32, 1]
  optimizer: adam
WARNING Ignored wandb.init() arg project when running a sweep.
WARNING Ignored wandb.init() arg entity when running a sweep.
run with wandb version 0.16.0
a is saved locally in /content/wandb/run-20231122_002556-ar1c7j8s
run **polished-sweep-3** to Weights & Biases (docs)
page: https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
oject at https://wandb.ai/ort-martin/obligatorio-deep-learning
eep at https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
n at https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/ar1c7j8s
_size': 128, 'dropout': 0.1, 'epochs': 35, 'neurons': [64, 32, 1], 'optimizer': 'adam'}
"sequential"

```
_____
 (type)              Output Shape          Param #
=========================================================
 (Dense)             (None, 64)            1152

 t (Dropout)         (None, 64)            0

 _1 (Dense)          (None, 32)            2080

 t_1 (Dropout)       (None, 32)            0

 _2 (Dense)          (None, 1)             33

 t_2 (Dropout)       (None, 1)             0

=========================================================
 arams: 3265 (12.75 KB)
 le params: 3265 (12.75 KB)
 inable params: 0 (0.00 Byte)
 _____
/35
.32 [==============================>.] - ETA: 0s - loss: 18790.8281 - mae: 80.9374/usr/local/lib/python3.10/dist-packages/keras/src/engine/
 g_api.save_model(
```

```
Adding directory to artifact (/content/wandb/run-20231122_002556-ar1c7j8s/files/model-best)... Done. 0.0s
332 [==============================] - 7s 4ms/step - loss: 18788.1504 - mae: 80.9342 - val_loss: 13443.8789 - val_mae: 64.2917
2/35
332 [===========================>.] - ETA: 0s - loss: 15475.9990 - mae: 73.2127/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_002556-ar1c7j8s/files/model-best)... Done. 0.0s
332 [==============================] - 10s 6ms/step - loss: 15487.0977 - mae: 73.2266 - val_loss: 12197.2217 - val_mae: 60.7552
3/35
332 [===========================>.] - ETA: 0s - loss: 14201.2510 - mae: 70.2540/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_002556-ar1c7j8s/files/model-best)... Done. 0.0s
332 [==============================] - 12s 7ms/step - loss: 14204.2949 - mae: 70.2640 - val_loss: 10846.2148 - val_mae: 58.6208
4/35
332 [===========================>.] - ETA: 0s - loss: 13434.4805 - mae: 68.5952/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_002556-ar1c7j8s/files/model-best)... Done. 0.0s
332 [==============================] - 8s 5ms/step - loss: 13425.0918 - mae: 68.5762 - val_loss: 9911.0000 - val_mae: 56.0650
5/35
332 [===========================>.] - ETA: 0s - loss: 12707.7646 - mae: 66.5231/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_002556-ar1c7j8s/files/model-best)... Done. 0.0s
332 [==============================] - 9s 6ms/step - loss: 12704.5908 - mae: 66.5178 - val_loss: 9067.4131 - val_mae: 53.9435
6/35
332 [===========================>.] - ETA: 0s - loss: 11966.6094 - mae: 64.6607/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_002556-ar1c7j8s/files/model-best)... Done. 0.0s
332 [==============================] - 9s 5ms/step - loss: 11970.6260 - mae: 64.6443 - val_loss: 8522.7773 - val_mae: 51.4433
7/35
332 [===========================>.] - ETA: 0s - loss: 11157.6436 - mae: 62.2909/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_002556-ar1c7j8s/files/model-best)... Done. 0.0s
332 [==============================] - 10s 6ms/step - loss: 11160.4209 - mae: 62.2979 - val_loss: 7635.1045 - val_mae: 49.1081
8/35
332 [===========================>.] - ETA: 0s - loss: 10802.8994 - mae: 60.5015/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_002556-ar1c7j8s/files/model-best)... Done. 0.0s
332 [==============================] - 7s 4ms/step - loss: 10790.2949 - mae: 60.4814 - val_loss: 7273.4663 - val_mae: 47.8316
9/35
332 [==============================] - 9s 6ms/step - loss: 10606.5889 - mae: 59.3481 - val_loss: 7329.7007 - val_mae: 46.8478
10/35
332 [===========================>.] - ETA: 0s - loss: 10299.7686 - mae: 58.2539/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_002556-ar1c7j8s/files/model-best)... Done. 0.0s
332 [==============================] - 7s 5ms/step - loss: 10304.5469 - mae: 58.2608 - val_loss: 7001.2173 - val_mae: 46.0707
11/35
332 [===========================>.] - ETA: 0s - loss: 10318.5615 - mae: 57.8215/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_002556-ar1c7j8s/files/model-best)... Done. 0.0s
332 [==============================] - 9s 6ms/step - loss: 10316.6211 - mae: 57.8197 - val_loss: 6948.3848 - val_mae: 45.7025
12/35
332 [===========================>.] - ETA: 0s - loss: 10313.5811 - mae: 57.5674/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_002556-ar1c7j8s/files/model-best)... Done. 0.0s
332 [==============================] - 9s 5ms/step - loss: 10314.1836 - mae: 57.5781 - val_loss: 6758.4624 - val_mae: 45.5995
13/35
332 [==============================] - 7s 4ms/step - loss: 10281.4746 - mae: 57.1110 - val_loss: 6814.4380 - val_mae: 45.2104
14/35
332 [==============================] - 8s 5ms/step - loss: 10142.9473 - mae: 56.8647 - val_loss: 6777.1211 - val_mae: 45.0833
15/35
332 [==============================] - 6s 3ms/step - loss: 10163.5332 - mae: 56.6407 - val_loss: 6881.5317 - val_mae: 45.1507
16/35
332 [==============================] - 6s 4ms/step - loss: 10178.2158 - mae: 56.6541 - val_loss: 7123.9951 - val_mae: 45.7271
17/35
332 [==============================] - 9s 5ms/step - loss: 10164.1318 - mae: 56.5022 - val_loss: 7046.9629 - val_mae: 45.5181
18/35
332 [===========================>.] - ETA: 0s - loss: 10140.5176 - mae: 56.4392/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_002556-ar1c7j8s/files/model-best)... Done. 0.0s
332 [==============================] - 8s 5ms/step - loss: 10135.4619 - mae: 56.4378 - val_loss: 6621.1182 - val_mae: 44.6481
19/35
332 [==============================] - 9s 5ms/step - loss: 9999.9941 - mae: 56.1509 - val_loss: 6840.0381 - val_mae: 44.8697
20/35
332 [==============================] - 7s 4ms/step - loss: 10101.6533 - mae: 56.3738 - val_loss: 6670.6436 - val_mae: 44.6996
21/35
332 [==============================] - 7s 4ms/step - loss: 9954.5088 - mae: 56.0695 - val_loss: 6703.1240 - val_mae: 44.9867
22/35
332 [==============================] - 9s 5ms/step - loss: 10083.4609 - mae: 56.1874 - val_loss: 6783.4575 - val_mae: 44.9913
23/35
332 [==============================] - 6s 4ms/step - loss: 10101.2910 - mae: 56.0948 - val_loss: 6636.5503 - val_mae: 44.6594
24/35
332 [===========================>.] - ETA: 0s - loss: 9954.8281 - mae: 56.0447/usr/local/lib/python3.10/dist-packages/keras/src/engine/1
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_002556-ar1c7j8s/files/model-best)... Done. 0.0s
332 [==============================] - 8s 5ms/step - loss: 9952.5371 - mae: 56.0516 - val_loss: 6601.1108 - val_mae: 44.6013
25/35
```

```
32 [=============================] - 9s 5ms/step - loss: 10016.2510 - mae: 56.0769 - val_loss: 6642.3042 - val_mae: 44.5128
6/35
32 [=============================>.] - ETA: 0s - loss: 9897.0947 - mae: 55.7682/usr/local/lib/python3.10/dist-packages/keras/src/engine/1
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_002556-ar1c7j8s/files/model-best)... Done. 0.0s
32 [=============================] - 7s 4ms/step - loss: 9908.2568 - mae: 55.7839 - val_loss: 6580.3193 - val_mae: 44.3582
7/35
32 [=============================] - 9s 6ms/step - loss: 10100.7676 - mae: 55.9587 - val_loss: 6668.3594 - val_mae: 44.2692
8/35
32 [=============================>.] - ETA: 0s - loss: 9873.8877 - mae: 55.7147/usr/local/lib/python3.10/dist-packages/keras/src/engine/1
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_002556-ar1c7j8s/files/model-best)... Done. 0.0s
32 [=============================] - 7s 5ms/step - loss: 9872.6953 - mae: 55.7149 - val_loss: 6450.1699 - val_mae: 44.5089
9/35
32 [=============================] - 8s 5ms/step - loss: 9869.8125 - mae: 55.7648 - val_loss: 6585.9287 - val_mae: 44.4042
0/35
32 [=============================] - 8s 5ms/step - loss: 9989.5342 - mae: 55.8576 - val_loss: 6590.2573 - val_mae: 44.5189
1/35
32 [=============================] - 5s 3ms/step - loss: 9894.8652 - mae: 55.7317 - val_loss: 6658.5581 - val_mae: 44.7009
2/35
32 [=============================] - 8s 5ms/step - loss: 9858.4619 - mae: 55.5811 - val_loss: 6611.0850 - val_mae: 44.2497
3/35
32 [=============================] - 7s 4ms/step - loss: 9980.3320 - mae: 55.6463 - val_loss: 6798.1621 - val_mae: 44.4743
4/35
32 [=============================] - 5s 3ms/step - loss: 10036.0029 - mae: 55.8024 - val_loss: 6707.4487 - val_mae: 44.3527
5/35
32 [=============================] - 9s 5ms/step - loss: 9987.9609 - mae: 55.7407 - val_loss: 6693.1357 - val_mae: 44.4701
  35
size:  128
:  [64, 32, 1]
er:  adam
```

B of 2.656 MB uploaded (0.157 MB deduped)

nc reduced upload amount by 5.9%

history:

Run summary:

best_epoch	27
best_val_loss	6450.16992
epoch	34
loss	9987.96094
mae	55.74065
val_loss	6693.13574
val_mae	44.47009

n **polished-sweep-3** at: https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/ar1c7j8s
5 W&B file(s), 1 media file(s), 75 artifact file(s) and 1 other file(s)
s at: ./wandb/run-20231122_002556-ar1c7j8s/logs
 Agent Starting Run: dvzg6l4u with config:
  batch_size: 128
  dropout: 0.1
  epochs: 35
  neurons: [64, 32, 1]
  optimizer: sgd
 WARNING Ignored wandb.init() arg project when running a sweep.
 WARNING Ignored wandb.init() arg entity when running a sweep.
 run with wandb version 0.16.0
a is saved locally in /content/wandb/run-20231122_003142-dvzg6l4u
 run **crisp-sweep-4** to Weights & Biases (docs)
page: https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
ject at https://wandb.ai/ort-martin/obligatorio-deep-learning
eep at https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
 at https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/dvzg6l4u
_size': 128, 'dropout': 0.1, 'epochs': 35, 'neurons': [64, 32, 1], 'optimizer': 'sgd'}
 "sequential"

```
 (type)              Output Shape              Param #
=================================================
 (Dense)             (None, 64)                1152

t (Dropout)          (None, 64)                0

1 (Dense)            (None, 32)                2080

t_1 (Dropout)        (None, 32)                0

2 (Dense)            (None, 1)                 33

t_2 (Dropout)        (None, 1)                 0
```

```
:=========================================================
aarams: 3265 (12.75 KB)
ble params: 3265 (12.75 KB)
iinable params: 0 (0.00 Byte)
_____
1/35
532 [============================>.] - ETA: 0s - loss: 41918.4961 - mae: 138.1913/usr/local/lib/python3.10/dist-packages/keras/src/engine
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_003142-dvzg6l4u/files/model-best)... Done. 0.0s
532 [=============================] - 7s 4ms/step - loss: 41897.5469 - mae: 138.1832 - val_loss: 42161.3984 - val_mae: 138.9924
2/35
532 [=============================] - 12s 7ms/step - loss: 41325.1094 - mae: 137.9854 - val_loss: 42161.3984 - val_mae: 138.9924
3/35
532 [=============================] - 6s 4ms/step - loss: 41325.1289 - mae: 137.9851 - val_loss: 42161.3984 - val_mae: 138.9924
4/35
532 [=============================] - 6s 4ms/step - loss: 41325.1016 - mae: 137.9854 - val_loss: 42161.3984 - val_mae: 138.9924
5/35
532 [=============================] - 8s 5ms/step - loss: 41325.1016 - mae: 137.9851 - val_loss: 42161.3984 - val_mae: 138.9924
6/35
532 [=============================] - 6s 4ms/step - loss: 41325.1016 - mae: 137.9852 - val_loss: 42161.3984 - val_mae: 138.9924
7/35
532 [=============================] - 6s 3ms/step - loss: 41325.0977 - mae: 137.9852 - val_loss: 42161.3984 - val_mae: 138.9924
8/35
532 [=============================] - 8s 5ms/step - loss: 41325.1055 - mae: 137.9852 - val_loss: 42161.3984 - val_mae: 138.9924
9/35
532 [=============================] - 5s 3ms/step - loss: 41325.1055 - mae: 137.9851 - val_loss: 42161.3984 - val_mae: 138.9924
10/35
532 [=============================] - 7s 4ms/step - loss: 41325.1211 - mae: 137.9852 - val_loss: 42161.3984 - val_mae: 138.9924
11/35
532 [=============================] - 9s 6ms/step - loss: 41325.1016 - mae: 137.9852 - val_loss: 42161.3984 - val_mae: 138.9924
12/35
532 [=============================] - 5s 3ms/step - loss: 41325.1367 - mae: 137.9854 - val_loss: 42161.3984 - val_mae: 138.9924
13/35
532 [=============================] - 6s 4ms/step - loss: 41325.0820 - mae: 137.9851 - val_loss: 42161.3984 - val_mae: 138.9924
14/35
532 [=============================] - 8s 5ms/step - loss: 41325.1055 - mae: 137.9851 - val_loss: 42161.3984 - val_mae: 138.9924
15/35
532 [=============================] - 5s 3ms/step - loss: 41325.1094 - mae: 137.9851 - val_loss: 42161.3984 - val_mae: 138.9924
16/35
532 [=============================] - 6s 4ms/step - loss: 41325.1172 - mae: 137.9852 - val_loss: 42161.3984 - val_mae: 138.9924
17/35
532 [=============================] - 7s 4ms/step - loss: 41325.1289 - mae: 137.9852 - val_loss: 42161.3984 - val_mae: 138.9924
18/35
532 [=============================] - 7s 4ms/step - loss: 41325.1172 - mae: 137.9850 - val_loss: 42161.3984 - val_mae: 138.9924
19/35
532 [=============================] - 7s 4ms/step - loss: 41325.0977 - mae: 137.9852 - val_loss: 42161.3984 - val_mae: 138.9924
20/35
532 [=============================] - 8s 5ms/step - loss: 41325.1211 - mae: 137.9852 - val_loss: 42161.3984 - val_mae: 138.9924
21/35
532 [=============================] - 6s 3ms/step - loss: 41325.0898 - mae: 137.9851 - val_loss: 42161.3984 - val_mae: 138.9924
22/35
532 [=============================] - 7s 4ms/step - loss: 41325.1172 - mae: 137.9852 - val_loss: 42161.3984 - val_mae: 138.9924
23/35
532 [=============================] - 7s 5ms/step - loss: 41325.1016 - mae: 137.9852 - val_loss: 42161.3984 - val_mae: 138.9924
24/35
532 [=============================] - 5s 3ms/step - loss: 41325.0977 - mae: 137.9854 - val_loss: 42161.3984 - val_mae: 138.9924
25/35
532 [=============================] - 6s 4ms/step - loss: 41325.1172 - mae: 137.9852 - val_loss: 42161.3984 - val_mae: 138.9924
26/35
532 [=============================] - 8s 5ms/step - loss: 41325.0898 - mae: 137.9851 - val_loss: 42161.3984 - val_mae: 138.9924
27/35
532 [=============================] - 5s 3ms/step - loss: 41325.1367 - mae: 137.9852 - val_loss: 42161.3984 - val_mae: 138.9924
28/35
532 [=============================] - 8s 5ms/step - loss: 41325.0234 - mae: 137.9852 - val_loss: 42161.3984 - val_mae: 138.9924
29/35
532 [=============================] - 10s 6ms/step - loss: 41325.0898 - mae: 137.9851 - val_loss: 42161.3984 - val_mae: 138.9924
30/35
532 [=============================] - 7s 4ms/step - loss: 41325.0898 - mae: 137.9852 - val_loss: 42161.3984 - val_mae: 138.9924
31/35
532 [=============================] - 6s 4ms/step - loss: 41325.1250 - mae: 137.9854 - val_loss: 42161.3984 - val_mae: 138.9924
32/35
532 [=============================] - 9s 5ms/step - loss: 41325.1016 - mae: 137.9852 - val_loss: 42161.3984 - val_mae: 138.9924
33/35
532 [=============================] - 5s 3ms/step - loss: 41325.0859 - mae: 137.9850 - val_loss: 42161.3984 - val_mae: 138.9924
34/35
532 [=============================] - 7s 4ms/step - loss: 41325.0312 - mae: 137.9852 - val_loss: 42161.3984 - val_mae: 138.9924
35/35
532 [=============================] - 9s 5ms/step - loss: 41325.0898 - mae: 137.9852 - val_loss: 42161.3984 - val_mae: 138.9924
: 35
size:  128
:: [64, 32, 1]
er:  sgd
B of 0.215 MB uploaded
```

History: **Run summary:**

best_epoch	0
best_val_loss	42161.39844
epoch	34
loss	41325.08984
mae	137.98517
val_loss	42161.39844
val_mae	138.9924

crisp-sweep-4 at: https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/dvzg6l4u
5 W&B file(s), 1 media file(s), 5 artifact file(s) and 1 other file(s)
s at: ./wandb/run-20231122_003142-dvzg6l4u/logs
Agent Starting Run: 0t3zvt3e with config:
  batch_size: 128
  dropout: 0.1
  epochs: 25
  neurons: [64, 1]
  optimizer: adam
WARNING Ignored wandb.init() arg project when running a sweep.
WARNING Ignored wandb.init() arg entity when running a sweep.
run with wandb version 0.16.0
a is saved locally in /content/wandb/run-20231122_003625-0t3zvt3e
run **wild-sweep-5** to Weights & Biases (docs)
page: https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
oject at https://wandb.ai/ort-martin/obligatorio-deep-learning
eep at https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
n at https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/0t3zvt3e
n_size': 128, 'dropout': 0.1, 'epochs': 25, 'neurons': [64, 1], 'optimizer': 'adam'}
"sequential"

```
 (type)              Output Shape           Param #
===========================================================
 (Dense)             (None, 64)             1152

t (Dropout)          (None, 64)             0

_1 (Dense)           (None, 1)              65

t_1 (Dropout)        (None, 1)              0

===========================================================
params: 1217 (4.75 KB)
le params: 1217 (4.75 KB)
inable params: 0 (0.00 Byte)
_____
/25
32 [============================>.] - ETA: 0s - loss: 24195.2383 - mae: 92.4264/usr/local/lib/python3.10/dist-packages/keras/src/engine/
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_003625-0t3zvt3e/files/model-best)... Done. 0.0s
32 [============================] - 10s 6ms/step - loss: 24148.3965 - mae: 92.3372 - val_loss: 15333.0596 - val_mae: 69.0605
/25
32 [============================>.] - ETA: 0s - loss: 17049.5312 - mae: 77.3282/usr/local/lib/python3.10/dist-packages/keras/src/engine/
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_003625-0t3zvt3e/files/model-best)... Done. 0.0s
32 [============================] - 8s 5ms/step - loss: 17063.5820 - mae: 77.3318 - val_loss: 14241.7480 - val_mae: 66.0263
/25
32 [============================>.] - ETA: 0s - loss: 16352.6367 - mae: 75.4732/usr/local/lib/python3.10/dist-packages/keras/src/engine/
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_003625-0t3zvt3e/files/model-best)... Done. 0.0s
32 [============================] - 8s 5ms/step - loss: 16351.4043 - mae: 75.4705 - val_loss: 13591.8525 - val_mae: 64.9887
/25
32 [============================>.] - ETA: 0s - loss: 15852.6211 - mae: 74.4415/usr/local/lib/python3.10/dist-packages/keras/src/engine/
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_003625-0t3zvt3e/files/model-best)... Done. 0.0s
32 [============================] - 8s 5ms/step - loss: 15844.7539 - mae: 74.4276 - val_loss: 13174.8975 - val_mae: 63.8944
/25
32 [============================>.] - ETA: 0s - loss: 15472.5723 - mae: 73.7873/usr/local/lib/python3.10/dist-packages/keras/src/engine/
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_003625-0t3zvt3e/files/model-best)... Done. 0.0s
32 [============================] - 6s 4ms/step - loss: 15468.8447 - mae: 73.7806 - val_loss: 12852.4287 - val_mae: 62.7532
/25
32 [============================>.] - ETA: 0s - loss: 15196.5117 - mae: 73.1685/usr/local/lib/python3.10/dist-packages/keras/src/engine/
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_003625-0t3zvt3e/files/model-best)... Done. 0.0s
32 [============================] - 10s 6ms/step - loss: 15189.3223 - mae: 73.1539 - val_loss: 12552.7715 - val_mae: 62.1418
/25
32 [============================>.] - ETA: 0s - loss: 14903.6855 - mae: 72.5872/usr/local/lib/python3.10/dist-packages/keras/src/engine/
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_003625-0t3zvt3e/files/model-best)... Done. 0.0s
```

```
Adding directory to artifact (/content/wandb/run-20231122_003625-0t3zvt3e/files/model-best)... Done. 0.0s
532 [==============================] - 7s 4ms/step - loss: 14902.7861 - mae: 72.5872 - val_loss: 12220.3662 - val_mae: 61.6351
8/25
532 [=============================>.] - ETA: 0s - loss: 14678.9131 - mae: 72.1521/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_003625-0t3zvt3e/files/model-best)... Done. 0.0s
532 [==============================] - 8s 5ms/step - loss: 14668.2979 - mae: 72.1328 - val_loss: 11940.2627 - val_mae: 61.2173
9/25
532 [=============================>.] - ETA: 0s - loss: 14397.7441 - mae: 71.6379/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_003625-0t3zvt3e/files/model-best)... Done. 0.0s
532 [==============================] - 9s 5ms/step - loss: 14400.0977 - mae: 71.6395 - val_loss: 11738.4443 - val_mae: 60.5246
10/25
532 [=============================>.] - ETA: 0s - loss: 14107.0273 - mae: 71.0965/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_003625-0t3zvt3e/files/model-best)... Done. 0.0s
532 [==============================] - 7s 4ms/step - loss: 14129.0137 - mae: 71.1251 - val_loss: 11404.2607 - val_mae: 60.2829
11/25
532 [=============================>.] - ETA: 0s - loss: 13999.9805 - mae: 70.6861/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_003625-0t3zvt3e/files/model-best)... Done. 0.0s
532 [==============================] - 10s 6ms/step - loss: 13999.2441 - mae: 70.6849 - val_loss: 11218.8184 - val_mae: 59.6647
12/25
532 [=============================>.] - ETA: 0s - loss: 13785.4160 - mae: 70.1576/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_003625-0t3zvt3e/files/model-best)... Done. 0.0s
532 [==============================] - 7s 4ms/step - loss: 13789.3135 - mae: 70.1698 - val_loss: 10969.8125 - val_mae: 59.2837
13/25
532 [==============================] - ETA: 0s - loss: 13671.0771 - mae: 69.7094/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_003625-0t3zvt3e/files/model-best)... Done. 0.0s
532 [==============================] - 8s 5ms/step - loss: 13671.0771 - mae: 69.7094 - val_loss: 10680.7881 - val_mae: 58.8089
14/25
532 [==============================] - ETA: 0s - loss: 13364.2227 - mae: 69.1260/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_003625-0t3zvt3e/files/model-best)... Done. 0.0s
532 [==============================] - 8s 5ms/step - loss: 13364.2227 - mae: 69.1260 - val_loss: 10521.6426 - val_mae: 58.2104
15/25
532 [=============================>.] - ETA: 0s - loss: 13198.6133 - mae: 68.5931/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_003625-0t3zvt3e/files/model-best)... Done. 0.0s
532 [==============================] - 6s 4ms/step - loss: 13197.6943 - mae: 68.5963 - val_loss: 10480.9688 - val_mae: 57.6311
16/25
532 [=============================>.] - ETA: 0s - loss: 13150.4980 - mae: 68.1780/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_003625-0t3zvt3e/files/model-best)... Done. 0.0s
532 [==============================] - 10s 6ms/step - loss: 13146.7393 - mae: 68.1678 - val_loss: 10169.2969 - val_mae: 57.1298
17/25
532 [=============================>.] - ETA: 0s - loss: 12841.8809 - mae: 67.6580/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_003625-0t3zvt3e/files/model-best)... Done. 0.0s
532 [==============================] - 7s 4ms/step - loss: 12840.7373 - mae: 67.6538 - val_loss: 9951.8838 - val_mae: 56.7588
18/25
532 [=============================>.] - ETA: 0s - loss: 12709.3447 - mae: 67.1214/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_003625-0t3zvt3e/files/model-best)... Done. 0.0s
532 [==============================] - 8s 5ms/step - loss: 12713.5869 - mae: 67.1238 - val_loss: 9825.8350 - val_mae: 56.2112
19/25
532 [=============================>.] - ETA: 0s - loss: 12597.1738 - mae: 66.6232/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_003625-0t3zvt3e/files/model-best)... Done. 0.0s
532 [==============================] - 8s 5ms/step - loss: 12589.5234 - mae: 66.6210 - val_loss: 9737.5322 - val_mae: 55.8668
20/25
532 [=============================>.] - ETA: 0s - loss: 12444.1670 - mae: 66.1923/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_003625-0t3zvt3e/files/model-best)... Done. 0.0s
532 [==============================] - 8s 5ms/step - loss: 12442.3926 - mae: 66.1954 - val_loss: 9523.7061 - val_mae: 55.3232
21/25
532 [=============================>.] - ETA: 0s - loss: 12403.2598 - mae: 65.8790/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_003625-0t3zvt3e/files/model-best)... Done. 0.0s
532 [==============================] - 11s 7ms/step - loss: 12410.4863 - mae: 65.8906 - val_loss: 9385.0928 - val_mae: 54.7331
22/25
532 [=============================>.] - ETA: 0s - loss: 12268.4082 - mae: 65.4679/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_003625-0t3zvt3e/files/model-best)... Done. 0.0s
532 [==============================] - 9s 6ms/step - loss: 12268.2637 - mae: 65.4693 - val_loss: 9244.3477 - val_mae: 54.5145
23/25
532 [=============================>.] - ETA: 0s - loss: 12184.6787 - mae: 65.1936/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_003625-0t3zvt3e/files/model-best)... Done. 0.0s
532 [==============================] - 7s 4ms/step - loss: 12191.2979 - mae: 65.1974 - val_loss: 9089.4121 - val_mae: 54.0341
24/25
532 [=============================>.] - ETA: 0s - loss: 11963.6182 - mae: 64.6843/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
```

```
 Adding directory to artifact (/content/wandb/run-20231122_003625-0t3zvt3e/files/model-best)... Done. 0.0s
32 [==============================] - 10s 6ms/step - loss: 11962.8662 - mae: 64.6827 - val_loss: 8986.8760 - val_mae: 53.5437
25/25
32 [==============================>.] - ETA: 0s - loss: 11815.8848 - mae: 64.2233/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_003625-0t3zvt3e/files/model-best)... Done. 0.0s
32 [==============================] - 9s 5ms/step - loss: 11815.5225 - mae: 64.2239 - val_loss: 8868.0957 - val_mae: 53.2821
 25
size:  128
:  [64, 1]
er:  adam
B of 2.885 MB uploaded (0.199 MB deduped)
```

nc reduced upload amount by 6.9%

history:

Run summary:

best_epoch	24
best_val_loss	8868.0957
epoch	24
loss	11815.52246
mae	64.22394
val_loss	8868.0957
val_mae	53.28206

```
 wild-sweep-5 at: https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/0t3zvt3e
5 W&B file(s), 1 media file(s), 125 artifact file(s) and 1 other file(s)
s at: ./wandb/run-20231122_003625-0t3zvt3e/logs
 Agent Starting Run: 654ksdov with config:
  batch_size: 128
  dropout: 0.1
  epochs: 25
  neurons: [64, 1]
  optimizer: sgd
 WARNING Ignored wandb.init() arg project when running a sweep.
 WARNING Ignored wandb.init() arg entity when running a sweep.
 run with wandb version 0.16.0
a is saved locally in /content/wandb/run-20231122_004109-654ksdov
 run unique-sweep-6 to Weights & Biases (docs)
 age: https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
 oject at https://wandb.ai/ort-martin/obligatorio-deep-learning
 eep at https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
 n at https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/654ksdov
 n_size': 128, 'dropout': 0.1, 'epochs': 25, 'neurons': [64, 1], 'optimizer': 'sgd'}
 "sequential"
_____
 (type)              Output Shape              Param #
=================================================================
 (Dense)             (None, 64)                1152

 t (Dropout)         (None, 64)                0

 1 (Dense)           (None, 1)                 65

 t_1 (Dropout)       (None, 1)                 0

=================================================================
params: 1217 (4.75 KB)
le params: 1217 (4.75 KB)
inable params: 0 (0.00 Byte)
_____
 /25
32 [==============================>.] - ETA: 0s - loss: 22316.6680 - mae: 95.0961/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_004109-654ksdov/files/model-best)... Done. 0.0s
32 [==============================] - 9s 5ms/step - loss: 22309.0371 - mae: 95.0974 - val_loss: 25336.4570 - val_mae: 108.2503
 /25
32 [==============================>.] - ETA: 0s - loss: 20584.7930 - mae: 96.8568/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_004109-654ksdov/files/model-best)... Done. 0.0s
32 [==============================] - 8s 5ms/step - loss: 20600.0645 - mae: 96.8824 - val_loss: 18666.4668 - val_mae: 89.8745
 3/25
32 [==============================>.] - ETA: 0s - loss: 20463.3066 - mae: 97.5503/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_004109-654ksdov/files/model-best)... Done. 0.0s
32 [==============================] - 7s 4ms/step - loss: 20475.7578 - mae: 97.5724 - val_loss: 18178.4434 - val_mae: 90.1283
 /25
32 [==============================>.] - ETA: 0s - loss: 20341.6270 - mae: 97.4338/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_004109-654ksdov/files/model-best)... Done. 0.0s
```

```
532 [==============================] - 10s 6ms/step - loss: 20342.0020 - mae: 97.4270 - val_loss: 17868.1699 - val_mae: 86.6873
5/25
532 [==============================] - 6s 4ms/step - loss: 20310.1445 - mae: 97.4017 - val_loss: 19850.0254 - val_mae: 93.4764
6/25
532 [==============================] - 7s 4ms/step - loss: 20340.1680 - mae: 97.7532 - val_loss: 20391.5098 - val_mae: 94.2885
7/25
532 [==============================] - 8s 5ms/step - loss: 20337.9121 - mae: 97.5169 - val_loss: 17874.0137 - val_mae: 90.3484
8/25
532 [=============================>.] - ETA: 0s - loss: 20244.7461 - mae: 97.4836/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_004109-654ksdov/files/model-best)... Done. 0.0s
532 [==============================] - 6s 4ms/step - loss: 20236.6328 - mae: 97.4694 - val_loss: 17471.3633 - val_mae: 86.4827
9/25
532 [==============================] - 8s 5ms/step - loss: 20236.4570 - mae: 97.5924 - val_loss: 19204.0723 - val_mae: 91.9947
10/25
532 [==============================] - 6s 4ms/step - loss: 20262.1191 - mae: 97.6278 - val_loss: 17949.6426 - val_mae: 87.6795
11/25
532 [==============================] - 5s 3ms/step - loss: 20438.1035 - mae: 97.8219 - val_loss: 18206.8848 - val_mae: 89.8586
12/25
532 [==============================] - 7s 4ms/step - loss: 20326.7031 - mae: 97.4027 - val_loss: 19353.2559 - val_mae: 92.2279
13/25
532 [==============================] - 8s 5ms/step - loss: 20353.0352 - mae: 97.1525 - val_loss: 20217.7617 - val_mae: 92.3240
14/25
532 [==============================] - 5s 3ms/step - loss: 20152.9141 - mae: 96.1279 - val_loss: 18239.3203 - val_mae: 88.3918
15/25
532 [==============================] - 6s 4ms/step - loss: 20127.6074 - mae: 96.5698 - val_loss: 18873.0781 - val_mae: 88.5467
16/25
532 [==============================] - 7s 4ms/step - loss: 20314.0605 - mae: 96.9283 - val_loss: 18539.0742 - val_mae: 89.9690
17/25
532 [==============================] - 5s 3ms/step - loss: 20273.9277 - mae: 96.9392 - val_loss: 18137.0254 - val_mae: 86.6558
18/25
532 [==============================] - 5s 3ms/step - loss: 20210.7090 - mae: 96.4556 - val_loss: 17647.6660 - val_mae: 85.4611
19/25
532 [==============================] - 7s 4ms/step - loss: 20070.4160 - mae: 96.2736 - val_loss: 18199.3340 - val_mae: 87.2130
20/25
532 [==============================] - 6s 4ms/step - loss: 20146.6270 - mae: 96.6085 - val_loss: 19157.4980 - val_mae: 97.1664
21/25
532 [==============================] - 6s 3ms/step - loss: 20193.4961 - mae: 96.5980 - val_loss: 21828.9082 - val_mae: 96.6391
22/25
532 [==============================] - 7s 5ms/step - loss: 20196.2773 - mae: 96.5713 - val_loss: 21140.7051 - val_mae: 104.9999
23/25
532 [==============================] - 8s 5ms/step - loss: 20317.9316 - mae: 96.9210 - val_loss: 18152.9980 - val_mae: 85.6471
24/25
532 [==============================] - 5s 3ms/step - loss: 20275.2285 - mae: 96.7376 - val_loss: 18788.0859 - val_mae: 90.8742
25/25
532 [=============================>.] - ETA: 0s - loss: 20050.6074 - mae: 95.9245/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_004109-654ksdov/files/model-best)... Done. 0.0s
532 [==============================] - 5s 3ms/step - loss: 20052.1582 - mae: 95.9243 - val_loss: 17384.4102 - val_mae: 84.4300
  25
size:  128
s: [64, 1]
er:  sgd
B of 0.648 MB uploaded (0.041 MB deduped)
```

nc reduced upload amount by 6.4%

history:

Run summary:

best_epoch	24
best_val_loss	17384.41016
epoch	24
loss	20052.1582
mae	95.92429
val_loss	17384.41016
val_mae	84.43003

```
n unique-sweep-6 at: https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/654ksdov
5 W&B file(s), 1 media file(s), 30 artifact file(s) and 1 other file(s)
s at: ./wandb/run-20231122_004109-654ksdov/logs
 Agent Starting Run: bdo7ai57 with config:
  batch_size: 128
  dropout: 0.1
  epochs: 25
  neurons: [64, 32, 1]
  optimizer: adam
 WARNING Ignored wandb.init() arg project when running a sweep.
 WARNING Ignored wandb.init() arg entity when running a sweep.
 run with wandb version 0.16.0
 a is saved locally in /content/wandb/run-20231122_004455-bdo7ai57
```

run **hearty-sweep-7** to Weights & Biases (docs)
page: https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
oject at https://wandb.ai/ort-martin/obligatorio-deep-learning
eep at https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
n at https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/bdo7ai57
_size': 128, 'dropout': 0.1, 'epochs': 25, 'neurons': [64, 32, 1], 'optimizer': 'adam'}
"sequential"

```
_____
 (type)              Output Shape            Param #
=========================================================
 (Dense)             (None, 64)              1152

t (Dropout)          (None, 64)              0

_1 (Dense)           (None, 32)              2080

t_1 (Dropout)        (None, 32)              0

_2 (Dense)           (None, 1)               33

t_2 (Dropout)        (None, 1)               0


=========================================================
params: 3265 (12.75 KB)
le params: 3265 (12.75 KB)
ainable params: 0 (0.00 Byte)
_____
/25
32 [==============================] - ETA: 0s - loss: 19015.1191 - mae: 81.3909/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_004455-bdo7ai57/files/model-best)... Done. 0.0s
32 [==============================] - 11s 6ms/step - loss: 19015.1191 - mae: 81.3909 - val_loss: 13489.9873 - val_mae: 64.3680
/25
32 [=============================>.] - ETA: 0s - loss: 15549.8164 - mae: 73.2120/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_004455-bdo7ai57/files/model-best)... Done. 0.0s
32 [==============================] - 7s 4ms/step - loss: 15560.1543 - mae: 73.2163 - val_loss: 12132.1504 - val_mae: 60.4176
/25
32 [=============================>.] - ETA: 0s - loss: 14133.3428 - mae: 70.0398/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_004455-bdo7ai57/files/model-best)... Done. 0.0s
32 [==============================] - 8s 5ms/step - loss: 14133.3662 - mae: 70.0436 - val_loss: 10605.6768 - val_mae: 57.7536
/25
32 [=============================>.] - ETA: 0s - loss: 13344.5713 - mae: 68.3995/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_004455-bdo7ai57/files/model-best)... Done. 0.0s
32 [==============================] - 8s 5ms/step - loss: 13337.6436 - mae: 68.3836 - val_loss: 9702.8066 - val_mae: 55.4429
/25
32 [=============================>.] - ETA: 0s - loss: 12715.1650 - mae: 66.4983/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_004455-bdo7ai57/files/model-best)... Done. 0.0s
32 [==============================] - 9s 5ms/step - loss: 12715.1172 - mae: 66.5014 - val_loss: 9081.7285 - val_mae: 53.4773
/25
32 [=============================>.] - ETA: 0s - loss: 12102.6084 - mae: 64.8749/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_004455-bdo7ai57/files/model-best)... Done. 0.0s
32 [==============================] - 9s 6ms/step - loss: 12101.9795 - mae: 64.8736 - val_loss: 8631.3516 - val_mae: 51.4672
/25
32 [=============================>.] - ETA: 0s - loss: 11505.9561 - mae: 63.2671/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_004455-bdo7ai57/files/model-best)... Done. 0.0s
32 [==============================] - 7s 4ms/step - loss: 11507.8643 - mae: 63.2723 - val_loss: 7947.7544 - val_mae: 49.7994
/25
32 [=============================>.] - ETA: 0s - loss: 11174.0977 - mae: 61.9081/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_004455-bdo7ai57/files/model-best)... Done. 0.0s
32 [==============================] - 10s 6ms/step - loss: 11169.3350 - mae: 61.9011 - val_loss: 7522.5635 - val_mae: 48.6753
/25
32 [==============================] - 6s 4ms/step - loss: 10987.8008 - mae: 61.0854 - val_loss: 7536.9785 - val_mae: 47.9400
10/25
32 [=============================>.] - ETA: 0s - loss: 10639.9941 - mae: 60.1112/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_004455-bdo7ai57/files/model-best)... Done. 0.0s
32 [==============================] - 7s 5ms/step - loss: 10646.7305 - mae: 60.1165 - val_loss: 7246.1997 - val_mae: 47.3879
11/25
32 [=============================>.] - ETA: 0s - loss: 10594.4346 - mae: 59.4642/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_004455-bdo7ai57/files/model-best)... Done. 0.0s
32 [==============================] - 8s 5ms/step - loss: 10591.5498 - mae: 59.4626 - val_loss: 7219.7788 - val_mae: 47.0627
12/25
32 [=============================>.] - ETA: 0s - loss: 10557.4414 - mae: 59.0500/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_004455-bdo7ai57/files/model-best)... Done. 0.0s
32 [==============================] - 7s 4ms/step - loss: 10560.7715 - mae: 59.0632 - val_loss: 6924.0981 - val_mae: 46.4538
13/25
```

```
32 [==============================] - 8s 5ms/step - loss: 10509.6680 - mae: 58.6191 - val_loss: 7013.2915 - val_mae: 46.3549
14/25
32 [=============================>.] - ETA: 0s - loss: 10360.6348 - mae: 58.2085/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_004455-bdo7ai57/files/model-best)... Done. 0.0s
32 [==============================] - 7s 4ms/step - loss: 10361.1670 - mae: 58.2071 - val_loss: 6777.1118 - val_mae: 45.8405
15/25
32 [==============================] - 5s 3ms/step - loss: 10372.7070 - mae: 57.8947 - val_loss: 6998.0020 - val_mae: 45.8254
16/25
32 [==============================] - 7s 4ms/step - loss: 10367.7314 - mae: 57.7774 - val_loss: 7150.3213 - val_mae: 46.5091
17/25
32 [==============================] - 6s 4ms/step - loss: 10312.6953 - mae: 57.5780 - val_loss: 6925.3564 - val_mae: 45.9510
18/25
32 [=============================>.] - ETA: 0s - loss: 10261.0488 - mae: 57.2704/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_004455-bdo7ai57/files/model-best)... Done. 0.0s
32 [==============================] - 7s 4ms/step - loss: 10253.7852 - mae: 57.2668 - val_loss: 6637.5259 - val_mae: 44.9857
19/25
32 [==============================] - 8s 5ms/step - loss: 10119.6768 - mae: 56.9343 - val_loss: 6922.8848 - val_mae: 45.1075
20/25
32 [==============================] - 6s 4ms/step - loss: 10193.1338 - mae: 57.0295 - val_loss: 6735.0552 - val_mae: 44.7966
21/25
32 [=============================>.] - ETA: 0s - loss: 10035.8027 - mae: 56.6166/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_004455-bdo7ai57/files/model-best)... Done. 0.0s
32 [==============================] - 6s 4ms/step - loss: 10035.4795 - mae: 56.6169 - val_loss: 6605.9404 - val_mae: 44.7638
22/25
32 [==============================] - 8s 5ms/step - loss: 10158.4795 - mae: 56.6818 - val_loss: 6799.5771 - val_mae: 45.0416
23/25
32 [==============================] - 6s 4ms/step - loss: 10173.5273 - mae: 56.5546 - val_loss: 6661.8779 - val_mae: 44.7688
24/25
32 [=============================>.] - ETA: 0s - loss: 10024.0410 - mae: 56.4480/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_004455-bdo7ai57/files/model-best)... Done. 0.0s
32 [==============================] - 9s 6ms/step - loss: 10022.8184 - mae: 56.4552 - val_loss: 6553.3584 - val_mae: 44.5883
25/25
32 [==============================] - 9s 5ms/step - loss: 10082.8906 - mae: 56.4319 - val_loss: 6710.4443 - val_mae: 44.7593
  25
size:  128
:  [64, 32, 1]
er:  adam
```

B of 2.658 MB uploaded (0.157 MB deduped)

nc reduced upload amount by 5.9%

history:

Run summary:

best_epoch	23
best_val_loss	6553.3584
epoch	24
loss	10082.89062
mae	56.43195
val_loss	6710.44434
val_mae	44.7593

hearty-sweep-7 at: https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/bdo7ai57
5 W&B file(s), 1 media file(s), 75 artifact file(s) and 1 other file(s)
s at: ./wandb/run-20231122_004455-bdo7ai57/logs
 Agent Starting Run: t9xwzlf7 with config:
  batch_size: 128
  dropout: 0.1
  epochs: 25
  neurons: [64, 32, 1]
  optimizer: sgd
 WARNING Ignored wandb.init() arg project when running a sweep.
 WARNING Ignored wandb.init() arg entity when running a sweep.
 run with wandb version 0.16.0
 a is saved locally in /content/wandb/run-20231122_004841-t9xwzlf7
 run **devout-sweep-8** to Weights & Biases (docs)
 age: https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
 ject at https://wandb.ai/ort-martin/obligatorio-deep-learning
 eep at https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
 n at https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/t9xwzlf7
 _size': 128, 'dropout': 0.1, 'epochs': 25, 'neurons': [64, 32, 1], 'optimizer': 'sgd'}
 "sequential"

(type)	Output Shape	Param #
(Dense)	(None, 64)	1152

```
t (Dropout)              (None, 64)              0

_1 (Dense)               (None, 32)              2080

t_1 (Dropout)            (None, 32)              0

_2 (Dense)               (None, 1)               33

t_2 (Dropout)            (None, 1)               0

=========================================================
params: 3265 (12.75 KB)
le params: 3265 (12.75 KB)
inable params: 0 (0.00 Byte)
_____
1/25
32 [..............................] - ETA: 17:49 - loss: 52538.5391 - mae: 152.6310WARNING:tensorflow:Callback method `on_train_batch_e
32 [==============================] - ETA: 0s - loss: 106473704.0000 - mae: 260.2924/usr/local/lib/python3.10/dist-packages/keras/src/e
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_004841-t9xwzlf7/files/model-best)... Done. 0.0s
32 [==============================] - 7s 4ms/step - loss: 106473704.0000 - mae: 260.2924 - val_loss: 42161.3984 - val_mae: 138.9924
2/25
32 [==============================] - 7s 4ms/step - loss: 41325.1094 - mae: 137.9854 - val_loss: 42161.3984 - val_mae: 138.9924
3/25
32 [==============================] - 7s 4ms/step - loss: 41325.1289 - mae: 137.9851 - val_loss: 42161.3984 - val_mae: 138.9924
4/25
32 [==============================] - 5s 3ms/step - loss: 41325.1016 - mae: 137.9854 - val_loss: 42161.3984 - val_mae: 138.9924
5/25
32 [==============================] - 6s 4ms/step - loss: 41325.1016 - mae: 137.9851 - val_loss: 42161.3984 - val_mae: 138.9924
6/25
32 [==============================] - 7s 4ms/step - loss: 41325.1016 - mae: 137.9852 - val_loss: 42161.3984 - val_mae: 138.9924
7/25
32 [==============================] - 5s 3ms/step - loss: 41325.0977 - mae: 137.9852 - val_loss: 42161.3984 - val_mae: 138.9924
8/25
32 [==============================] - 5s 3ms/step - loss: 41325.1055 - mae: 137.9852 - val_loss: 42161.3984 - val_mae: 138.9924
9/25
32 [==============================] - 7s 4ms/step - loss: 41325.1055 - mae: 137.9851 - val_loss: 42161.3984 - val_mae: 138.9924
10/25
32 [==============================] - 6s 4ms/step - loss: 41325.1211 - mae: 137.9852 - val_loss: 42161.3984 - val_mae: 138.9924
11/25
32 [==============================] - 5s 3ms/step - loss: 41325.1016 - mae: 137.9852 - val_loss: 42161.3984 - val_mae: 138.9924
12/25
32 [==============================] - 6s 4ms/step - loss: 41325.1367 - mae: 137.9854 - val_loss: 42161.3984 - val_mae: 138.9924
13/25
32 [==============================] - 7s 4ms/step - loss: 41325.0820 - mae: 137.9851 - val_loss: 42161.3984 - val_mae: 138.9924
14/25
32 [==============================] - 5s 3ms/step - loss: 41325.1055 - mae: 137.9851 - val_loss: 42161.3984 - val_mae: 138.9924
15/25
32 [==============================] - 5s 3ms/step - loss: 41325.1094 - mae: 137.9851 - val_loss: 42161.3984 - val_mae: 138.9924
16/25
32 [==============================] - 7s 4ms/step - loss: 41325.1172 - mae: 137.9852 - val_loss: 42161.3984 - val_mae: 138.9924
17/25
32 [==============================] - 6s 3ms/step - loss: 41325.1289 - mae: 137.9852 - val_loss: 42161.3984 - val_mae: 138.9924
18/25
32 [==============================] - 5s 3ms/step - loss: 41325.1172 - mae: 137.9850 - val_loss: 42161.3984 - val_mae: 138.9924
19/25
32 [==============================] - 6s 4ms/step - loss: 41325.0977 - mae: 137.9852 - val_loss: 42161.3984 - val_mae: 138.9924
20/25
32 [==============================] - 7s 5ms/step - loss: 41325.1211 - mae: 137.9852 - val_loss: 42161.3984 - val_mae: 138.9924
21/25
32 [==============================] - 5s 3ms/step - loss: 41325.0898 - mae: 137.9851 - val_loss: 42161.3984 - val_mae: 138.9924
22/25
32 [==============================] - 5s 3ms/step - loss: 41325.1172 - mae: 137.9852 - val_loss: 42161.3984 - val_mae: 138.9924
23/25
32 [==============================] - 7s 4ms/step - loss: 41325.1016 - mae: 137.9852 - val_loss: 42161.3984 - val_mae: 138.9924
24/25
32 [==============================] - 7s 4ms/step - loss: 41325.0977 - mae: 137.9854 - val_loss: 42161.3984 - val_mae: 138.9924
25/25
32 [==============================] - 5s 3ms/step - loss: 41325.1172 - mae: 137.9852 - val_loss: 42161.3984 - val_mae: 138.9924
  25
size:  128
:  [64, 32, 1]
er:  sgd
B of 0.214 MB uploaded
```

history:

Run summary:

best_epoch	0
best_val_loss	42161.39844
epoch	24

oss _____

mae _____

loss	41325.11719
mae	137.98521
val_loss	42161.39844
val_mae	138.9924

n **devout-sweep-8** at: https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/t9xwzlf7
5 W&B file(s), 1 media file(s), 5 artifact file(s) and 1 other file(s)
s at: ./wandb/run-20231122_004841-t9xwzlf7/logs
Agent Starting Run: 31b4rtdd with config:
 batch_size: 64
 dropout: 0.1
 epochs: 35
 neurons: [64, 1]
 optimizer: adam
WARNING Ignored wandb.init() arg project when running a sweep.
WARNING Ignored wandb.init() arg entity when running a sweep.
 run with wandb version 0.16.0
a is saved locally in /content/wandb/run-20231122_005131-31b4rtdd
 run **copper-sweep-9** to Weights & Biases (docs)
age: https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
ject at https://wandb.ai/ort-martin/obligatorio-deep-learning
eep at https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
n at https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/31b4rtdd
_size': 64, 'dropout': 0.1, 'epochs': 35, 'neurons': [64, 1], 'optimizer': 'adam'}
 "sequential"

```
_____
 (type)              Output Shape          Param #
=====================================================
 (Dense)             (None, 64)            1152

t (Dropout)          (None, 64)            0

_1 (Dense)           (None, 1)             65

t_1 (Dropout)        (None, 1)             0

=====================================================
params: 1217 (4.75 KB)
le params: 1217 (4.75 KB)
inable params: 0 (0.00 Byte)
_____
/35
263 [===========================>.] - ETA: 0s - loss: 20999.1172 - mae: 85.4566/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_005131-31b4rtdd/files/model-best)... Done. 0.0s
263 [============================] - 14s 4ms/step - loss: 20968.2148 - mae: 85.3931 - val_loss: 14435.9219 - val_mae: 66.4676
/35
263 [===========================>.] - ETA: 0s - loss: 16289.1270 - mae: 75.5479/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_005131-31b4rtdd/files/model-best)... Done. 0.0s
263 [============================] - 15s 5ms/step - loss: 16299.1006 - mae: 75.5597 - val_loss: 13530.4854 - val_mae: 64.5345
/35
263 [===========================>.] - ETA: 0s - loss: 15650.4766 - mae: 74.1394/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_005131-31b4rtdd/files/model-best)... Done. 0.0s
263 [============================] - 12s 4ms/step - loss: 15670.3154 - mae: 74.1777 - val_loss: 12872.5098 - val_mae: 63.5900
/35
263 [===========================>.] - ETA: 0s - loss: 15291.7178 - mae: 73.3664/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_005131-31b4rtdd/files/model-best)... Done. 0.0s
263 [============================] - 16s 5ms/step - loss: 15287.5479 - mae: 73.3582 - val_loss: 12438.0801 - val_mae: 62.5555
/35
263 [===========================>.] - ETA: 0s - loss: 14831.0791 - mae: 72.5375/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_005131-31b4rtdd/files/model-best)... Done. 0.0s
263 [============================] - 13s 4ms/step - loss: 14831.4600 - mae: 72.5365 - val_loss: 12092.8574 - val_mae: 61.3695
/35
263 [===========================>.] - ETA: 0s - loss: 14569.3574 - mae: 72.0679/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_005131-31b4rtdd/files/model-best)... Done. 0.0s
263 [============================] - 12s 4ms/step - loss: 14562.9092 - mae: 72.0542 - val_loss: 11768.5273 - val_mae: 60.7377
/35
263 [===========================>.] - ETA: 0s - loss: 14254.7920 - mae: 71.3187/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_005131-31b4rtdd/files/model-best)... Done. 0.0s
263 [============================] - 13s 4ms/step - loss: 14254.4531 - mae: 71.3244 - val_loss: 11452.2031 - val_mae: 60.0100
/35
263 [===========================>.] - ETA: 0s - loss: 13993.8066 - mae: 70.7010.usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_005131-31b4rtdd/files/model-best)... Done. 0.0s
263 [============================] - 14s 4ms/step - loss: 13990.9072 - mae: 70.6992 - val_loss: 11116.2920 - val_mae: 59.4470
/35
263 [===========================>.] - ETA: 0s - loss: 13795.2949 - mae: 69.9985/usr/local/lib/python3.10/dist-packages/keras/src/engine,
```

```
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_005131-31b4rtdd/files/model-best)... Done. 0.0s
263 [==============================] - 10s 3ms/step - loss: 13796.1719 - mae: 69.9901 - val_loss: 10901.4043 - val_mae: 58.3756
10/35
263 [=============================>.] - ETA: 0s - loss: 13434.2627 - mae: 69.2208/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_005131-31b4rtdd/files/model-best)... Done. 0.0s
263 [==============================] - 13s 4ms/step - loss: 13431.3057 - mae: 69.2151 - val_loss: 10521.4570 - val_mae: 57.8429
11/35
263 [=============================>.] - ETA: 0s - loss: 13259.0039 - mae: 68.7060/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_005131-31b4rtdd/files/model-best)... Done. 0.0s
263 [==============================] - 13s 4ms/step - loss: 13261.4746 - mae: 68.7106 - val_loss: 10329.0791 - val_mae: 57.2489
12/35
263 [=============================>.] - ETA: 0s - loss: 13057.8369 - mae: 68.1737/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_005131-31b4rtdd/files/model-best)... Done. 0.0s
263 [==============================] - 11s 3ms/step - loss: 13060.5684 - mae: 68.1773 - val_loss: 10069.9238 - val_mae: 56.7749
13/35
263 [=============================>.] - ETA: 0s - loss: 12867.4980 - mae: 67.5133/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_005131-31b4rtdd/files/model-best)... Done. 0.0s
263 [==============================] - 14s 4ms/step - loss: 12867.4980 - mae: 67.5133 - val_loss: 9763.2939 - val_mae: 56.3116
14/35
263 [=============================>.] - ETA: 0s - loss: 12648.3555 - mae: 66.9477/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_005131-31b4rtdd/files/model-best)... Done. 0.0s
263 [==============================] - 12s 4ms/step - loss: 12642.8223 - mae: 66.9361 - val_loss: 9632.6299 - val_mae: 55.6154
15/35
263 [=============================>.] - ETA: 0s - loss: 12567.7334 - mae: 66.5386/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_005131-31b4rtdd/files/model-best)... Done. 0.0s
263 [==============================] - 12s 4ms/step - loss: 12569.0479 - mae: 66.5424 - val_loss: 9594.0957 - val_mae: 55.1419
16/35
263 [=============================>.] - ETA: 0s - loss: 12392.2559 - mae: 65.9801/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_005131-31b4rtdd/files/model-best)... Done. 0.0s
263 [==============================] - 16s 5ms/step - loss: 12396.5430 - mae: 65.9887 - val_loss: 9319.0967 - val_mae: 54.4666
17/35
263 [=============================>.] - ETA: 0s - loss: 12022.6943 - mae: 65.3660/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_005131-31b4rtdd/files/model-best)... Done. 0.0s
263 [==============================] - 14s 4ms/step - loss: 12021.7422 - mae: 65.3643 - val_loss: 9130.8867 - val_mae: 54.2471
18/35
263 [=============================>.] - ETA: 0s - loss: 12039.0645 - mae: 64.9641/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_005131-31b4rtdd/files/model-best)... Done. 0.0s
263 [==============================] - 12s 4ms/step - loss: 12034.9512 - mae: 64.9591 - val_loss: 8912.1914 - val_mae: 53.6483
19/35
263 [=============================>.] - ETA: 0s - loss: 11904.8213 - mae: 64.3804/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_005131-31b4rtdd/files/model-best)... Done. 0.0s
263 [==============================] - 14s 4ms/step - loss: 11912.1338 - mae: 64.3954 - val_loss: 8898.1221 - val_mae: 53.0749
20/35
263 [=============================>.] - ETA: 0s - loss: 11761.3174 - mae: 63.9645/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_005131-31b4rtdd/files/model-best)... Done. 0.0s
263 [==============================] - 12s 4ms/step - loss: 11758.6904 - mae: 63.9630 - val_loss: 8611.3672 - val_mae: 52.4879
21/35
263 [=============================>.] - ETA: 0s - loss: 11665.1240 - mae: 63.3643/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_005131-31b4rtdd/files/model-best)... Done. 0.0s
263 [==============================] - 12s 4ms/step - loss: 11670.6875 - mae: 63.3759 - val_loss: 8384.1328 - val_mae: 51.8062
22/35
263 [=============================>.] - ETA: 0s - loss: 11413.9658 - mae: 62.8196/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_005131-31b4rtdd/files/model-best)... Done. 0.0s
263 [==============================] - 14s 4ms/step - loss: 11418.5117 - mae: 62.8273 - val_loss: 8279.5898 - val_mae: 51.3034
23/35
263 [=============================>.] - ETA: 0s - loss: 11271.9424 - mae: 62.2576/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_005131-31b4rtdd/files/model-best)... Done. 0.0s
263 [==============================] - 11s 3ms/step - loss: 11278.1094 - mae: 62.2623 - val_loss: 8126.3970 - val_mae: 50.8001
24/35
263 [=============================>.] - ETA: 0s - loss: 11200.2373 - mae: 61.9176/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_005131-31b4rtdd/files/model-best)... Done. 0.0s
263 [==============================] - 14s 4ms/step - loss: 11195.4346 - mae: 61.9093 - val_loss: 8014.8330 - val_mae: 50.3449
25/35
263 [=============================>.] - ETA: 0s - loss: 11011.6768 - mae: 61.4963/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_005131-31b4rtdd/files/model-best)... Done. 0.0s
263 [==============================] - 14s 4ms/step - loss: 11011.2881 - mae: 61.4963 - val_loss: 7926.1626 - val_mae: 50.0160
26/35
263 [=============================>.] - ETA: 0s - loss: 11075.0303 - mae: 61.1808/usr/local/lib/python3.10/dist-packages/keras/src/engine,
```

```
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_005131-31b4rtdd/files/model-best)... Done. 0.0s
263 [==============================] - 14s 4ms/step - loss: 11081.9297 - mae: 61.1966 - val_loss: 7694.6665 - val_mae: 49.6177
27/35
263 [==============================] - 12s 4ms/step - loss: 10896.8281 - mae: 60.7396 - val_loss: 7723.7344 - val_mae: 49.0941
28/35
263 [=============================>.] - ETA: 0s - loss: 10885.8984 - mae: 60.4908/usr/local/lib/python3.10/dist-packages/keras/src/engine/
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_005131-31b4rtdd/files/model-best)... Done. 0.0s
263 [==============================] - 11s 3ms/step - loss: 10885.4736 - mae: 60.4899 - val_loss: 7540.8574 - val_mae: 48.8509
29/35
263 [=============================>.] - ETA: 0s - loss: 10835.3613 - mae: 60.1913/usr/local/lib/python3.10/dist-packages/keras/src/engine/
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_005131-31b4rtdd/files/model-best)... Done. 0.0s
263 [==============================] - 14s 4ms/step - loss: 10834.8008 - mae: 60.1883 - val_loss: 7526.3247 - val_mae: 48.4459
30/35
263 [=============================>.] - ETA: 0s - loss: 10542.9014 - mae: 59.6971/usr/local/lib/python3.10/dist-packages/keras/src/engine/
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_005131-31b4rtdd/files/model-best)... Done. 0.0s
263 [==============================] - 12s 4ms/step - loss: 10547.9824 - mae: 59.7060 - val_loss: 7442.9194 - val_mae: 48.3253
31/35
263 [=============================>.] - ETA: 0s - loss: 10557.0742 - mae: 59.5217/usr/local/lib/python3.10/dist-packages/keras/src/engine/
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_005131-31b4rtdd/files/model-best)... Done. 0.0s
263 [==============================] - 13s 4ms/step - loss: 10555.7041 - mae: 59.5119 - val_loss: 7385.0195 - val_mae: 48.0744
32/35
263 [=============================>.] - ETA: 0s - loss: 10592.6777 - mae: 59.4327/usr/local/lib/python3.10/dist-packages/keras/src/engine/
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_005131-31b4rtdd/files/model-best)... Done. 0.0s
263 [==============================] - 14s 4ms/step - loss: 10594.4033 - mae: 59.4295 - val_loss: 7343.5205 - val_mae: 47.7306
33/35
263 [=============================>.] - ETA: 0s - loss: 10618.7900 - mae: 59.2262/usr/local/lib/python3.10/dist-packages/keras/src/engine/
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_005131-31b4rtdd/files/model-best)... Done. 0.0s
263 [==============================] - 10s 3ms/step - loss: 10629.3018 - mae: 59.2378 - val_loss: 7278.3594 - val_mae: 47.5398
34/35
263 [==============================] - 13s 4ms/step - loss: 10491.2549 - mae: 58.8694 - val_loss: 7343.6709 - val_mae: 47.3533
35/35
263 [=============================>.] - ETA: 0s - loss: 10346.0928 - mae: 58.5092/usr/local/lib/python3.10/dist-packages/keras/src/engine/
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_005131-31b4rtdd/files/model-best)... Done. 0.0s
263 [==============================] - 11s 3ms/step - loss: 10345.2939 - mae: 58.5076 - val_loss: 7218.6270 - val_mae: 47.1606
  35
size:  64
:  [64, 1]
er:  adam
```

B of 3.792 MB uploaded (0.265 MB deduped)

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istory:

Run summary:

best_epoch	34
best_val_loss	7218.62695
epoch	34
loss	10345.29395
mae	58.50763
val_loss	7218.62695
val_mae	47.16065

copper-sweep-9 at: https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/31b4rtdd
5 W&B file(s), 1 media file(s), 165 artifact file(s) and 1 other file(s)
s at: ./wandb/run-20231122_005131-31b4rtdd/logs
 Agent Starting Run: oh8rxbfe with config:
  batch_size: 64
  dropout: 0.1
  epochs: 35
  neurons: [64, 1]
  optimizer: sgd
 WARNING Ignored wandb.init() arg project when running a sweep.
 WARNING Ignored wandb.init() arg entity when running a sweep.
 run with wandb version 0.16.0
 is saved locally in /content/wandb/run-20231122_010016-oh8rxbfe
 run **dauntless-sweep-10** to Weights & Biases (docs)
 age: https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
 ject at https://wandb.ai/ort-martin/obligatorio-deep-learning
 eep at https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
 n at https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/oh8rxbfe
 _size': 64, 'dropout': 0.1, 'epochs': 35, 'neurons': [64, 1], 'optimizer': 'sgd'}
 "sequential"

```
(type)              Output Shape         Param #
===========================================================
(Dense)             (None, 64)           1152

t (Dropout)         (None, 64)           0

_1 (Dense)          (None, 1)            65

t_1 (Dropout)       (None, 1)            0

===========================================================
arams: 1217 (4.75 KB)
le params: 1217 (4.75 KB)
ainable params: 0 (0.00 Byte)
_____
/35
63 [============================>.] - ETA: 0s - loss: 31705.4844 - mae: 113.4361/usr/local/lib/python3.10/dist-packages/keras/src/engine
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_010016-oh8rxbfe/files/model-best)... Done. 0.0s
63 [==============================] - 17s 5ms/step - loss: 31676.2422 - mae: 113.3973 - val_loss: 21554.0430 - val_mae: 96.1200
/35
63 [==============================] - 14s 4ms/step - loss: 24155.8789 - mae: 103.9864 - val_loss: 22094.3516 - val_mae: 103.1114
/35
63 [============================>.] - ETA: 0s - loss: 21944.0312 - mae: 99.5862/usr/local/lib/python3.10/dist-packages/keras/src/engine
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_010016-oh8rxbfe/files/model-best)... Done. 0.0s
63 [==============================] - 11s 3ms/step - loss: 21942.4688 - mae: 99.5830 - val_loss: 19185.9258 - val_mae: 88.8206
/35
63 [==============================] - 14s 4ms/step - loss: 21901.6934 - mae: 99.7934 - val_loss: 19991.1094 - val_mae: 90.1616
/35
63 [============================>.] - ETA: 0s - loss: 21486.6211 - mae: 99.7795/usr/local/lib/python3.10/dist-packages/keras/src/engine
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_010016-oh8rxbfe/files/model-best)... Done. 0.0s
63 [==============================] - 14s 4ms/step - loss: 21490.3223 - mae: 99.7785 - val_loss: 18817.2617 - val_mae: 87.0605
/35
63 [==============================] - 16s 5ms/step - loss: 21535.7891 - mae: 100.0216 - val_loss: 19527.9453 - val_mae: 91.9332
/35
63 [==============================] - 13s 4ms/step - loss: 21602.0977 - mae: 100.4003 - val_loss: 19084.4609 - val_mae: 89.4263
/35
63 [==============================] - 12s 4ms/step - loss: 21571.6523 - mae: 100.2562 - val_loss: 19765.8965 - val_mae: 92.3583
/35
63 [==============================] - 15s 5ms/step - loss: 21518.4824 - mae: 99.4077 - val_loss: 20266.0117 - val_mae: 92.1592
.0/35
63 [==============================] - 12s 4ms/step - loss: 21884.0273 - mae: 99.5277 - val_loss: 20152.2891 - val_mae: 87.9154
.1/35
63 [==============================] - 13s 4ms/step - loss: 21662.7285 - mae: 99.3751 - val_loss: 19483.9746 - val_mae: 89.7869
.2/35
63 [==============================] - 14s 4ms/step - loss: 21914.7637 - mae: 100.5282 - val_loss: 20339.0117 - val_mae: 92.5820
.3/35
63 [==============================] - 11s 3ms/step - loss: 22088.8906 - mae: 101.7538 - val_loss: 19960.5586 - val_mae: 92.7075
.4/35
63 [==============================] - 14s 4ms/step - loss: 21782.5762 - mae: 100.6422 - val_loss: 21110.2305 - val_mae: 95.3682
.5/35
63 [==============================] - 12s 4ms/step - loss: 21675.4023 - mae: 99.5864 - val_loss: 18950.5195 - val_mae: 85.5993
.6/35
63 [==============================] - 13s 4ms/step - loss: 22543.7617 - mae: 101.4453 - val_loss: 20660.7695 - val_mae: 90.6842
.7/35
63 [==============================] - 12s 4ms/step - loss: 22134.6406 - mae: 99.2091 - val_loss: 20055.0039 - val_mae: 90.0825
.8/35
63 [==============================] - 11s 3ms/step - loss: 21752.2441 - mae: 98.7949 - val_loss: 19958.1914 - val_mae: 93.8206
.9/35
63 [==============================] - 14s 4ms/step - loss: 21612.5371 - mae: 98.7577 - val_loss: 19817.7227 - val_mae: 89.2133
.0/35
63 [==============================] - 10s 3ms/step - loss: 21676.3301 - mae: 98.7426 - val_loss: 19923.2793 - val_mae: 90.2818
.1/35
63 [==============================] - 13s 4ms/step - loss: 21721.6777 - mae: 98.9768 - val_loss: 20544.5078 - val_mae: 94.4333
.2/35
63 [==============================] - 11s 3ms/step - loss: 21760.9336 - mae: 98.3973 - val_loss: 20248.9004 - val_mae: 93.3855
.3/35
63 [==============================] - 12s 4ms/step - loss: 21778.7832 - mae: 98.3828 - val_loss: 20074.2559 - val_mae: 87.8064
.4/35
63 [==============================] - 13s 4ms/step - loss: 21793.5977 - mae: 98.4573 - val_loss: 19993.3398 - val_mae: 88.2614
.5/35
63 [==============================] - 11s 3ms/step - loss: 21859.9121 - mae: 98.9508 - val_loss: 19998.0332 - val_mae: 88.1117
.6/35
63 [==============================] - 15s 5ms/step - loss: 21929.9102 - mae: 99.0816 - val_loss: 21548.7148 - val_mae: 93.4906
.7/35
63 [==============================] - 12s 4ms/step - loss: 21476.7520 - mae: 97.8153 - val_loss: 20062.4824 - val_mae: 90.9424
.8/35
63 [==============================] - 17s 5ms/step - loss: 21831.6152 - mae: 98.7050 - val_loss: 20259.5137 - val_mae: 90.8334
.9/35
63 [==============================] - 11s 3ms/step - loss: 22084.2402 - mae: 99.5849 - val_loss: 20777.0488 - val_mae: 92.8715
.0/35
63 [                             ] - 12s 4ms/step - loss: 21877.7676 - mae: 99.1713 - val_loss: 20262.8259 - val_mae: 90.6382
```

```
263 [==============================] - 13s 4ms/step - loss: 21877.7676 - mae: 99.1712 - val_loss: 20262.8359 - val_mae: 90.6382
31/35
263 [==============================] - 14s 4ms/step - loss: 21946.6523 - mae: 99.2398 - val_loss: 20777.0352 - val_mae: 92.5253
32/35
263 [==============================] - 10s 3ms/step - loss: 22071.2129 - mae: 99.7370 - val_loss: 20270.9043 - val_mae: 91.7306
33/35
263 [==============================] - 14s 4ms/step - loss: 22027.6484 - mae: 99.1839 - val_loss: 20720.9297 - val_mae: 89.9936
34/35
263 [==============================] - 9s 3ms/step - loss: 21900.6016 - mae: 99.2697 - val_loss: 19616.0195 - val_mae: 87.5934
35/35
263 [==============================] - 14s 4ms/step - loss: 22421.2617 - mae: 100.0446 - val_loss: 20748.1426 - val_mae: 88.9799
   35
size:  64
:  [64, 1]
er:  sgd
```

B of 0.349 MB uploaded (0.017 MB deduped)

nc reduced upload amount by 4.7%

history:

Run summary:

best_epoch	4
best_val_loss	18817.26172
epoch	34
loss	22421.26172
mae	100.04456
val_loss	20748.14258
val_mae	88.9799

n **dauntless-sweep-10** at: https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/oh8rxbfe
5 W&B file(s), 1 media file(s), 15 artifact file(s) and 1 other file(s)
s at: ./wandb/run-20231122_010016-oh8rxbfe/logs
Agent Starting Run: szt0xvyx with config:
  batch_size: 64
  dropout: 0.1
  epochs: 35
  neurons: [64, 32, 1]
  optimizer: adam
WARNING Ignored wandb.init() arg project when running a sweep.
WARNING Ignored wandb.init() arg entity when running a sweep.
run with wandb version 0.16.0
a is saved locally in /content/wandb/run-20231122_010901-szt0xvyx
run **super-sweep-11** to Weights & Biases (docs)
age: https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
oject at https://wandb.ai/ort-martin/obligatorio-deep-learning
eep at https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
n at https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/szt0xvyx
n_size': 64, 'dropout': 0.1, 'epochs': 35, 'neurons': [64, 32, 1], 'optimizer': 'adam'}
"sequential"

```
 (type)               Output Shape            Param #
=============================================================
 (Dense)              (None, 64)              1152

t (Dropout)          (None, 64)              0

_1 (Dense)            (None, 32)              2080

t_1 (Dropout)        (None, 32)              0

_2 (Dense)            (None, 1)               33

t_2 (Dropout)        (None, 1)               0

=============================================================
params: 3265 (12.75 KB)
le params: 3265 (12.75 KB)
inable params: 0 (0.00 Byte)
_____
/35
263 [==============================>.] - ETA: 0s - loss: 17444.5332 - mae: 77.8385/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_010901-szt0xvyx/files/model-best)... Done. 0.0s
263 [==============================] - 19s 5ms/step - loss: 17440.6211 - mae: 77.8386 - val_loss: 12940.3594 - val_mae: 62.8285
/35
263 [==============================>.] - ETA: 0s - loss: 14815.5977 - mae: 71.2557/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_010901-szt0xvyx/files/model-best)... Done. 0.0s
263 [==============================] - 15s 5ms/step - loss: 14819.9199 - mae: 71.2639 - val_loss: 11153.5322 - val_mae: 58.5739
/35
```

```
263 [==============================>.] - ETA: 0s - loss: 13342.7012 - mae: 67.6150/usr/local/lib/python3.10/dist-packages/keras/src/engine,
  ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_010901-szt0xvyx/files/model-best)... Done. 0.0s
263 [==============================] - 17s 5ms/step - loss: 13343.1826 - mae: 67.6158 - val_loss: 9675.4062 - val_mae: 55.2280
1/35
263 [==============================>.] - ETA: 0s - loss: 12288.9922 - mae: 64.9403/usr/local/lib/python3.10/dist-packages/keras/src/engine,
  ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_010901-szt0xvyx/files/model-best)... Done. 0.0s
263 [==============================] - 18s 6ms/step - loss: 12288.9922 - mae: 64.9403 - val_loss: 8418.1572 - val_mae: 51.8401
5/35
263 [==============================>.] - ETA: 0s - loss: 11361.0498 - mae: 61.9305/usr/local/lib/python3.10/dist-packages/keras/src/engine,
  ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_010901-szt0xvyx/files/model-best)... Done. 0.0s
263 [==============================] - 17s 5ms/step - loss: 11354.4307 - mae: 61.9156 - val_loss: 7553.3154 - val_mae: 48.3443
5/35
263 [==============================>.] - ETA: 0s - loss: 10603.7246 - mae: 59.3953/usr/local/lib/python3.10/dist-packages/keras/src/engine,
  ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_010901-szt0xvyx/files/model-best)... Done. 0.0s
263 [==============================] - 17s 5ms/step - loss: 10606.7441 - mae: 59.3972 - val_loss: 7107.5073 - val_mae: 46.5874
7/35
263 [==============================>.] - ETA: 0s - loss: 10396.6377 - mae: 58.1194/usr/local/lib/python3.10/dist-packages/keras/src/engine,
  ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_010901-szt0xvyx/files/model-best)... Done. 0.0s
263 [==============================] - 18s 6ms/step - loss: 10402.2002 - mae: 58.1330 - val_loss: 6978.0659 - val_mae: 45.8483
8/35
263 [==============================>.] - ETA: 0s - loss: 10259.0205 - mae: 57.3561/usr/local/lib/python3.10/dist-packages/keras/src/engine,
  ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_010901-szt0xvyx/files/model-best)... Done. 0.0s
263 [==============================] - 16s 5ms/step - loss: 10256.3740 - mae: 57.3542 - val_loss: 6964.3574 - val_mae: 45.5315
9/35
263 [==============================] - 13s 4ms/step - loss: 10289.6279 - mae: 57.0237 - val_loss: 7253.4751 - val_mae: 45.5292
10/35
263 [==============================>.] - ETA: 0s - loss: 10107.5127 - mae: 56.5649/usr/local/lib/python3.10/dist-packages/keras/src/engine,
  ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_010901-szt0xvyx/files/model-best)... Done. 0.0s
263 [==============================] - 16s 5ms/step - loss: 10107.5127 - mae: 56.5649 - val_loss: 6687.5806 - val_mae: 44.8837
11/35
263 [==============================] - 17s 5ms/step - loss: 10131.9268 - mae: 56.4781 - val_loss: 6861.8901 - val_mae: 44.8866
12/35
263 [==============================>.] - ETA: 0s - loss: 10182.7598 - mae: 56.4744/usr/local/lib/python3.10/dist-packages/keras/src/engine,
  ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_010901-szt0xvyx/files/model-best)... Done. 0.0s
263 [==============================] - 17s 5ms/step - loss: 10183.9346 - mae: 56.4806 - val_loss: 6561.3076 - val_mae: 45.0532
13/35
263 [==============================] - 16s 5ms/step - loss: 10145.4990 - mae: 56.2825 - val_loss: 6621.3604 - val_mae: 44.7035
14/35
263 [==============================] - 15s 5ms/step - loss: 10022.0039 - mae: 56.0236 - val_loss: 6790.3706 - val_mae: 44.8752
15/35
263 [==============================] - 16s 5ms/step - loss: 10106.4463 - mae: 56.2257 - val_loss: 6878.6631 - val_mae: 44.7554
16/35
263 [==============================] - 15s 5ms/step - loss: 10144.3809 - mae: 56.2312 - val_loss: 6806.7402 - val_mae: 44.8436
17/35
263 [==============================] - 12s 4ms/step - loss: 10141.7910 - mae: 56.0997 - val_loss: 6980.3999 - val_mae: 45.3044
18/35
263 [==============================>.] - ETA: 0s - loss: 10083.9971 - mae: 56.1206/usr/local/lib/python3.10/dist-packages/keras/src/engine,
  ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_010901-szt0xvyx/files/model-best)... Done. 0.0s
263 [==============================] - 17s 5ms/step - loss: 10084.3076 - mae: 56.1211 - val_loss: 6556.6953 - val_mae: 44.2707
19/35
263 [==============================] - 16s 5ms/step - loss: 9960.2900 - mae: 55.7687 - val_loss: 6794.9170 - val_mae: 44.5379
20/35
263 [==============================>.] - ETA: 0s - loss: 10008.2666 - mae: 55.9321/usr/local/lib/python3.10/dist-packages/keras/src/engine,
  ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_010901-szt0xvyx/files/model-best)... Done. 0.0s
263 [==============================] - 15s 5ms/step - loss: 10008.8184 - mae: 55.9352 - val_loss: 6547.1191 - val_mae: 44.3513
21/35
263 [==============================>.] - ETA: 0s - loss: 9947.7354 - mae: 55.7985/usr/local/lib/python3.10/dist-packages/keras/src/engine/1
  ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_010901-szt0xvyx/files/model-best)... Done. 0.0s
263 [==============================] - 15s 5ms/step - loss: 9947.2324 - mae: 55.7982 - val_loss: 6530.1143 - val_mae: 44.4379
22/35
263 [==============================] - 17s 5ms/step - loss: 10084.8086 - mae: 55.8998 - val_loss: 6750.9546 - val_mae: 44.6049
23/35
263 [==============================] - 17s 5ms/step - loss: 10036.3193 - mae: 55.8024 - val_loss: 6646.0308 - val_mae: 44.5939
24/35
263 [==============================] - 14s 4ms/step - loss: 9944.6133 - mae: 55.8223 - val_loss: 6531.7271 - val_mae: 44.3611
25/35
263 [==============================] - 20s 6ms/step - loss: 10105.8730 - mae: 55.8992 - val_loss: 6717.2109 - val_mae: 44.3668
26/35
263 [==============================] - 15s 4ms/step - loss: 10024.3652 - mae: 55.7226 - val_loss: 6536.4902 - val_mae: 44.0788
27/35
263 [==============================] - 16s 5ms/step - loss: 10049.1826 - mae: 55.7902 - val_loss: 6605.3560 - val_mae: 44.0919
28/35
263 [==============================>.] - ETA: 0s - loss: 9995.8613 - mae: 55.7859/usr/local/lib/python3.10/dist-packages/keras/src/engine/1
  ng_api.save_model(
```

```
 Adding directory to artifact (/content/wandb/run-20231122_010901-szt0xvyx/files/model-best)... Done. 0.0s
263 [==============================] - 15s 5ms/step - loss: 9998.2129 - mae: 55.7948 - val_loss: 6425.2446 - val_mae: 44.6172
9/35
263 [==============================] - 17s 5ms/step - loss: 9892.9658 - mae: 55.5745 - val_loss: 6673.8926 - val_mae: 44.3810
30/35
263 [==============================] - 16s 5ms/step - loss: 9908.1631 - mae: 55.5969 - val_loss: 6468.0210 - val_mae: 44.2665
31/35
263 [==============================] - 13s 4ms/step - loss: 9947.6816 - mae: 55.6091 - val_loss: 6814.7627 - val_mae: 44.9475
32/35
263 [==============================] - 16s 5ms/step - loss: 9843.1650 - mae: 55.4126 - val_loss: 6566.3125 - val_mae: 44.3588
33/35
263 [==============================] - 16s 5ms/step - loss: 9920.5605 - mae: 55.3897 - val_loss: 6603.7988 - val_mae: 44.1843
34/35
263 [==============================] - 14s 4ms/step - loss: 10048.9346 - mae: 55.6757 - val_loss: 6493.6523 - val_mae: 43.9989
35/35
263 [==============================] - 16s 5ms/step - loss: 9942.4307 - mae: 55.5543 - val_loss: 6741.9092 - val_mae: 44.2275
  35
size:  64
:  [64, 32, 1]
er:  adam
B of 2.488 MB uploaded (0.146 MB deduped)
```

nc reduced upload amount by 5.9%

istory:

Run summary:

best_epoch	27
best_val_loss	6425.24463
epoch	34
loss	9942.43066
mae	55.55433
val_loss	6741.90918
val_mae	44.22749

n **super-sweep-11** at: https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/szt0xvyx
5 W&B file(s), 1 media file(s), 70 artifact file(s) and 1 other file(s)
s at: ./wandb/run-20231122_010901-szt0xvyx/logs

```
 Agent Starting Run: idkkrph0 with config:
  batch_size: 64
  dropout: 0.1
  epochs: 35
  neurons: [64, 32, 1]
  optimizer: sgd
 WARNING Ignored wandb.init() arg project when running a sweep.
 WARNING Ignored wandb.init() arg entity when running a sweep.
 run with wandb version 0.16.0
a is saved locally in /content/wandb/run-20231122_011848-idkkrph0
```

run **electric-sweep-12** to Weights & Biases (docs)
age: https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
ject at https://wandb.ai/ort-martin/obligatorio-deep-learning
eep at https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
n at https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/idkkrph0

```
_size': 64, 'dropout': 0.1, 'epochs': 35, 'neurons': [64, 32, 1], 'optimizer': 'sgd'}
 "sequential"
_____
 (type)              Output Shape            Param #
=================================================================
 (Dense)             (None, 64)              1152

t (Dropout)          (None, 64)              0

1 (Dense)            (None, 32)              2080

t_1 (Dropout)        (None, 32)              0

2 (Dense)            (None, 1)               33

t_2 (Dropout)        (None, 1)               0

=================================================================
params: 3265 (12.75 KB)
le params: 3265 (12.75 KB)
inable params: 0 (0.00 Byte)
_____
/35
263 [..............................] - ETA: 31:13 - loss: 56241.6445 - mae: 156.4883WARNING:tensorflow:Callback method `on_train_batch_e
263 [=============================>.] - ETA: 0s - loss: 314625568.0000 - mae: 233.8575/usr/local/lib/python3.10/dist-packages/keras/src/e
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_011848-idkkrph0/files/model-best)... Done. 0.0s
263 [==============================] - 15s 5ms/step - loss: 314583360.0000 - mae: 233.8458 - val_loss: 42161.3945 - val_mae: 138.9924
```

```
?/35
?63 [==============================] - 14s 4ms/step - loss: 617678.7500 - mae: 139.6461 - val_loss: 42161.3945 - val_mae: 138.9924
3/35
?63 [==============================] - 13s 4ms/step - loss: 41325.1250 - mae: 137.9852 - val_loss: 42161.3945 - val_mae: 138.9924
4/35
?63 [==============================] - 15s 5ms/step - loss: 41325.0859 - mae: 137.9850 - val_loss: 42161.3945 - val_mae: 138.9924
5/35
?63 [==============================] - 12s 4ms/step - loss: 41325.1289 - mae: 137.9851 - val_loss: 42161.3945 - val_mae: 138.9924
6/35
?63 [==============================] - 16s 5ms/step - loss: 41325.1484 - mae: 137.9849 - val_loss: 42161.3945 - val_mae: 138.9924
7/35
?63 [==============================] - 18s 5ms/step - loss: 41325.1250 - mae: 137.9851 - val_loss: 42161.3945 - val_mae: 138.9924
8/35
?63 [==============================] - 13s 4ms/step - loss: 41325.1211 - mae: 137.9852 - val_loss: 42161.3945 - val_mae: 138.9924
9/35
?63 [==============================] - 13s 4ms/step - loss: 41325.1367 - mae: 137.9852 - val_loss: 42161.3945 - val_mae: 138.9924
10/35
?63 [==============================] - 16s 5ms/step - loss: 41325.1055 - mae: 137.9850 - val_loss: 42161.3945 - val_mae: 138.9924
11/35
?63 [==============================] - 13s 4ms/step - loss: 41325.0586 - mae: 137.9853 - val_loss: 42161.3945 - val_mae: 138.9924
12/35
?63 [==============================] - 14s 4ms/step - loss: 41325.1055 - mae: 137.9852 - val_loss: 42161.3945 - val_mae: 138.9924
13/35
?63 [==============================] - 15s 5ms/step - loss: 41325.1445 - mae: 137.9850 - val_loss: 42161.3945 - val_mae: 138.9924
14/35
?63 [==============================] - 12s 4ms/step - loss: 41325.1016 - mae: 137.9851 - val_loss: 42161.3945 - val_mae: 138.9924
15/35
?63 [==============================] - 14s 4ms/step - loss: 41325.1250 - mae: 137.9850 - val_loss: 42161.3945 - val_mae: 138.9924
16/35
?63 [==============================] - 13s 4ms/step - loss: 41325.0625 - mae: 137.9852 - val_loss: 42161.3945 - val_mae: 138.9924
17/35
?63 [==============================] - 12s 4ms/step - loss: 41325.0430 - mae: 137.9853 - val_loss: 42161.3945 - val_mae: 138.9924
18/35
?63 [==============================] - 15s 5ms/step - loss: 41325.1797 - mae: 137.9851 - val_loss: 42161.3945 - val_mae: 138.9924
19/35
?63 [==============================] - 12s 4ms/step - loss: 41325.1562 - mae: 137.9851 - val_loss: 42161.3945 - val_mae: 138.9924
20/35
?63 [==============================] - 13s 4ms/step - loss: 41325.0859 - mae: 137.9851 - val_loss: 42161.3945 - val_mae: 138.9924
21/35
?63 [==============================] - 14s 4ms/step - loss: 41325.0469 - mae: 137.9853 - val_loss: 42161.3945 - val_mae: 138.9924
22/35
?63 [==============================] - 13s 4ms/step - loss: 41325.1211 - mae: 137.9852 - val_loss: 42161.3945 - val_mae: 138.9924
23/35
?63 [==============================] - 14s 4ms/step - loss: 41325.1289 - mae: 137.9851 - val_loss: 42161.3945 - val_mae: 138.9924
24/35
?63 [==============================] - 15s 4ms/step - loss: 41325.0977 - mae: 137.9854 - val_loss: 42161.3945 - val_mae: 138.9924
25/35
?63 [==============================] - 11s 3ms/step - loss: 41325.1484 - mae: 137.9851 - val_loss: 42161.3945 - val_mae: 138.9924
26/35
?63 [==============================] - 15s 5ms/step - loss: 41325.0977 - mae: 137.9855 - val_loss: 42161.3945 - val_mae: 138.9924
27/35
?63 [==============================] - 14s 4ms/step - loss: 41325.1055 - mae: 137.9851 - val_loss: 42161.3945 - val_mae: 138.9924
28/35
?63 [==============================] - 17s 5ms/step - loss: 41325.0781 - mae: 137.9851 - val_loss: 42161.3945 - val_mae: 138.9924
29/35
?63 [==============================] - 12s 4ms/step - loss: 41325.0859 - mae: 137.9852 - val_loss: 42161.3945 - val_mae: 138.9924
30/35
?63 [==============================] - 13s 4ms/step - loss: 41325.0977 - mae: 137.9852 - val_loss: 42161.3945 - val_mae: 138.9924
31/35
?63 [==============================] - 15s 5ms/step - loss: 41325.1055 - mae: 137.9853 - val_loss: 42161.3945 - val_mae: 138.9924
32/35
?63 [==============================] - 12s 4ms/step - loss: 41325.0859 - mae: 137.9851 - val_loss: 42161.3945 - val_mae: 138.9924
33/35
?63 [==============================] - 16s 5ms/step - loss: 41325.1055 - mae: 137.9851 - val_loss: 42161.3945 - val_mae: 138.9924
34/35
?63 [==============================] - 15s 5ms/step - loss: 41325.0977 - mae: 137.9850 - val_loss: 42161.3945 - val_mae: 138.9924
35/35
?63 [==============================] - 13s 4ms/step - loss: 41325.1250 - mae: 137.9853 - val_loss: 42161.3945 - val_mae: 138.9924
: 35
ize:  64
: [64, 32, 1]
er:  sgd
B of 0.216 MB uploaded (0.011 MB deduped)
```

nc reduced upload amount by 5.2%

istory: **Run summary:**

best_epoch	0
best_val_loss	42161.39453
epoch	34

oss _____
nae _____

loss   41325.125
mae   137.98528
val_loss   42161.39453
val_mae   138.9924

electric-sweep-12 at: https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/idkkrph0
5 W&B file(s), 1 media file(s), 5 artifact file(s) and 1 other file(s)
s at: ./wandb/run-20231122_011848-idkkrph0/logs
Agent Starting Run: ctyznrxq with config:
  batch_size: 64
  dropout: 0.1
  epochs: 25
  neurons: [64, 1]
  optimizer: adam
WARNING Ignored wandb.init() arg project when running a sweep.
WARNING Ignored wandb.init() arg entity when running a sweep.
run with wandb version 0.16.0
a is saved locally in /content/wandb/run-20231122_012734-ctyznrxq
run **earnest-sweep-13** to Weights & Biases (docs)
age: https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
oject at https://wandb.ai/ort-martin/obligatorio-deep-learning
eep at https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
n at https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/ctyznrxq
n_size': 64, 'dropout': 0.1, 'epochs': 25, 'neurons': [64, 1], 'optimizer': 'adam'}
"sequential"

```
 (type)             Output Shape          Param #
================================================================
 (Dense)            (None, 64)            1152

 t (Dropout)        (None, 64)            0

 1 (Dense)          (None, 1)             65

 t_1 (Dropout)      (None, 1)             0

================================================================
params: 1217 (4.75 KB)
le params: 1217 (4.75 KB)
inable params: 0 (0.00 Byte)
_____
```

/25
263 [============================>.] - ETA: 0s - loss: 21053.2617 - mae: 85.6918/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_012734-ctyznrxq/files/model-best)... Done. 0.0s
263 [============================] - 17s 5ms/step - loss: 21040.6992 - mae: 85.6664 - val_loss: 14549.2676 - val_mae: 66.5783
/25
263 [============================>.] - ETA: 0s - loss: 16337.8096 - mae: 75.6217/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_012734-ctyznrxq/files/model-best)... Done. 0.0s
263 [============================] - 14s 4ms/step - loss: 16354.7471 - mae: 75.6434 - val_loss: 13547.8506 - val_mae: 64.5595
3/25
263 [============================>.] - ETA: 0s - loss: 15695.0977 - mae: 74.4580/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_012734-ctyznrxq/files/model-best)... Done. 0.0s
263 [============================] - 14s 4ms/step - loss: 15693.3984 - mae: 74.4577 - val_loss: 12876.0938 - val_mae: 63.7932
4/25
263 [============================>.] - ETA: 0s - loss: 15339.3486 - mae: 73.6514/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_012734-ctyznrxq/files/model-best)... Done. 0.0s
263 [============================] - 16s 5ms/step - loss: 15332.2734 - mae: 73.6413 - val_loss: 12434.2119 - val_mae: 62.6487
5/25
263 [============================>.] - ETA: 0s - loss: 14861.4795 - mae: 72.8201/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_012734-ctyznrxq/files/model-best)... Done. 0.0s
263 [============================] - 13s 4ms/step - loss: 14861.4795 - mae: 72.8201 - val_loss: 12088.8838 - val_mae: 61.3810
6/25
263 [============================>.] - ETA: 0s - loss: 14597.0732 - mae: 72.2075/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_012734-ctyznrxq/files/model-best)... Done. 0.0s
263 [============================] - 15s 5ms/step - loss: 14597.0732 - mae: 72.2075 - val_loss: 11746.5195 - val_mae: 60.6798
7/25
263 [============================>.] - ETA: 0s - loss: 14268.4209 - mae: 71.4381/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_012734-ctyznrxq/files/model-best)... Done. 0.0s
263 [============================] - 17s 5ms/step - loss: 14269.0537 - mae: 71.4472 - val_loss: 11450.9072 - val_mae: 60.0730
8/25
263 [============================>.] - ETA: 0s - loss: 14028.0420 - mae: 71.0079/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_012734-ctyznrxq/files/model-best)... Done. 0.0s
263 [============================] - 14s 4ms/step - loss: 14018.9131 - mae: 70.9935 - val_loss: 11127.3936 - val_mae: 59.7037
/25
263 [============================>.] - ETA: 0s - loss: 13848.2207 - mae: 70.4347/usr/local/lib/python3.10/dist-packages/keras/src/engine,

```
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_012734-ctyznrxq/files/model-best)... Done. 0.0s
.63 [==============================] - 17s 5ms/step - loss: 13849.7510 - mae: 70.4251 - val_loss: 10958.9004 - val_mae: 58.6697
10/25
.63 [==========================>.] - ETA: 0s - loss: 13494.2041 - mae: 69.6309/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_012734-ctyznrxq/files/model-best)... Done. 0.0s
.63 [==============================] - 18s 6ms/step - loss: 13497.2158 - mae: 69.6349 - val_loss: 10597.4189 - val_mae: 58.1337
11/25
.63 [==========================>.] - ETA: 0s - loss: 13335.5830 - mae: 69.1427/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_012734-ctyznrxq/files/model-best)... Done. 0.0s
.63 [==============================] - 17s 5ms/step - loss: 13340.8057 - mae: 69.1548 - val_loss: 10414.6113 - val_mae: 57.6673
12/25
.63 [==========================>.] - ETA: 0s - loss: 13177.4150 - mae: 68.7293/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_012734-ctyznrxq/files/model-best)... Done. 0.0s
.63 [==============================] - 15s 5ms/step - loss: 13177.8916 - mae: 68.7292 - val_loss: 10175.1631 - val_mae: 57.2027
13/25
.63 [==========================>.] - ETA: 0s - loss: 12966.8457 - mae: 68.0150/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_012734-ctyznrxq/files/model-best)... Done. 0.0s
.63 [==============================] - 18s 5ms/step - loss: 12963.3086 - mae: 68.0089 - val_loss: 9868.3330 - val_mae: 56.8339
14/25
.63 [==========================>.] - ETA: 0s - loss: 12779.0508 - mae: 67.4908/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_012734-ctyznrxq/files/model-best)... Done. 0.0s
.63 [==============================] - 15s 5ms/step - loss: 12782.7109 - mae: 67.4915 - val_loss: 9794.8154 - val_mae: 56.0888
15/25
.63 [==========================>.] - ETA: 0s - loss: 12700.0303 - mae: 67.0456/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_012734-ctyznrxq/files/model-best)... Done. 0.0s
.63 [==============================] - 17s 5ms/step - loss: 12700.0303 - mae: 67.0456 - val_loss: 9752.4746 - val_mae: 55.6127
16/25
.63 [==========================>.] - ETA: 0s - loss: 12499.8857 - mae: 66.4332/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_012734-ctyznrxq/files/model-best)... Done. 0.0s
.63 [==============================] - 16s 5ms/step - loss: 12500.4727 - mae: 66.4315 - val_loss: 9463.2314 - val_mae: 54.8890
17/25
.63 [==========================>.] - ETA: 0s - loss: 12121.8301 - mae: 65.7012/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_012734-ctyznrxq/files/model-best)... Done. 0.0s
.63 [==============================] - 15s 5ms/step - loss: 12122.4844 - mae: 65.6985 - val_loss: 9249.0859 - val_mae: 54.5321
18/25
.63 [==========================>.] - ETA: 0s - loss: 12152.3525 - mae: 65.3103/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_012734-ctyznrxq/files/model-best)... Done. 0.0s
.63 [==============================] - 15s 4ms/step - loss: 12152.9980 - mae: 65.3119 - val_loss: 9037.0830 - val_mae: 53.9760
19/25
.63 [==============================] - 16s 5ms/step - loss: 12014.6016 - mae: 64.8243 - val_loss: 9047.6562 - val_mae: 53.4986
20/25
.63 [==========================>.] - ETA: 0s - loss: 11877.4346 - mae: 64.4545/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_012734-ctyznrxq/files/model-best)... Done. 0.0s
.63 [==============================] - 14s 4ms/step - loss: 11874.4365 - mae: 64.4578 - val_loss: 8752.1250 - val_mae: 52.9184
21/25
.63 [==========================>.] - ETA: 0s - loss: 11796.7275 - mae: 63.8372/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_012734-ctyznrxq/files/model-best)... Done. 0.0s
.63 [==============================] - 14s 4ms/step - loss: 11798.1953 - mae: 63.8418 - val_loss: 8510.6416 - val_mae: 52.4062
22/25
.63 [==========================>.] - ETA: 0s - loss: 11500.4688 - mae: 63.2499/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_012734-ctyznrxq/files/model-best)... Done. 0.0s
.63 [==============================] - 16s 5ms/step - loss: 11504.3369 - mae: 63.2571 - val_loss: 8422.0811 - val_mae: 51.8309
23/25
.63 [==========================>.] - ETA: 0s - loss: 11389.1514 - mae: 62.7456/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_012734-ctyznrxq/files/model-best)... Done. 0.0s
.63 [==============================] - 15s 4ms/step - loss: 11389.1514 - mae: 62.7456 - val_loss: 8267.1875 - val_mae: 51.2970
24/25
.63 [==========================>.] - ETA: 0s - loss: 11270.3535 - mae: 62.3310/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_012734-ctyznrxq/files/model-best)... Done. 0.0s
.63 [==============================] - 13s 4ms/step - loss: 11265.6562 - mae: 62.3228 - val_loss: 8166.3066 - val_mae: 50.8496
25/25
.63 [==========================>.] - ETA: 0s - loss: 11119.7139 - mae: 61.9551/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_012734-ctyznrxq/files/model-best)... Done. 0.0s
.63 [==============================] - 16s 5ms/step - loss: 11114.5918 - mae: 61.9439 - val_loss: 8067.4746 - val_mae: 50.5766
: 25
ize: 64
: [64, 1]
er: adam
```

B of 2.772 MB uploaded (0.191 MB deduped)

nc reduced upload amount by 6.9%

history: **Run summary:**

best_epoch	24
best_val_loss	8067.47461
epoch	24
loss	11114.5918
mae	61.94389
val_loss	8067.47461
val_mae	50.57656

n **earnest-sweep-13** at: https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/ctyznrxq
5 W&B file(s), 1 media file(s), 120 artifact file(s) and 1 other file(s)
s at: ./wandb/run-20231122_012734-ctyznrxq/logs
Agent Starting Run: uu04lxyx with config:
  batch_size: 64
  dropout: 0.1
  epochs: 25
  neurons: [64, 1]
  optimizer: sgd
  WARNING Ignored wandb.init() arg project when running a sweep.
  WARNING Ignored wandb.init() arg entity when running a sweep.
  run with wandb version 0.16.0
a is saved locally in /content/wandb/run-20231122_013523-uu04lxyx
run **lunar-sweep-14** to Weights & Biases (docs)
oage: https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
oject at https://wandb.ai/ort-martin/obligatorio-deep-learning
eep at https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
n at https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/uu04lxyx
n_size': 64, 'dropout': 0.1, 'epochs': 25, 'neurons': [64, 1], 'optimizer': 'sgd'}
"sequential"

```
 (type)               Output Shape            Param #
=========================================================
 (Dense)              (None, 64)              1152

 t (Dropout)          (None, 64)              0

 _1 (Dense)           (None, 1)               65

 t_1 (Dropout)        (None, 1)               0

=========================================================
params: 1217 (4.75 KB)
le params: 1217 (4.75 KB)
inable params: 0 (0.00 Byte)
```
_____

```
l/25
263 [============================>.] - ETA: 0s - loss: 28235.2051 - mae: 112.7644/usr/local/lib/python3.10/dist-packages/keras/src/engine
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_013523-uu04lxyx/files/model-best)... Done. 0.0s
263 [=============================] - 14s 4ms/step - loss: 28209.0820 - mae: 112.7227 - val_loss: 21178.7402 - val_mae: 96.1491
!/25
263 [============================>.] - ETA: 0s - loss: 22316.6465 - mae: 102.4042/usr/local/lib/python3.10/dist-packages/keras/src/engine
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_013523-uu04lxyx/files/model-best)... Done. 0.0s
263 [=============================] - 13s 4ms/step - loss: 22333.1836 - mae: 102.4211 - val_loss: 20188.4746 - val_mae: 93.4134
3/25
263 [============================>.] - ETA: 0s - loss: 22184.1484 - mae: 102.0187/usr/local/lib/python3.10/dist-packages/keras/src/engine
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_013523-uu04lxyx/files/model-best)... Done. 0.0s
263 [=============================] - 15s 5ms/step - loss: 22199.4805 - mae: 102.0386 - val_loss: 19863.9688 - val_mae: 94.3446
l/25
263 [============================>.] - ETA: 0s - loss: 21967.6816 - mae: 100.3206/usr/local/lib/python3.10/dist-packages/keras/src/engine
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_013523-uu04lxyx/files/model-best)... Done. 0.0s
263 [=============================] - 14s 4ms/step - loss: 21963.4375 - mae: 100.3152 - val_loss: 19124.8203 - val_mae: 86.9497
5/25
263 [=============================] - 12s 4ms/step - loss: 21331.7207 - mae: 98.7756 - val_loss: 19856.4316 - val_mae: 91.8196
5/25
263 [=============================] - 14s 4ms/step - loss: 21833.3711 - mae: 98.6888 - val_loss: 19874.5508 - val_mae: 88.1337
7/25
263 [=============================] - 11s 3ms/step - loss: 22198.7812 - mae: 99.5514 - val_loss: 19943.1113 - val_mae: 90.3293
3/25
263 [=============================] - 13s 4ms/step - loss: 22150.8340 - mae: 100.5755 - val_loss: 20934.7734 - val_mae: 93.7605
)/25
263 [=============================] - 11s 3ms/step - loss: 22783.2871 - mae: 100.9490 - val_loss: 20772.9258 - val_mae: 90.5927
l0/25
```

```
263 [==============================] - 12s 4ms/step - loss: 22179.5938 - mae: 99.1041 - val_loss: 20252.4766 - val_mae: 94.2302
1/25
263 [==============================] - 13s 4ms/step - loss: 21983.9824 - mae: 99.5621 - val_loss: 19684.6055 - val_mae: 90.5264
2/25
263 [==============================] - 11s 3ms/step - loss: 22235.7578 - mae: 100.2438 - val_loss: 20234.4043 - val_mae: 88.9120
3/25
263 [==============================] - 13s 4ms/step - loss: 22133.0840 - mae: 99.0018 - val_loss: 20112.3945 - val_mae: 91.7309
4/25
263 [==============================] - 10s 3ms/step - loss: 22072.2227 - mae: 99.8472 - val_loss: 19483.3691 - val_mae: 86.0499
5/25
263 [==============================] - 14s 4ms/step - loss: 22162.6992 - mae: 100.0855 - val_loss: 20804.7148 - val_mae: 88.6775
6/25
263 [==============================] - 12s 4ms/step - loss: 22093.5859 - mae: 100.1610 - val_loss: 20810.0566 - val_mae: 93.0782
7/25
263 [==============================] - 12s 4ms/step - loss: 22047.7031 - mae: 99.9716 - val_loss: 19493.5371 - val_mae: 88.7950
8/25
263 [==============================] - 11s 3ms/step - loss: 21955.8906 - mae: 99.3641 - val_loss: 21159.2695 - val_mae: 97.9016
9/25
263 [==============================] - 12s 4ms/step - loss: 22073.5723 - mae: 98.2976 - val_loss: 20493.1875 - val_mae: 88.9907
20/25
263 [==============================] - 12s 4ms/step - loss: 22077.0410 - mae: 98.2026 - val_loss: 20344.6602 - val_mae: 91.1534
21/25
263 [==============================] - 14s 4ms/step - loss: 22073.7969 - mae: 98.1111 - val_loss: 20485.4082 - val_mae: 90.6770
22/25
263 [==============================] - 15s 5ms/step - loss: 21859.6270 - mae: 98.7322 - val_loss: 19669.5840 - val_mae: 89.0796
23/25
263 [==============================] - 11s 3ms/step - loss: 21837.4238 - mae: 99.6235 - val_loss: 20954.7148 - val_mae: 92.9528
24/25
263 [==============================] - 13s 4ms/step - loss: 22290.0508 - mae: 99.8810 - val_loss: 19625.7148 - val_mae: 85.5313
25/25
263 [==============================] - 12s 4ms/step - loss: 21924.1719 - mae: 99.2988 - val_loss: 19582.0000 - val_mae: 85.4559
  25
size:  64
:  [64, 1]
er:  sgd
```

B of 0.448 MB uploaded (0.025 MB deduped)

nc reduced upload amount by 5.5%

history:

Run summary:

best_epoch	3
best_val_loss	19124.82031
epoch	24
loss	21924.17188
mae	99.29883
val_loss	19582.0
val_mae	85.45595

lunar-sweep-14 at: https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/uu04lxyx
5 W&B file(s), 1 media file(s), 20 artifact file(s) and 1 other file(s)
s at: ./wandb/run-20231122_013523-uu04lxyx/logs
Agent Starting Run: hqqvpz81 with config:
```
  batch_size: 64
  dropout: 0.1
  epochs: 25
  neurons: [64, 32, 1]
  optimizer: adam
```
WARNING Ignored wandb.init() arg project when running a sweep.
WARNING Ignored wandb.init() arg entity when running a sweep.
run with wandb version 0.16.0
a is saved locally in /content/wandb/run-20231122_014107-hqqvpz81
run **lucky-sweep-15** to Weights & Biases (docs)
age: https://wandb.ai/ort-martin/obligatorio-deep-learning
ject at https://wandb.ai/ort-martin/obligatorio-deep-learning
eep at https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
at https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/hqqvpz81
n_size': 64, 'dropout': 0.1, 'epochs': 25, 'neurons': [64, 32, 1], 'optimizer': 'adam'}
"sequential"

```
 (type)              Output Shape           Param #
=======================================================
 (Dense)             (None, 64)             1152

t (Dropout)          (None, 64)             0

_1 (Dense)           (None, 32)             2080

t_1 (Dropout)        (None, 32)             0
```

```
g_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_014107-hqqvpz81/files/model-best)... Done. 0.0s
263 [==============================] - 17s 5ms/step - loss: 9913.6748 - mae: 55.6822 - val_loss: 6510.6064 - val_mae: 44.3544
2/25
263 [==============================] - 15s 5ms/step - loss: 10068.7197 - mae: 55.7769 - val_loss: 6604.7676 - val_mae: 44.4084
3/25
263 [==============================] - 13s 4ms/step - loss: 9990.9893 - mae: 55.6661 - val_loss: 6648.8618 - val_mae: 44.5634
4/25
263 [===========================>.] - ETA: 0s - loss: 9910.3018 - mae: 55.6369/usr/local/lib/python3.10/dist-packages/keras/src/engine/1
g_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_014107-hqqvpz81/files/model-best)... Done. 0.0s
263 [==============================] - 17s 5ms/step - loss: 9908.5547 - mae: 55.6485 - val_loss: 6508.1465 - val_mae: 44.3138
5/25
263 [==============================] - 16s 5ms/step - loss: 10078.7402 - mae: 55.8371 - val_loss: 6725.2891 - val_mae: 44.2630
  25
size:  64
:  [64, 32, 1]
er:  adam
```

B of 2.315 MB uploaded (0.134 MB deduped)

nc reduced upload amount by 5.8%

history:

Run summary:

best_epoch	23
best_val_loss	6508.14648
epoch	24
loss	10078.74023
mae	55.83715
val_loss	6725.28906
val_mae	44.26302

n **lucky-sweep-15** at: https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/hqqvpz81
5 W&B file(s), 1 media file(s), 65 artifact file(s) and 1 other file(s)
s at: ./wandb/run-20231122_014107-hqqvpz81/logs
Agent Starting Run: n4igaino with config:
  batch_size: 64
  dropout: 0.1
  epochs: 25
  neurons: [64, 32, 1]
  optimizer: sgd
 WARNING Ignored wandb.init() arg project when running a sweep.
 WARNING Ignored wandb.init() arg entity when running a sweep.
 run with wandb version 0.16.0
a is saved locally in /content/wandb/run-20231122_014851-n4igaino
 run **cosmic-sweep-16** to Weights & Biases (docs)
page: https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
oject at https://wandb.ai/ort-martin/obligatorio-deep-learning
eep at https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
n at https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/n4igaino
_size': 64, 'dropout': 0.1, 'epochs': 25, 'neurons': [64, 32, 1], 'optimizer': 'sgd'}
"sequential"

```
_____
 (type)              Output Shape              Param #
=========================================================
 (Dense)             (None, 64)                1152

 t (Dropout)         (None, 64)                0

 _1 (Dense)          (None, 32)                2080

 t_1 (Dropout)       (None, 32)                0

 _2 (Dense)          (None, 1)                 33

 t_2 (Dropout)       (None, 1)                 0

=========================================================
params: 3265 (12.75 KB)
le params: 3265 (12.75 KB)
inable params: 0 (0.00 Byte)
_____
1/25
263 [===========================>.] - ETA: 0s - loss: 18253044.0000 - mae: 188.9335/usr/local/lib/python3.10/dist-packages/keras/src/eng
g_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_014851-n4igaino/files/model-best)... Done. 0.0s
263 [==============================] - 17s 5ms/step - loss: 18222682.0000 - mae: 188.8494 - val_loss: 42161.3945 - val_mae: 138.9924
2/25
263 [==============================] - 14s 4ms/step - loss: 41325.1289 - mae: 137.9851 - val_loss: 42161.3945 - val_mae: 138.9924
3/25
```

```
263 [==============================] - 18s 6ms/step - loss: 41325.1250 - mae: 137.9852 - val_loss: 42161.3945 - val_mae: 138.9924
/25
263 [==============================] - 16s 5ms/step - loss: 41325.0859 - mae: 137.9850 - val_loss: 42161.3945 - val_mae: 138.9924
5/25
263 [==============================] - 13s 4ms/step - loss: 41325.1289 - mae: 137.9851 - val_loss: 42161.3945 - val_mae: 138.9924
5/25
263 [==============================] - 13s 4ms/step - loss: 41325.1484 - mae: 137.9849 - val_loss: 42161.3945 - val_mae: 138.9924
7/25
263 [==============================] - 15s 5ms/step - loss: 41325.1250 - mae: 137.9851 - val_loss: 42161.3945 - val_mae: 138.9924
8/25
263 [==============================] - 13s 4ms/step - loss: 41325.1211 - mae: 137.9852 - val_loss: 42161.3945 - val_mae: 138.9924
9/25
263 [==============================] - 14s 4ms/step - loss: 41325.1367 - mae: 137.9852 - val_loss: 42161.3945 - val_mae: 138.9924
10/25
263 [==============================] - 15s 4ms/step - loss: 41325.1055 - mae: 137.9850 - val_loss: 42161.3945 - val_mae: 138.9924
11/25
263 [==============================] - 11s 3ms/step - loss: 41325.0586 - mae: 137.9853 - val_loss: 42161.3945 - val_mae: 138.9924
12/25
263 [==============================] - 15s 5ms/step - loss: 41325.1055 - mae: 137.9852 - val_loss: 42161.3945 - val_mae: 138.9924
13/25
263 [==============================] - 12s 4ms/step - loss: 41325.1445 - mae: 137.9850 - val_loss: 42161.3945 - val_mae: 138.9924
14/25
263 [==============================] - 13s 4ms/step - loss: 41325.1016 - mae: 137.9851 - val_loss: 42161.3945 - val_mae: 138.9924
15/25
263 [==============================] - 14s 4ms/step - loss: 41325.1250 - mae: 137.9850 - val_loss: 42161.3945 - val_mae: 138.9924
16/25
263 [==============================] - 12s 4ms/step - loss: 41325.0625 - mae: 137.9852 - val_loss: 42161.3945 - val_mae: 138.9924
17/25
263 [==============================] - 16s 5ms/step - loss: 41325.0430 - mae: 137.9853 - val_loss: 42161.3945 - val_mae: 138.9924
18/25
263 [==============================] - 13s 4ms/step - loss: 41325.1797 - mae: 137.9851 - val_loss: 42161.3945 - val_mae: 138.9924
19/25
263 [==============================] - 13s 4ms/step - loss: 41325.1562 - mae: 137.9851 - val_loss: 42161.3945 - val_mae: 138.9924
20/25
263 [==============================] - 15s 5ms/step - loss: 41325.0859 - mae: 137.9851 - val_loss: 42161.3945 - val_mae: 138.9924
21/25
263 [==============================] - 12s 4ms/step - loss: 41325.0469 - mae: 137.9853 - val_loss: 42161.3945 - val_mae: 138.9924
22/25
263 [==============================] - 13s 4ms/step - loss: 41325.1211 - mae: 137.9852 - val_loss: 42161.3945 - val_mae: 138.9924
23/25
263 [==============================] - 14s 4ms/step - loss: 41325.1289 - mae: 137.9851 - val_loss: 42161.3945 - val_mae: 138.9924
24/25
263 [==============================] - 13s 4ms/step - loss: 41325.0977 - mae: 137.9854 - val_loss: 42161.3945 - val_mae: 138.9924
25/25
263 [==============================] - 16s 5ms/step - loss: 41325.1484 - mae: 137.9851 - val_loss: 42161.3945 - val_mae: 138.9924
  25
size:  64
:  [64, 32, 1]
er:  sgd
```

B of 0.214 MB uploaded

istory:

Run summary:

best_epoch	0
best_val_loss	42161.39453
epoch	24
loss	41325.14844
mae	137.98508
val_loss	42161.39453
val_mae	138.9924

```
cosmic-sweep-16 at: https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/n4igaino
5 W&B file(s), 1 media file(s), 5 artifact file(s) and 1 other file(s)
s at: ./wandb/run-20231122_014851-n4igaino/logs
Agent Starting Run: 4nribscs with config:
  batch_size: 32
  dropout: 0.1
  epochs: 35
  neurons: [64, 1]
  optimizer: adam
WARNING Ignored wandb.init() arg project when running a sweep.
WARNING Ignored wandb.init() arg entity when running a sweep.
 run with wandb version 0.16.0
a is saved locally in /content/wandb/run-20231122_015536-4nribscs
 run winter-sweep-17 to Weights & Biases (docs)
 page: https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
 ject at https://wandb.ai/ort-martin/obligatorio-deep-learning
 eep at https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
 n at https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/4nribscs
```

```
n_size': 32, 'dropout': 0.1, 'epochs': 35, 'neurons': [64, 1], 'optimizer': 'adam'}
 "sequential"
_____
 (type)              Output Shape              Param #
=================================================================
 (Dense)             (None, 64)                1152

 t (Dropout)         (None, 64)                0

 _1 (Dense)          (None, 1)                 65

 t_1 (Dropout)       (None, 1)                 0

=================================================================
 params: 1217 (4.75 KB)
 le params: 1217 (4.75 KB)
 inable params: 0 (0.00 Byte)
_____
 1/35
 525 [..............................] - ETA: 1:13:27 - loss: 46179.7305 - mae: 145.0323WARNING:tensorflow:Callback method `on_train_batch
 525 [=============================>.] - ETA: 0s - loss: 19102.9707 - mae: 81.5963/usr/local/lib/python3.10/dist-packages/keras/src/engine,
 ng_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_015536-4nribscs/files/model-best)... Done. 0.0s
 525 [==============================] - 29s 4ms/step - loss: 19099.9629 - mae: 81.5918 - val_loss: 13994.3760 - val_mae: 65.3002
 2/35
 525 [=============================>.] - ETA: 0s - loss: 15874.5801 - mae: 74.6460/usr/local/lib/python3.10/dist-packages/keras/src/engine,
 ng_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_015536-4nribscs/files/model-best)... Done. 0.0s
 525 [==============================] - 31s 5ms/step - loss: 15877.8057 - mae: 74.6521 - val_loss: 13024.0293 - val_mae: 63.2687
 3/35
 525 [=============================>.] - ETA: 0s - loss: 15216.8682 - mae: 73.3610/usr/local/lib/python3.10/dist-packages/keras/src/engine,
 ng_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_015536-4nribscs/files/model-best)... Done. 0.0s
 525 [==============================] - 31s 5ms/step - loss: 15214.0527 - mae: 73.3587 - val_loss: 12263.7588 - val_mae: 62.3602
 4/35
 525 [=============================>.] - ETA: 0s - loss: 14726.0625 - mae: 72.3911/usr/local/lib/python3.10/dist-packages/keras/src/engine,
 ng_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_015536-4nribscs/files/model-best)... Done. 0.0s
 525 [==============================] - 28s 4ms/step - loss: 14725.4883 - mae: 72.3903 - val_loss: 11686.0625 - val_mae: 61.0433
 5/35
 525 [=============================>.] - ETA: 0s - loss: 14100.5850 - mae: 71.2924/usr/local/lib/python3.10/dist-packages/keras/src/engine,
 ng_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_015536-4nribscs/files/model-best)... Done. 0.0s
 525 [==============================] - 30s 5ms/step - loss: 14100.0498 - mae: 71.2885 - val_loss: 11238.1152 - val_mae: 59.5858
 6/35
 525 [=============================>.] - ETA: 0s - loss: 13751.9668 - mae: 70.4148/usr/local/lib/python3.10/dist-packages/keras/src/engine,
 ng_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_015536-4nribscs/files/model-best)... Done. 0.0s
 525 [==============================] - 30s 5ms/step - loss: 13750.7520 - mae: 70.4128 - val_loss: 10825.6475 - val_mae: 58.4735
 7/35
 525 [=============================>.] - ETA: 0s - loss: 13380.1504 - mae: 69.3728/usr/local/lib/python3.10/dist-packages/keras/src/engine,
 ng_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_015536-4nribscs/files/model-best)... Done. 0.0s
 525 [==============================] - 27s 4ms/step - loss: 13381.9102 - mae: 69.3790 - val_loss: 10467.6953 - val_mae: 57.6074
 8/35
 525 [=============================>.] - ETA: 0s - loss: 13084.7578 - mae: 68.4595/usr/local/lib/python3.10/dist-packages/keras/src/engine,
 ng_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_015536-4nribscs/files/model-best)... Done. 0.0s
 525 [==============================] - 28s 4ms/step - loss: 13083.1016 - mae: 68.4592 - val_loss: 10084.6260 - val_mae: 56.8755
 9/35
 525 [=============================>.] - ETA: 0s - loss: 12918.9043 - mae: 67.7531/usr/local/lib/python3.10/dist-packages/keras/src/engine,
 ng_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_015536-4nribscs/files/model-best)... Done. 0.0s
 525 [==============================] - 30s 5ms/step - loss: 12919.5029 - mae: 67.7490 - val_loss: 9928.3330 - val_mae: 55.5708
 10/35
 525 [=============================>.] - ETA: 0s - loss: 12575.1396 - mae: 66.7172/usr/local/lib/python3.10/dist-packages/keras/src/engine,
 ng_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_015536-4nribscs/files/model-best)... Done. 0.0s
 525 [==============================] - 28s 4ms/step - loss: 12575.8066 - mae: 66.7200 - val_loss: 9472.9922 - val_mae: 54.8874
 11/35
 525 [=============================>.] - ETA: 0s - loss: 12404.3896 - mae: 66.0820/usr/local/lib/python3.10/dist-packages/keras/src/engine,
 ng_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_015536-4nribscs/files/model-best)... Done. 0.0s
 525 [==============================] - 29s 4ms/step - loss: 12403.8340 - mae: 66.0810 - val_loss: 9262.9531 - val_mae: 54.2350
 12/35
 525 [=============================>.] - ETA: 0s - loss: 12058.3604 - mae: 65.1479/usr/local/lib/python3.10/dist-packages/keras/src/engine,
 ng_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_015536-4nribscs/files/model-best)... Done. 0.0s
 525 [==============================] - 28s 4ms/step - loss: 12058.3604 - mae: 65.1479 - val_loss: 8939.3379 - val_mae: 53.3750
 13/35
 525 [=============================>.] - ETA: 0s - loss: 11851.1289 - mae: 64.4674/usr/local/lib/python3.10/dist-packages/keras/src/engine,
 ng_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_015536-4nribscs/files/model-best)... Done. 0.0s
 525 [==============================] - 29s 4ms/step - loss: 11848.7773 - mae: 64.4617 - val_loss: 8670.4814 - val_mae: 52.7755
 14/35
```
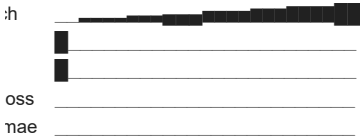
```
525 [==========================>.] - ETA: 0s - loss: 11579.9834 - mae: 63.6244/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_015536-4nribscs/files/model-best)... Done. 0.0s
525 [==============================] - 32s 5ms/step - loss: 11580.1143 - mae: 63.6227 - val_loss: 8481.1982 - val_mae: 52.0137
15/35
525 [==============================] - 30s 5ms/step - loss: 11553.6875 - mae: 63.3173 - val_loss: 8542.4609 - val_mae: 51.4053
16/35
525 [==========================>.] - ETA: 0s - loss: 11372.4150 - mae: 62.5579/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_015536-4nribscs/files/model-best)... Done. 0.0s
525 [==============================] - 27s 4ms/step - loss: 11370.9424 - mae: 62.5552 - val_loss: 8254.0166 - val_mae: 50.7612
17/35
525 [==========================>.] - ETA: 0s - loss: 11096.3828 - mae: 62.0965/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_015536-4nribscs/files/model-best)... Done. 0.0s
525 [==============================] - 28s 4ms/step - loss: 11095.1670 - mae: 62.0962 - val_loss: 8067.8857 - val_mae: 50.5607
18/35
525 [==========================>.] - ETA: 0s - loss: 11079.0137 - mae: 61.6807/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_015536-4nribscs/files/model-best)... Done. 0.0s
525 [==============================] - 29s 4ms/step - loss: 11077.6270 - mae: 61.6783 - val_loss: 7882.9282 - val_mae: 50.0011
19/35
525 [==============================] - 26s 4ms/step - loss: 11084.9414 - mae: 61.2429 - val_loss: 7899.7393 - val_mae: 49.5694
20/35
525 [==========================>.] - ETA: 0s - loss: 10893.8438 - mae: 60.8848/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_015536-4nribscs/files/model-best)... Done. 0.0s
525 [==============================] - 30s 5ms/step - loss: 10892.5068 - mae: 60.8862 - val_loss: 7695.2065 - val_mae: 49.2930
21/35
525 [==========================>.] - ETA: 0s - loss: 10998.5078 - mae: 60.8057/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_015536-4nribscs/files/model-best)... Done. 0.0s
525 [==============================] - 25s 4ms/step - loss: 10999.9287 - mae: 60.8101 - val_loss: 7528.1343 - val_mae: 48.8113
22/35
525 [==============================] - 25s 4ms/step - loss: 10733.2217 - mae: 60.1960 - val_loss: 7537.8374 - val_mae: 48.6138
23/35
525 [==========================>.] - ETA: 0s - loss: 10611.0020 - mae: 59.7791/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_015536-4nribscs/files/model-best)... Done. 0.0s
525 [==============================] - 25s 4ms/step - loss: 10611.0537 - mae: 59.7812 - val_loss: 7406.4980 - val_mae: 48.2816
24/35
525 [==========================>.] - ETA: 0s - loss: 10765.1670 - mae: 59.7622/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_015536-4nribscs/files/model-best)... Done. 0.0s
525 [==============================] - 26s 4ms/step - loss: 10763.5537 - mae: 59.7565 - val_loss: 7317.2007 - val_mae: 47.9984
25/35
525 [==============================] - 25s 4ms/step - loss: 10471.1055 - mae: 59.2906 - val_loss: 7363.7866 - val_mae: 47.8651
26/35
525 [==========================>.] - ETA: 0s - loss: 10458.7920 - mae: 58.9157/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_015536-4nribscs/files/model-best)... Done. 0.0s
525 [==============================] - 28s 4ms/step - loss: 10461.2178 - mae: 58.9186 - val_loss: 7183.7739 - val_mae: 47.5677
27/35
525 [==============================] - 28s 4ms/step - loss: 10468.0195 - mae: 58.9241 - val_loss: 7219.5112 - val_mae: 47.3458
28/35
525 [==========================>.] - ETA: 0s - loss: 10403.4551 - mae: 58.5937/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_015536-4nribscs/files/model-best)... Done. 0.0s
525 [==============================] - 26s 4ms/step - loss: 10398.8730 - mae: 58.5846 - val_loss: 7124.9556 - val_mae: 47.2479
29/35
525 [==============================] - 25s 4ms/step - loss: 10437.5293 - mae: 58.4851 - val_loss: 7141.4189 - val_mae: 46.9246
30/35
525 [==========================>.] - ETA: 0s - loss: 10277.2637 - mae: 58.1694/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_015536-4nribscs/files/model-best)... Done. 0.0s
525 [==============================] - 26s 4ms/step - loss: 10278.0518 - mae: 58.1737 - val_loss: 7020.2451 - val_mae: 46.7967
31/35
525 [==============================] - 29s 4ms/step - loss: 10304.8721 - mae: 58.0641 - val_loss: 7075.7310 - val_mae: 46.7734
32/35
525 [==============================] - 27s 4ms/step - loss: 10324.8936 - mae: 58.0170 - val_loss: 7090.9087 - val_mae: 46.6517
33/35
525 [==============================] - 28s 4ms/step - loss: 10372.6533 - mae: 57.8189 - val_loss: 7066.2993 - val_mae: 46.4720
34/35
525 [==============================] - 25s 4ms/step - loss: 10194.4883 - mae: 57.5805 - val_loss: 7125.7158 - val_mae: 46.3830
35/35
525 [==============================] - 25s 4ms/step - loss: 10141.9678 - mae: 57.4605 - val_loss: 7095.5747 - val_mae: 46.4601
  35
size: 32
: [64, 1]
er: adam
```

B of 2.773 MB uploaded (0.191 MB deduped)

nc reduced upload amount by 6.9%

history:

Run summary:

best_epoch	29
best_val_loss	7020.24512
epoch	34
loss	10141.96777
mae	57.46046
val_loss	7095.57471
val_mae	46.46006

n **winter-sweep-17** at: https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/4nribscs
5 W&B file(s), 1 media file(s), 120 artifact file(s) and 1 other file(s)
s at: ./wandb/run-20231122_015536-4nribscs/logs
Agent Starting Run: xc3mhwdk with config:
  batch_size: 32
  dropout: 0.1
  epochs: 35
  neurons: [64, 1]
  optimizer: sgd
WARNING Ignored wandb.init() arg project when running a sweep.
WARNING Ignored wandb.init() arg entity when running a sweep.
run with wandb version 0.16.0
a is saved locally in /content/wandb/run-20231122_021219-xc3mhwdk
run **polar-sweep-18** to Weights & Biases (docs)
age: https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
ject at https://wandb.ai/ort-martin/obligatorio-deep-learning
eep at https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
n at https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/xc3mhwdk
n_size': 32, 'dropout': 0.1, 'epochs': 35, 'neurons': [64, 1], 'optimizer': 'sgd'}
"sequential"

```
 (type)               Output Shape           Param #
============================================================
 (Dense)              (None, 64)             1152

 t (Dropout)          (None, 64)             0

_1 (Dense)            (None, 1)              65

 t_1 (Dropout)        (None, 1)              0

============================================================
 params: 1217 (4.75 KB)
 le params: 1217 (4.75 KB)
 ainable params: 0 (0.00 Byte)
_____
```

```
/35
25 [=============================>.] - ETA: 0s - loss: 34591.2773 - mae: 129.9576/usr/local/lib/python3.10/dist-packages/keras/src/engine
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_021219-xc3mhwdk/files/model-best)... Done. 0.0s
25 [==============================] - 27s 4ms/step - loss: 34591.6211 - mae: 129.9573 - val_loss: 31944.6289 - val_mae: 119.9052
/35
25 [=============================>.] - ETA: 0s - loss: 30346.1836 - mae: 119.8007/usr/local/lib/python3.10/dist-packages/keras/src/engine
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_021219-xc3mhwdk/files/model-best)... Done. 0.0s
25 [==============================] - 25s 4ms/step - loss: 30350.7734 - mae: 119.8049 - val_loss: 26497.8027 - val_mae: 109.9757
/35
25 [=============================>.] - ETA: 0s - loss: 25371.9336 - mae: 110.1983/usr/local/lib/python3.10/dist-packages/keras/src/engine
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_021219-xc3mhwdk/files/model-best)... Done. 0.0s
25 [==============================] - 24s 4ms/step - loss: 25370.2559 - mae: 110.1956 - val_loss: 22461.4258 - val_mae: 100.3226
/35
25 [=============================>.] - ETA: 0s - loss: 23909.8691 - mae: 106.3315/usr/local/lib/python3.10/dist-packages/keras/src/engine
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_021219-xc3mhwdk/files/model-best)... Done. 0.0s
25 [==============================] - 25s 4ms/step - loss: 23906.3457 - mae: 106.3233 - val_loss: 22025.5410 - val_mae: 95.6168
/35
25 [=============================>.] - ETA: 0s - loss: 23391.7188 - mae: 104.1941/usr/local/lib/python3.10/dist-packages/keras/src/engine
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_021219-xc3mhwdk/files/model-best)... Done. 0.0s
25 [==============================] - 25s 4ms/step - loss: 23394.1582 - mae: 104.1953 - val_loss: 21997.6289 - val_mae: 94.7314
/35
25 [=============================>.] - ETA: 0s - loss: 23397.9766 - mae: 102.8281/usr/local/lib/python3.10/dist-packages/keras/src/engine
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_021219-xc3mhwdk/files/model-best)... Done. 0.0s
25 [==============================] - 25s 4ms/step - loss: 23387.7246 - mae: 102.8183 - val_loss: 21556.0820 - val_mae: 93.2811
/35
25 [==============================] - 23s 4ms/step - loss: 23584.2949 - mae: 102.6225 - val_loss: 22366.9648 - val_mae: 97.0970
/35
25 [==============================] - 24s 4ms/step - loss: 23613.4297 - mae: 102.5340 - val_loss: 22013.6543 - val_mae: 95.0098
/35
```
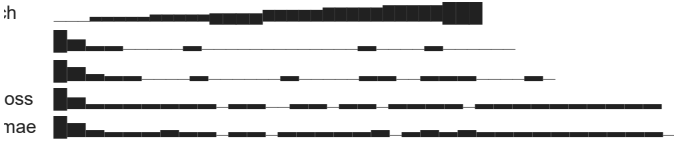
```
/35
525 [==============================] - 26s 4ms/step - loss: 23253.6367 - mae: 101.7787 - val_loss: 22560.4023 - val_mae: 96.7334
10/35
525 [===========================>.] - ETA: 0s - loss: 24829.3301 - mae: 105.7821/usr/local/lib/python3.10/dist-packages/keras/src/engine
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_021219-xc3mhwdk/files/model-best)... Done. 0.0s
525 [==============================] - 26s 4ms/step - loss: 24828.6113 - mae: 105.7800 - val_loss: 20678.1504 - val_mae: 91.7558
11/35
525 [==============================] - 24s 4ms/step - loss: 22977.3066 - mae: 101.4862 - val_loss: 21792.9883 - val_mae: 96.5583
12/35
525 [==============================] - 23s 3ms/step - loss: 23037.3613 - mae: 101.8849 - val_loss: 22559.7520 - val_mae: 96.6124
13/35
525 [==============================] - 22s 3ms/step - loss: 23016.4512 - mae: 102.0711 - val_loss: 20906.9922 - val_mae: 92.3554
14/35
525 [==============================] - 23s 3ms/step - loss: 22880.0918 - mae: 101.3480 - val_loss: 21465.7500 - val_mae: 93.9024
15/35
525 [==============================] - 22s 3ms/step - loss: 23080.5742 - mae: 101.5521 - val_loss: 22000.5938 - val_mae: 94.4719
16/35
525 [==============================] - 25s 4ms/step - loss: 23273.6660 - mae: 102.1954 - val_loss: 22028.9512 - val_mae: 93.9666
17/35
525 [==============================] - 23s 4ms/step - loss: 23145.0781 - mae: 103.0690 - val_loss: 21339.9590 - val_mae: 93.3732
18/35
525 [==============================] - 22s 3ms/step - loss: 22918.9766 - mae: 102.5590 - val_loss: 21868.4473 - val_mae: 95.9898
19/35
525 [==============================] - 24s 4ms/step - loss: 23534.1230 - mae: 102.6914 - val_loss: 22727.9395 - val_mae: 97.3522
20/35
525 [==============================] - 24s 4ms/step - loss: 23285.6855 - mae: 101.9704 - val_loss: 20801.3809 - val_mae: 90.4332
21/35
525 [==============================] - 26s 4ms/step - loss: 23006.0527 - mae: 100.9934 - val_loss: 22127.4648 - val_mae: 94.6436
22/35
525 [==============================] - 24s 4ms/step - loss: 23024.1387 - mae: 102.0692 - val_loss: 22202.4395 - val_mae: 97.7075
23/35
525 [==============================] - 23s 3ms/step - loss: 23283.9004 - mae: 103.1358 - val_loss: 21748.8438 - val_mae: 95.3678
24/35
525 [==============================] - 24s 4ms/step - loss: 24029.3262 - mae: 105.3891 - val_loss: 22720.5371 - val_mae: 99.4217
25/35
525 [==============================] - 25s 4ms/step - loss: 23457.1777 - mae: 102.8062 - val_loss: 21298.5078 - val_mae: 93.5718
26/35
525 [==============================] - 24s 4ms/step - loss: 23327.1035 - mae: 101.5403 - val_loss: 22007.6816 - val_mae: 95.7594
27/35
525 [==============================] - 23s 4ms/step - loss: 23591.6152 - mae: 103.1737 - val_loss: 22364.6094 - val_mae: 94.9817
28/35
525 [==============================] - 22s 3ms/step - loss: 23648.0703 - mae: 103.1373 - val_loss: 22597.2402 - val_mae: 95.8521
29/35
525 [==============================] - 25s 4ms/step - loss: 24152.3242 - mae: 103.1090 - val_loss: 22349.5781 - val_mae: 95.8256
30/35
525 [==============================] - 25s 4ms/step - loss: 23540.7793 - mae: 102.4364 - val_loss: 22211.6973 - val_mae: 95.9558
31/35
525 [==============================] - 23s 4ms/step - loss: 23476.6641 - mae: 102.2553 - val_loss: 21975.4258 - val_mae: 96.6600
32/35
525 [==============================] - 23s 4ms/step - loss: 23512.4004 - mae: 102.8806 - val_loss: 22313.6738 - val_mae: 94.7196
33/35
525 [==============================] - 25s 4ms/step - loss: 23495.3770 - mae: 102.8873 - val_loss: 22237.1582 - val_mae: 95.5603
34/35
525 [==============================] - 23s 4ms/step - loss: 23351.8086 - mae: 103.2626 - val_loss: 21676.2832 - val_mae: 93.8712
35/35
525 [==============================] - 26s 4ms/step - loss: 22954.6797 - mae: 100.9446 - val_loss: 21596.1543 - val_mae: 92.2466
: 35
size:  32
:  [64, 1]
er:  sgd
```

B of 0.750 MB uploaded (0.050 MB deduped)

nc reduced upload amount by 6.6%

history:

Run summary:

best_epoch	9
best_val_loss	20678.15039
epoch	34
loss	22954.67969
mae	100.94462
val_loss	21596.1543
val_mae	92.24656

 polar-sweep-18 at: https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/xc3mhwdk
5 W&B file(s), 1 media file(s), 35 artifact file(s) and 1 other file(s)
s at: ./wandb/run-20231122_021219-xc3mhwdk/logs
 Agent Starting Run: du04aavl with config:
  batch_size: 32

```
  dropout: 0.1
  epochs: 35
  neurons: [64, 32, 1]
  optimizer: adam
WARNING Ignored wandb.init() arg project when running a sweep.
WARNING Ignored wandb.init() arg entity when running a sweep.
  run with wandb version 0.16.0
a is saved locally in /content/wandb/run-20231122_022705-du04aavl
  run legendary-sweep-19 to Weights & Biases (docs)
age: https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
oject at https://wandb.ai/ort-martin/obligatorio-deep-learning
eep at https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
  at https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/du04aavl
n_size': 32, 'dropout': 0.1, 'epochs': 35, 'neurons': [64, 32, 1], 'optimizer': 'adam'}
  "sequential"
_____
 (type)              Output Shape            Param #
=========================================================
 (Dense)             (None, 64)              1152

t (Dropout)          (None, 64)              0

_1 (Dense)           (None, 32)              2080

t_1 (Dropout)        (None, 32)              0

_2 (Dense)           (None, 1)               33

t_2 (Dropout)        (None, 1)               0

=========================================================
arams: 3265 (12.75 KB)
le params: 3265 (12.75 KB)
inable params: 0 (0.00 Byte)
_____
/35
25 [==============================] - ETA: 0s - loss: 16545.6562 - mae: 75.8579/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_022705-du04aavl/files/model-best)... Done. 0.0s
25 [==============================] - 31s 5ms/step - loss: 16545.6562 - mae: 75.8579 - val_loss: 11708.5938 - val_mae: 59.8003
/35
25 [=============================>.] - ETA: 0s - loss: 13730.1680 - mae: 69.0383/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_022705-du04aavl/files/model-best)... Done. 0.0s
25 [==============================] - 32s 5ms/step - loss: 13738.8857 - mae: 69.0510 - val_loss: 9604.9424 - val_mae: 55.4181
/35
25 [=============================>.] - ETA: 0s - loss: 12202.4561 - mae: 65.4462/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_022705-du04aavl/files/model-best)... Done. 0.0s
25 [==============================] - 28s 4ms/step - loss: 12202.4121 - mae: 65.4507 - val_loss: 8103.3643 - val_mae: 50.8480
/35
25 [=============================>.] - ETA: 0s - loss: 11188.0078 - mae: 61.9800/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_022705-du04aavl/files/model-best)... Done. 0.0s
25 [==============================] - 32s 5ms/step - loss: 11185.3213 - mae: 61.9700 - val_loss: 7213.0718 - val_mae: 47.6888
/35
25 [=============================>.] - ETA: 0s - loss: 10851.8125 - mae: 59.9415/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_022705-du04aavl/files/model-best)... Done. 0.0s
25 [==============================] - 28s 4ms/step - loss: 10854.5391 - mae: 59.9453 - val_loss: 7207.1963 - val_mae: 46.6897
/35
25 [=============================>.] - ETA: 0s - loss: 10443.2549 - mae: 58.7983/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_022705-du04aavl/files/model-best)... Done. 0.0s
25 [==============================] - 29s 4ms/step - loss: 10440.4678 - mae: 58.7927 - val_loss: 6950.2656 - val_mae: 45.8098
/35
25 [==============================] - 27s 4ms/step - loss: 10378.6133 - mae: 58.0050 - val_loss: 7151.3032 - val_mae: 45.9712
/35
25 [=============================>.] - ETA: 0s - loss: 10257.3047 - mae: 57.5332/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_022705-du04aavl/files/model-best)... Done. 0.0s
25 [==============================] - 31s 5ms/step - loss: 10255.4561 - mae: 57.5343 - val_loss: 6900.1758 - val_mae: 45.3787
/35
25 [==============================] - 30s 5ms/step - loss: 10348.2568 - mae: 57.3761 - val_loss: 7314.1909 - val_mae: 45.6824
10/35
25 [=============================>.] - ETA: 0s - loss: 10214.5332 - mae: 56.9403/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_022705-du04aavl/files/model-best)... Done. 0.0s
25 [==============================] - 31s 5ms/step - loss: 10216.4170 - mae: 56.9508 - val_loss: 6616.2246 - val_mae: 45.0871
11/35
25 [==============================] - 30s 5ms/step - loss: 10089.8477 - mae: 56.6290 - val_loss: 6752.0718 - val_mae: 44.6727
12/35
25 [=============================>.] - ETA: 0s - loss: 10181.4014 - mae: 56.5392/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_022705-du04aavl/files/model-best)... Done. 0.0s
```

```
525 [==============================] - 29s 4ms/step - loss: 10186.3662 - mae: 56.5453 - val_loss: 6615.4961 - val_mae: 44.9165
13/35
525 [============================>.] - ETA: 0s - loss: 10141.5000 - mae: 56.4543/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_022705-du04aavl/files/model-best)... Done. 0.0s
525 [==============================] - 27s 4ms/step - loss: 10139.5811 - mae: 56.4515 - val_loss: 6592.0312 - val_mae: 44.9515
14/35
525 [==============================] - 28s 4ms/step - loss: 10149.2227 - mae: 56.2799 - val_loss: 6717.6489 - val_mae: 44.6770
15/35
525 [==============================] - 29s 4ms/step - loss: 10127.4678 - mae: 56.3676 - val_loss: 6810.5767 - val_mae: 44.7172
16/35
525 [==============================] - 31s 5ms/step - loss: 10053.6064 - mae: 56.0825 - val_loss: 6673.3662 - val_mae: 44.7917
17/35
525 [==============================] - 26s 4ms/step - loss: 10061.3438 - mae: 56.1493 - val_loss: 6862.2690 - val_mae: 45.3650
18/35
525 [============================>.] - ETA: 0s - loss: 10041.8428 - mae: 56.0897/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_022705-du04aavl/files/model-best)... Done. 0.0s
525 [==============================] - 29s 5ms/step - loss: 10042.0488 - mae: 56.0888 - val_loss: 6532.5317 - val_mae: 44.2888
19/35
525 [==============================] - 29s 4ms/step - loss: 10032.5947 - mae: 55.9720 - val_loss: 6687.3252 - val_mae: 44.4902
20/35
525 [==============================] - 29s 4ms/step - loss: 10024.8984 - mae: 55.9396 - val_loss: 6612.1948 - val_mae: 44.7316
21/35
525 [==============================] - 33s 5ms/step - loss: 10022.2217 - mae: 55.8742 - val_loss: 6577.5854 - val_mae: 44.5179
22/35
525 [==============================] - 28s 4ms/step - loss: 9973.9170 - mae: 55.9116 - val_loss: 6825.9248 - val_mae: 44.7667
23/35
525 [==============================] - 28s 4ms/step - loss: 10074.9561 - mae: 55.8737 - val_loss: 6761.6816 - val_mae: 44.7418
24/35
525 [==============================] - 28s 4ms/step - loss: 9938.1816 - mae: 55.7815 - val_loss: 6538.8003 - val_mae: 44.3905
25/35
525 [==============================] - 31s 5ms/step - loss: 9977.7969 - mae: 55.8386 - val_loss: 6725.4453 - val_mae: 44.3128
26/35
525 [==============================] - 28s 4ms/step - loss: 9972.5039 - mae: 55.6942 - val_loss: 6651.3105 - val_mae: 44.3662
27/35
525 [============================>.] - ETA: 0s - loss: 10108.2705 - mae: 55.9330/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_022705-du04aavl/files/model-best)... Done. 0.0s
525 [==============================] - 28s 4ms/step - loss: 10106.2666 - mae: 55.9361 - val_loss: 6425.0288 - val_mae: 43.9852
28/35
525 [==============================] - 28s 4ms/step - loss: 9991.2891 - mae: 55.6346 - val_loss: 6552.1948 - val_mae: 44.6086
29/35
525 [==============================] - 30s 5ms/step - loss: 9787.7256 - mae: 55.4085 - val_loss: 6476.6816 - val_mae: 44.0079
30/35
525 [==============================] - 28s 4ms/step - loss: 9854.4277 - mae: 55.5039 - val_loss: 6433.9600 - val_mae: 44.1767
31/35
525 [==============================] - 28s 4ms/step - loss: 9896.0586 - mae: 55.6287 - val_loss: 6886.9204 - val_mae: 45.2370
32/35
525 [==============================] - 31s 5ms/step - loss: 9834.4375 - mae: 55.4224 - val_loss: 6441.6128 - val_mae: 44.2387
33/35
525 [==============================] - 33s 5ms/step - loss: 9963.3291 - mae: 55.5190 - val_loss: 6702.0781 - val_mae: 44.5376
34/35
525 [==============================] - 27s 4ms/step - loss: 10012.4482 - mae: 55.6153 - val_loss: 6509.6777 - val_mae: 44.2708
35/35
525 [==============================] - 27s 4ms/step - loss: 9939.3057 - mae: 55.5483 - val_loss: 6604.1567 - val_mae: 44.1650
  35
size:  32
:  [64, 32, 1]
er:  adam
```
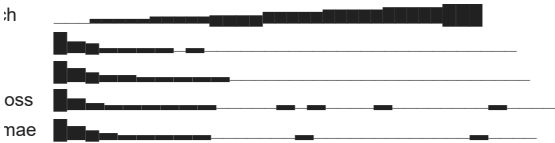
B of 2.145 MB uploaded (0.123 MB deduped)

nc reduced upload amount by 5.7%

history:		Run summary:	
		best_epoch	26
		best_val_loss	6425.02881
		epoch	34
		loss	9939.30566
oss		mae	55.54832
mae		val_loss	6604.15674
		val_mae	44.16503

n **legendary-sweep-19** at: https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/du04aavl
5 W&B file(s), 1 media file(s), 60 artifact file(s) and 1 other file(s)
s at: ./wandb/run-20231122_022705-du04aavl/logs
 Agent Starting Run: 3vdj527n with config:
  batch_size: 32
  dropout: 0.1

```
  epochs: 35
  neurons: [64, 32, 1]
  optimizer: sgd
WARNING Ignored wandb.init() arg project when running a sweep.
WARNING Ignored wandb.init() arg entity when running a sweep.
 run with wandb version 0.16.0
a is saved locally in /content/wandb/run-20231122_024450-3vdj527n
 run autumn-sweep-20 to Weights & Biases (docs)
age: https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
ject at https://wandb.ai/ort-martin/obligatorio-deep-learning
eep at https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
 at https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/3vdj527n
_size': 32, 'dropout': 0.1, 'epochs': 35, 'neurons': [64, 32, 1], 'optimizer': 'sgd'}
 "sequential"
```

(type)	Output Shape	Param #
(Dense)	(None, 64)	1152
t (Dropout)	(None, 64)	0
_1 (Dense)	(None, 32)	2080
t_1 (Dropout)	(None, 32)	0
_2 (Dense)	(None, 1)	33
t_2 (Dropout)	(None, 1)	0

```
arams: 3265 (12.75 KB)
le params: 3265 (12.75 KB)
inable params: 0 (0.00 Byte)
```

```
/35
25 [============================>.] - ETA: 0s - loss: 42584.3711 - mae: 138.3067/usr/local/lib/python3.10/dist-packages/keras/src/engine
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_024450-3vdj527n/files/model-best)... Done. 0.0s
25 [=============================] - 28s 4ms/step - loss: 42576.7070 - mae: 138.3061 - val_loss: 42161.4453 - val_mae: 138.9924
/35
25 [=============================] - 26s 4ms/step - loss: 41325.0703 - mae: 137.9849 - val_loss: 42161.4453 - val_mae: 138.9924
/35
25 [=============================] - 26s 4ms/step - loss: 41325.0977 - mae: 137.9851 - val_loss: 42161.4453 - val_mae: 138.9924
/35
25 [=============================] - 26s 4ms/step - loss: 41325.0977 - mae: 137.9849 - val_loss: 42161.4453 - val_mae: 138.9924
/35
25 [=============================] - 26s 4ms/step - loss: 41325.1992 - mae: 137.9851 - val_loss: 42161.4453 - val_mae: 138.9924
/35
25 [=============================] - 25s 4ms/step - loss: 41325.1562 - mae: 137.9852 - val_loss: 42161.4453 - val_mae: 138.9924
/35
25 [=============================] - 25s 4ms/step - loss: 41325.0430 - mae: 137.9851 - val_loss: 42161.4453 - val_mae: 138.9924
/35
25 [=============================] - 31s 5ms/step - loss: 41325.0859 - mae: 137.9852 - val_loss: 42161.4453 - val_mae: 138.9924
/35
25 [=============================] - 27s 4ms/step - loss: 41325.0781 - mae: 137.9852 - val_loss: 42161.4453 - val_mae: 138.9924
0/35
25 [=============================] - 28s 4ms/step - loss: 41325.1484 - mae: 137.9851 - val_loss: 42161.4453 - val_mae: 138.9924
1/35
25 [=============================] - 25s 4ms/step - loss: 41325.1914 - mae: 137.9852 - val_loss: 42161.4453 - val_mae: 138.9924
2/35
25 [=============================] - 26s 4ms/step - loss: 41325.0898 - mae: 137.9851 - val_loss: 42161.4453 - val_mae: 138.9924
3/35
25 [=============================] - 25s 4ms/step - loss: 41325.1055 - mae: 137.9850 - val_loss: 42161.4453 - val_mae: 138.9924
4/35
25 [=============================] - 27s 4ms/step - loss: 41325.1172 - mae: 137.9852 - val_loss: 42161.4453 - val_mae: 138.9924
5/35
25 [=============================] - 25s 4ms/step - loss: 41325.1211 - mae: 137.9854 - val_loss: 42161.4453 - val_mae: 138.9924
6/35
25 [=============================] - 25s 4ms/step - loss: 41325.1055 - mae: 137.9853 - val_loss: 42161.4453 - val_mae: 138.9924
7/35
25 [=============================] - 25s 4ms/step - loss: 41325.1953 - mae: 137.9853 - val_loss: 42161.4453 - val_mae: 138.9924
8/35
25 [=============================] - 25s 4ms/step - loss: 41325.1484 - mae: 137.9858 - val_loss: 42161.4453 - val_mae: 138.9924
9/35
25 [=============================] - 26s 4ms/step - loss: 41325.0586 - mae: 137.9852 - val_loss: 42161.4453 - val_mae: 138.9924
0/35
25 [=============================] - 25s 4ms/step - loss: 41325.1016 - mae: 137.9853 - val_loss: 42161.4453 - val_mae: 138.9924
1/35
25 [=============================] - 30s 5ms/step - loss: 41325.1289 - mae: 137.9852 - val_loss: 42161.4453 - val_mae: 138.9924
2/35
25 [=============================] - 25s 4ms/step - loss: 41325.1211 - mae: 137.9855 - val_loss: 42161.4453 - val_mae: 138.9924
3/35
25 [=============================] - 25s 4ms/step - loss: 41325.1641 - mae: 137.9851 - val_loss: 42161.4453 - val_mae: 138.9924
4/35
25 [=============================] - 25s 4ms/step - loss: 41325.1055 - mae: 137.9855 - val_loss: 42161.4453 - val_mae: 138.9924
```
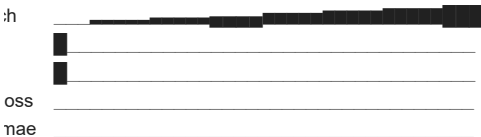
```
25/35
625 [==============================] - 24s 4ms/step - loss: 41325.0820 - mae: 137.9851 - val_loss: 42161.4453 - val_mae: 138.9924
26/35
625 [==============================] - 26s 4ms/step - loss: 41325.1211 - mae: 137.9855 - val_loss: 42161.4453 - val_mae: 138.9924
27/35
625 [==============================] - 25s 4ms/step - loss: 41325.0820 - mae: 137.9852 - val_loss: 42161.4453 - val_mae: 138.9924
28/35
625 [==============================] - 26s 4ms/step - loss: 41325.1289 - mae: 137.9850 - val_loss: 42161.4453 - val_mae: 138.9924
29/35
625 [==============================] - 24s 4ms/step - loss: 41325.0664 - mae: 137.9853 - val_loss: 42161.4453 - val_mae: 138.9924
30/35
625 [==============================] - 25s 4ms/step - loss: 41325.0977 - mae: 137.9850 - val_loss: 42161.4453 - val_mae: 138.9924
31/35
625 [==============================] - 25s 4ms/step - loss: 41325.1758 - mae: 137.9852 - val_loss: 42161.4453 - val_mae: 138.9924
32/35
625 [==============================] - 24s 4ms/step - loss: 41325.0508 - mae: 137.9854 - val_loss: 42161.4453 - val_mae: 138.9924
33/35
625 [==============================] - 24s 4ms/step - loss: 41325.0117 - mae: 137.9851 - val_loss: 42161.4453 - val_mae: 138.9924
34/35
625 [==============================] - 29s 4ms/step - loss: 41325.1797 - mae: 137.9852 - val_loss: 42161.4453 - val_mae: 138.9924
35/35
625 [==============================] - 24s 4ms/step - loss: 41325.1250 - mae: 137.9851 - val_loss: 42161.4453 - val_mae: 138.9924
: 35
size:  32
:  [64, 32, 1]
er:  sgd
B of 0.216 MB uploaded
```

history:

ch	
oss	
mae	

Run summary:

best_epoch	0
best_val_loss	42161.44531
epoch	34
loss	41325.125
mae	137.98511
val_loss	42161.44531
val_mae	138.9924

```
n autumn-sweep-20 at: https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/3vdj527n
5 W&B file(s), 1 media file(s), 5 artifact file(s) and 1 other file(s)
s at: ./wandb/run-20231122_024450-3vdj527n/logs
Agent Starting Run: 4n5a6q2c with config:
 batch_size: 32
 dropout: 0.1
 epochs: 25
 neurons: [64, 1]
 optimizer: adam
WARNING Ignored wandb.init() arg project when running a sweep.
WARNING Ignored wandb.init() arg entity when running a sweep.
run with wandb version 0.16.0
a is saved locally in /content/wandb/run-20231122_030010-4n5a6q2c
run glowing-sweep-21 to Weights & Biases (docs)
age: https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
ject at https://wandb.ai/ort-martin/obligatorio-deep-learning
eep at https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
n at https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/4n5a6q2c
n_size': 32, 'dropout': 0.1, 'epochs': 25, 'neurons': [64, 1], 'optimizer': 'adam'}
 "sequential"
```

```
_____
(type)              Output Shape            Param #
=======================================================
(Dense)             (None, 64)              1152

t (Dropout)         (None, 64)              0

_1 (Dense)          (None, 1)               65

t_1 (Dropout)       (None, 1)               0

=======================================================
params: 1217 (4.75 KB)
le params: 1217 (4.75 KB)
inable params: 0 (0.00 Byte)
_____
1/25
625 [=============================>.] - ETA: 0s - loss: 19090.8184 - mae: 81.4694/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_030010-4n5a6q2c/files/model-best)... Done. 0.0s
25 [==============================] - 25s 4ms/step - loss: 19083.9098 - mae: 81.4576 - val_loss: 14022.9023 - val_mae: 65.3055
```

```
525 [==============================] - 25s 4ms/step - loss: 19083.6098 - mae: 81.4576 - val_loss: 14022.9023 - val_mae: 65.5033
2/25
525 [=============================>.] - ETA: 0s - loss: 15916.6836 - mae: 74.7105/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_030010-4n5a6q2c/files/model-best)... Done. 0.0s
525 [==============================] - 25s 4ms/step - loss: 15926.9482 - mae: 74.7259 - val_loss: 13102.1865 - val_mae: 63.2109
3/25
525 [=============================>.] - ETA: 0s - loss: 15266.9219 - mae: 73.2814/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_030010-4n5a6q2c/files/model-best)... Done. 0.0s
525 [==============================] - 24s 4ms/step - loss: 15268.5977 - mae: 73.2876 - val_loss: 12345.0576 - val_mae: 62.3368
4/25
525 [=============================>.] - ETA: 0s - loss: 14789.4678 - mae: 72.3319/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_030010-4n5a6q2c/files/model-best)... Done. 0.0s
525 [==============================] - 25s 4ms/step - loss: 14784.4912 - mae: 72.3329 - val_loss: 11756.3799 - val_mae: 61.0809
5/25
525 [=============================>.] - ETA: 0s - loss: 14190.5244 - mae: 71.2336/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_030010-4n5a6q2c/files/model-best)... Done. 0.0s
525 [==============================] - 28s 4ms/step - loss: 14189.1660 - mae: 71.2286 - val_loss: 11356.1855 - val_mae: 59.6973
5/25
525 [=============================>.] - ETA: 0s - loss: 13820.3857 - mae: 70.3351/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_030010-4n5a6q2c/files/model-best)... Done. 0.0s
525 [==============================] - 28s 4ms/step - loss: 13815.3037 - mae: 70.3307 - val_loss: 10925.7969 - val_mae: 58.6288
7/25
525 [=============================>.] - ETA: 0s - loss: 13453.4727 - mae: 69.3532/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_030010-4n5a6q2c/files/model-best)... Done. 0.0s
525 [==============================] - 25s 4ms/step - loss: 13455.4883 - mae: 69.3534 - val_loss: 10569.6357 - val_mae: 57.6796
3/25
525 [=============================>.] - ETA: 0s - loss: 13163.9795 - mae: 68.3631/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_030010-4n5a6q2c/files/model-best)... Done. 0.0s
525 [==============================] - 24s 4ms/step - loss: 13160.7734 - mae: 68.3593 - val_loss: 10205.7520 - val_mae: 56.8431
9/25
525 [=============================>.] - ETA: 0s - loss: 12991.1201 - mae: 67.6414/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_030010-4n5a6q2c/files/model-best)... Done. 0.0s
525 [==============================] - 25s 4ms/step - loss: 12991.0117 - mae: 67.6382 - val_loss: 10053.5107 - val_mae: 55.5570
10/25
525 [=============================>.] - ETA: 0s - loss: 12633.8662 - mae: 66.5809/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_030010-4n5a6q2c/files/model-best)... Done. 0.0s
525 [==============================] - 26s 4ms/step - loss: 12633.5342 - mae: 66.5794 - val_loss: 9531.3359 - val_mae: 54.9661
11/25
525 [=============================>.] - ETA: 0s - loss: 12451.9033 - mae: 65.9690/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_030010-4n5a6q2c/files/model-best)... Done. 0.0s
525 [==============================] - 31s 5ms/step - loss: 12450.3203 - mae: 65.9722 - val_loss: 9296.1006 - val_mae: 54.4070
12/25
525 [=============================>.] - ETA: 0s - loss: 12083.8223 - mae: 65.0405/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_030010-4n5a6q2c/files/model-best)... Done. 0.0s
525 [==============================] - 25s 4ms/step - loss: 12082.3193 - mae: 65.0398 - val_loss: 8966.6436 - val_mae: 53.5033
13/25
525 [=============================>.] - ETA: 0s - loss: 11853.8174 - mae: 64.3311/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_030010-4n5a6q2c/files/model-best)... Done. 0.0s
525 [==============================] - 26s 4ms/step - loss: 11853.2236 - mae: 64.3284 - val_loss: 8734.0078 - val_mae: 52.8781
14/25
525 [=============================>.] - ETA: 0s - loss: 11600.9336 - mae: 63.5191/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_030010-4n5a6q2c/files/model-best)... Done. 0.0s
525 [==============================] - 27s 4ms/step - loss: 11596.6367 - mae: 63.5105 - val_loss: 8494.9336 - val_mae: 52.0212
15/25
525 [==============================] - 28s 4ms/step - loss: 11545.9072 - mae: 63.1182 - val_loss: 8495.4678 - val_mae: 51.2295
16/25
525 [=============================>.] - ETA: 0s - loss: 11327.9580 - mae: 62.2384/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_030010-4n5a6q2c/files/model-best)... Done. 0.0s
525 [==============================] - 28s 4ms/step - loss: 11329.0420 - mae: 62.2385 - val_loss: 8241.0283 - val_mae: 50.4880
17/25
525 [=============================>.] - ETA: 0s - loss: 10993.2969 - mae: 61.6029/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_030010-4n5a6q2c/files/model-best)... Done. 0.0s
525 [==============================] - 26s 4ms/step - loss: 10995.8457 - mae: 61.6117 - val_loss: 7994.9365 - val_mae: 50.1727
18/25
525 [=============================>.] - ETA: 0s - loss: 10948.8535 - mae: 61.1051/usr/local/lib/python3.10/dist-packages/keras/src/engine,
ng_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_030010-4n5a6q2c/files/model-best)... Done. 0.0s
525 [==============================] - 26s 4ms/step - loss: 10948.1924 - mae: 61.1069 - val_loss: 7773.1948 - val_mae: 49.6092
19/25
525 [=============================>.] - ETA: 0s - loss: 10960.1191 - mae: 60.6312/usr/local/lib/python3.10/dist-packages/keras/src/engine,
```

```
g_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_030010-4n5a6q2c/files/model-best)... Done. 0.0s
25 [==============================] - 25s 4ms/step - loss: 10964.0586 - mae: 60.6342 - val_loss: 7744.1616 - val_mae: 48.9345
0/25
25 [==============================>.] - ETA: 0s - loss: 10734.4766 - mae: 60.2093/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_030010-4n5a6q2c/files/model-best)... Done. 0.0s
25 [==============================] - 26s 4ms/step - loss: 10729.9482 - mae: 60.2046 - val_loss: 7532.1831 - val_mae: 48.7105
21/25
25 [==============================>.] - ETA: 0s - loss: 10824.9766 - mae: 60.0552/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_030010-4n5a6q2c/files/model-best)... Done. 0.0s
25 [==============================] - 26s 4ms/step - loss: 10824.5332 - mae: 60.0606 - val_loss: 7363.4575 - val_mae: 48.1814
22/25
25 [==============================] - 23s 4ms/step - loss: 10553.7334 - mae: 59.4115 - val_loss: 7384.7510 - val_mae: 47.9539
23/25
25 [==============================>.] - ETA: 0s - loss: 10444.3926 - mae: 58.9547/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_030010-4n5a6q2c/files/model-best)... Done. 0.0s
25 [==============================] - 25s 4ms/step - loss: 10448.3740 - mae: 58.9614 - val_loss: 7294.5396 - val_mae: 47.5916
24/25
25 [==============================>.] - ETA: 0s - loss: 10571.6172 - mae: 58.9006/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_030010-4n5a6q2c/files/model-best)... Done. 0.0s
25 [==============================] - 32s 5ms/step - loss: 10571.4590 - mae: 58.8992 - val_loss: 7166.8066 - val_mae: 47.2389
25/25
25 [==============================] - 25s 4ms/step - loss: 10294.2695 - mae: 58.4714 - val_loss: 7218.1797 - val_mae: 47.2068
  25
size:  32
:  [64, 1]
er:  adam
```

B of 2.548 MB uploaded (0.174 MB deduped)

nc reduced upload amount by 6.8%

history:

Run summary:

best_epoch	23
best_val_loss	7166.80664
epoch	24
loss	10294.26953
mae	58.47143
val_loss	7218.17969
val_mae	47.20683

glowing-sweep-21 at: https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/4n5a6q2c
5 W&B file(s), 1 media file(s), 110 artifact file(s) and 1 other file(s)
s at: ./wandb/run-20231122_030010-4n5a6q2c/logs

```
Agent Starting Run: ota6616b with config:
  batch_size: 32
  dropout: 0.1
  epochs: 25
  neurons: [64, 1]
  optimizer: sgd
WARNING Ignored wandb.init() arg project when running a sweep.
WARNING Ignored wandb.init() arg entity when running a sweep.
 run with wandb version 0.16.0
a is saved locally in /content/wandb/run-20231122_031157-ota6616b
```

run **dazzling-sweep-22** to Weights & Biases (docs)
page: https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
ject at https://wandb.ai/ort-martin/obligatorio-deep-learning
eep at https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
 at https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/ota6616b
_size': 32, 'dropout': 0.1, 'epochs': 25, 'neurons': [64, 1], 'optimizer': 'sgd'}
 "sequential"

```
(type)                Output Shape           Param #
=======================================================
(Dense)               (None, 64)             1152

t (Dropout)           (None, 64)             0

1 (Dense)             (None, 1)              65

t_1 (Dropout)         (None, 1)              0

=======================================================
params: 1217 (4.75 KB)
le params: 1217 (4.75 KB)
inable params: 0 (0.00 Byte)
```

```
_____
1/25
525 [============================>.] - ETA: 0s - loss: 38727.7891 - mae: 134.5920/usr/local/lib/python3.10/dist-packages/keras/src/engine
ng_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_031157-ota6616b/files/model-best)... Done. 0.0s
525 [==============================] - 29s 4ms/step - loss: 38728.6797 - mae: 134.5942 - val_loss: 37325.6094 - val_mae: 134.0566
2/25
525 [============================>.] - ETA: 0s - loss: 36219.0312 - mae: 133.8622/usr/local/lib/python3.10/dist-packages/keras/src/engine
ng_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_031157-ota6616b/files/model-best)... Done. 0.0s
525 [==============================] - 27s 4ms/step - loss: 36219.0312 - mae: 133.8622 - val_loss: 36593.7422 - val_mae: 133.7945
3/25
525 [==============================] - 23s 4ms/step - loss: 36826.5078 - mae: 134.5541 - val_loss: 36903.6641 - val_mae: 134.0464
4/25
525 [==============================] - 22s 3ms/step - loss: 36450.6523 - mae: 134.2495 - val_loss: 36901.5508 - val_mae: 134.3283
5/25
525 [==============================] - 23s 3ms/step - loss: 36540.9961 - mae: 134.2033 - val_loss: 37256.5430 - val_mae: 134.4462
6/25
525 [==============================] - 24s 4ms/step - loss: 36860.3477 - mae: 134.2919 - val_loss: 36705.4805 - val_mae: 133.6188
7/25
525 [==============================] - 24s 4ms/step - loss: 36223.4922 - mae: 133.7051 - val_loss: 36963.7695 - val_mae: 134.1601
8/25
525 [============================>.] - ETA: 0s - loss: 36173.8945 - mae: 133.6439/usr/local/lib/python3.10/dist-packages/keras/src/engine
ng_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_031157-ota6616b/files/model-best)... Done. 0.0s
525 [==============================] - 24s 4ms/step - loss: 36159.5156 - mae: 133.6211 - val_loss: 36515.5742 - val_mae: 133.3459
9/25
525 [==============================] - 22s 3ms/step - loss: 36394.9258 - mae: 133.8053 - val_loss: 42085.3633 - val_mae: 138.8374
10/25
525 [============================>.] - ETA: 0s - loss: 36022.9141 - mae: 133.1866/usr/local/lib/python3.10/dist-packages/keras/src/engine
ng_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_031157-ota6616b/files/model-best)... Done. 0.0s
525 [==============================] - 28s 4ms/step - loss: 36018.4180 - mae: 133.1800 - val_loss: 36302.7383 - val_mae: 132.9268
11/25
525 [============================>.] - ETA: 0s - loss: 36439.2656 - mae: 133.4027/usr/local/lib/python3.10/dist-packages/keras/src/engine
ng_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_031157-ota6616b/files/model-best)... Done. 0.0s
525 [==============================] - 26s 4ms/step - loss: 36430.1641 - mae: 133.3884 - val_loss: 36282.4531 - val_mae: 132.8772
12/25
525 [============================>.] - ETA: 0s - loss: 35592.3359 - mae: 132.6164/usr/local/lib/python3.10/dist-packages/keras/src/engine
ng_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_031157-ota6616b/files/model-best)... Done. 0.0s
525 [==============================] - 24s 4ms/step - loss: 35592.4219 - mae: 132.6216 - val_loss: 36251.1094 - val_mae: 132.7652
13/25
525 [============================>.] - ETA: 0s - loss: 35160.3711 - mae: 131.9138/usr/local/lib/python3.10/dist-packages/keras/src/engine
ng_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_031157-ota6616b/files/model-best)... Done. 0.0s
525 [==============================] - 24s 4ms/step - loss: 35154.4961 - mae: 131.9043 - val_loss: 35432.4609 - val_mae: 130.6829
14/25
525 [==============================] - 23s 3ms/step - loss: 35915.4336 - mae: 132.8219 - val_loss: 36622.0391 - val_mae: 133.6041
15/25
525 [==============================] - 22s 3ms/step - loss: 35876.2969 - mae: 132.6475 - val_loss: 37237.6406 - val_mae: 132.5244
16/25
525 [==============================] - 24s 4ms/step - loss: 36470.1953 - mae: 131.1308 - val_loss: 36965.8711 - val_mae: 130.9955
17/25
525 [============================>.] - ETA: 0s - loss: 35357.9180 - mae: 129.4872/usr/local/lib/python3.10/dist-packages/keras/src/engine
ng_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_031157-ota6616b/files/model-best)... Done. 0.0s
525 [==============================] - 23s 4ms/step - loss: 35357.9180 - mae: 129.4872 - val_loss: 35102.8945 - val_mae: 127.3672
18/25
525 [==============================] - 23s 4ms/step - loss: 34689.4961 - mae: 128.0552 - val_loss: 35211.1406 - val_mae: 128.2925
19/25
525 [============================>.] - ETA: 0s - loss: 34348.8984 - mae: 126.9112/usr/local/lib/python3.10/dist-packages/keras/src/engine
ng_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_031157-ota6616b/files/model-best)... Done. 0.0s
525 [==============================] - 26s 4ms/step - loss: 34349.4883 - mae: 126.9101 - val_loss: 34444.4883 - val_mae: 124.8609
20/25
525 [============================>.] - ETA: 0s - loss: 33989.3750 - mae: 126.3797/usr/local/lib/python3.10/dist-packages/keras/src/engine
ng_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_031157-ota6616b/files/model-best)... Done. 0.0s
525 [==============================] - 26s 4ms/step - loss: 33987.1875 - mae: 126.3763 - val_loss: 33745.2383 - val_mae: 125.8589
21/25
525 [============================>.] - ETA: 0s - loss: 32837.3125 - mae: 126.0337/usr/local/lib/python3.10/dist-packages/keras/src/engine
ng_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_031157-ota6616b/files/model-best)... Done. 0.0s
525 [==============================] - 24s 4ms/step - loss: 32848.4883 - mae: 126.0508 - val_loss: 33364.1367 - val_mae: 125.7785
22/25
525 [============================>.] - ETA: 0s - loss: 33124.4883 - mae: 126.1745/usr/local/lib/python3.10/dist-packages/keras/src/engine
ng_api.save_model(
  Adding directory to artifact (/content/wandb/run-20231122_031157-ota6616b/files/model-best)... Done. 0.0s
525 [==============================] - 24s 4ms/step - loss: 33130.2656 - mae: 126.1814 - val_loss: 33309.8164 - val_mae: 125.5376
23/25
525 [==============================] - 27s 4ms/step - loss: 32791.4141 - mae: 125.4511 - val_loss: 33428.5273 - val_mae: 124.0249
24/25
525 [============================>.] - ETA: 0s - loss: 32849.4922 - mae: 125.2680/usr/local/lib/python3.10/dist-packages/keras/src/engine
```

```
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_031157-ota6616b/files/model-best)... Done. 0.0s
25 [==============================] - 28s 4ms/step - loss: 32850.4922 - mae: 125.2667 - val_loss: 33233.4336 - val_mae: 124.0878
!5/25
25 [==============================>.] - ETA: 0s - loss: 32597.4219 - mae: 125.1685/usr/local/lib/python3.10/dist-packages/keras/src/engine
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_031157-ota6616b/files/model-best)... Done. 0.0s
25 [==============================] - 25s 4ms/step - loss: 32599.1738 - mae: 125.1717 - val_loss: 32915.9102 - val_mae: 124.0005
  25
ize: 32
:  [64, 1]
er:  sgd
```

B of 1.452 MB uploaded (0.107 MB deduped)

nc reduced upload amount by 7.4%

history:

Run summary:

best_epoch	24
best_val_loss	32915.91016
epoch	24
loss	32599.17383
mae	125.17175
val_loss	32915.91016
val_mae	124.00051

dazzling-sweep-22 at: https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/ota6616b
5 W&B file(s), 1 media file(s), 70 artifact file(s) and 1 other file(s)
s at: ./wandb/run-20231122_031157-ota6616b/logs
Agent Starting Run: 5l7f4bzg with config:
 batch_size: 32
 dropout: 0.1
 epochs: 25
 neurons: [64, 32, 1]
 optimizer: adam
WARNING Ignored wandb.init() arg project when running a sweep.
WARNING Ignored wandb.init() arg entity when running a sweep.
run with wandb version 0.16.0
a is saved locally in /content/wandb/run-20231122_032236-5l7f4bzg
run **twilight-sweep-23** to Weights & Biases (docs)
page: https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
ject at https://wandb.ai/ort-martin/obligatorio-deep-learning
eep at https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
n at https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/5l7f4bzg
_size': 32, 'dropout': 0.1, 'epochs': 25, 'neurons': [64, 32, 1], 'optimizer': 'adam'}
 "sequential"

```
 (type)              Output Shape          Param #
=========================================================
 (Dense)             (None, 64)            1152

 t (Dropout)         (None, 64)            0

 1 (Dense)           (None, 32)            2080

 t_1 (Dropout)       (None, 32)            0

 2 (Dense)           (None, 1)             33

 t_2 (Dropout)       (None, 1)             0

=========================================================
params: 3265 (12.75 KB)
le params: 3265 (12.75 KB)
inable params: 0 (0.00 Byte)
_____
```

```
/25
25 [==============================>.] - ETA: 0s - loss: 16914.2305 - mae: 76.6571/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_032236-5l7f4bzg/files/model-best)... Done. 0.0s
25 [==============================] - 29s 4ms/step - loss: 16913.9199 - mae: 76.6577 - val_loss: 12467.0625 - val_mae: 61.2823
!/25
25 [==============================>.] - ETA: 0s - loss: 14303.3652 - mae: 70.1019/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_032236-5l7f4bzg/files/model-best)... Done. 0.0s
25 [==============================] - 32s 5ms/step - loss: 14308.2090 - mae: 70.1107 - val_loss: 10158.9971 - val_mae: 56.7627
8/25
25 [==============================>.] - ETA: 0s - loss: 12667.2793 - mae: 66.2317/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_032236-5l7f4bzg/files/model-best)... Done  0.0s
```

```
Adding directory to artifact (/content/wandb/run-20231122_032236-5l7f4bzg/files/model-best)... Done. 0.0s
25 [==============================] - 30s 5ms/step - loss: 12666.0898 - mae: 66.2301 - val_loss: 8661.6572 - val_mae: 52.9560
/25
25 [=============================>.] - ETA: 0s - loss: 11403.8545 - mae: 62.4831/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_032236-5l7f4bzg/files/model-best)... Done. 0.0s
25 [==============================] - 33s 5ms/step - loss: 11403.9521 - mae: 62.4839 - val_loss: 7288.6890 - val_mae: 48.0855
/25
25 [=============================>.] - ETA: 0s - loss: 10837.9043 - mae: 59.7096/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_032236-5l7f4bzg/files/model-best)... Done. 0.0s
25 [==============================] - 29s 4ms/step - loss: 10837.7783 - mae: 59.7109 - val_loss: 7182.9883 - val_mae: 46.4206
/25
25 [=============================>.] - ETA: 0s - loss: 10401.2510 - mae: 58.3878/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_032236-5l7f4bzg/files/model-best)... Done. 0.0s
25 [==============================] - 32s 5ms/step - loss: 10401.5938 - mae: 58.3868 - val_loss: 6915.6338 - val_mae: 45.7193
/25
25 [==============================] - 28s 4ms/step - loss: 10354.7939 - mae: 57.6281 - val_loss: 6951.2607 - val_mae: 45.5095
/25
25 [==============================] - 29s 4ms/step - loss: 10222.9062 - mae: 57.1448 - val_loss: 6973.9453 - val_mae: 45.3815
/25
25 [==============================] - 32s 5ms/step - loss: 10293.6523 - mae: 57.0388 - val_loss: 7360.0952 - val_mae: 45.6511
10/25
25 [==============================] - ETA: 0s - loss: 10172.7656 - mae: 56.6535/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_032236-5l7f4bzg/files/model-best)... Done. 0.0s
25 [==============================] - 30s 5ms/step - loss: 10172.7656 - mae: 56.6535 - val_loss: 6522.8545 - val_mae: 44.7480
11/25
25 [==============================] - 31s 5ms/step - loss: 10085.5605 - mae: 56.5083 - val_loss: 6716.4648 - val_mae: 44.5248
12/25
25 [==============================] - 29s 4ms/step - loss: 10166.2383 - mae: 56.4058 - val_loss: 6633.0874 - val_mae: 44.7484
13/25
25 [=============================>.] - ETA: 0s - loss: 10118.0303 - mae: 56.2733/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_032236-5l7f4bzg/files/model-best)... Done. 0.0s
25 [==============================] - 28s 4ms/step - loss: 10114.2959 - mae: 56.2679 - val_loss: 6521.6865 - val_mae: 44.6122
14/25
25 [==============================] - 30s 5ms/step - loss: 10128.6484 - mae: 56.1222 - val_loss: 6627.5542 - val_mae: 44.4629
15/25
25 [==============================] - 26s 4ms/step - loss: 10083.2354 - mae: 56.1284 - val_loss: 6818.5059 - val_mae: 44.5676
16/25
25 [==============================] - 28s 4ms/step - loss: 10016.1787 - mae: 55.8695 - val_loss: 6665.9897 - val_mae: 44.6818
17/25
25 [==============================] - 29s 4ms/step - loss: 10015.1260 - mae: 55.8710 - val_loss: 6726.1172 - val_mae: 44.8252
18/25
25 [=============================>.] - ETA: 0s - loss: 10014.2979 - mae: 55.8841/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_032236-5l7f4bzg/files/model-best)... Done. 0.0s
25 [==============================] - 31s 5ms/step - loss: 10012.8047 - mae: 55.8818 - val_loss: 6505.4976 - val_mae: 43.8889
19/25
25 [==============================] - 28s 4ms/step - loss: 9987.7363 - mae: 55.7150 - val_loss: 6714.3877 - val_mae: 44.2880
20/25
25 [==============================] - ETA: 0s - loss: 10000.0869 - mae: 55.8502/usr/local/lib/python3.10/dist-packages/keras/src/engine,
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_032236-5l7f4bzg/files/model-best)... Done. 0.0s
25 [==============================] - 32s 5ms/step - loss: 10000.0869 - mae: 55.8502 - val_loss: 6467.9463 - val_mae: 44.2553
21/25
25 [==============================] - 33s 5ms/step - loss: 10003.9160 - mae: 55.6457 - val_loss: 6531.7007 - val_mae: 44.0962
22/25
25 [==============================] - 31s 5ms/step - loss: 9970.7852 - mae: 55.8102 - val_loss: 6678.8130 - val_mae: 44.3183
23/25
25 [==============================] - 27s 4ms/step - loss: 10005.3379 - mae: 55.6276 - val_loss: 6690.9058 - val_mae: 44.4517
24/25
25 [=============================>.] - ETA: 0s - loss: 9916.8701 - mae: 55.6053/usr/local/lib/python3.10/dist-packages/keras/src/engine/1
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_032236-5l7f4bzg/files/model-best)... Done. 0.0s
25 [==============================] - 29s 4ms/step - loss: 9910.7354 - mae: 55.6012 - val_loss: 6452.8716 - val_mae: 43.9903
25/25
25 [==============================] - 34s 5ms/step - loss: 9988.5479 - mae: 55.7428 - val_loss: 6656.7515 - val_mae: 44.0459
  25
size:  32
:  [64, 32, 1]
er:  adam
B of 1.974 MB uploaded (0.112 MB deduped)
```

nc reduced upload amount by 5.7%

history:

Run summary:

best_epoch   23
best_val_loss 6452.87158

epoch	24
loss	9988.54785
mae	55.74281
val_loss	6656.75146
val_mae	44.04585

twilight-sweep-23 at: https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/5l7f4bzg
5 W&B file(s), 1 media file(s), 55 artifact file(s) and 1 other file(s)
s at: ./wandb/run-20231122_032236-5l7f4bzg/logs
Agent Starting Run: 27flg413 with config:
  batch_size: 32
  dropout: 0.1
  epochs: 25
  neurons: [64, 32, 1]
  optimizer: sgd
WARNING Ignored wandb.init() arg project when running a sweep.
WARNING Ignored wandb.init() arg entity when running a sweep.
 run with wandb version 0.16.0
a is saved locally in /content/wandb/run-20231122_033524-27flg413
 run **colorful-sweep-24** to Weights & Biases (docs)
page: https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
ject at https://wandb.ai/ort-martin/obligatorio-deep-learning
eep at https://wandb.ai/ort-martin/obligatorio-deep-learning/sweeps/0af3wbjy
n at https://wandb.ai/ort-martin/obligatorio-deep-learning/runs/27flg413
_size': 32, 'dropout': 0.1, 'epochs': 25, 'neurons': [64, 32, 1], 'optimizer': 'sgd'}
"sequential"

```
_____
(type)              Output Shape           Param #
=======================================================
(Dense)             (None, 64)             1152

t (Dropout)         (None, 64)             0

_1 (Dense)          (None, 32)             2080

t_1 (Dropout)       (None, 32)             0

_2 (Dense)          (None, 1)              33

t_2 (Dropout)       (None, 1)              0

=======================================================
params: 3265 (12.75 KB)
le params: 3265 (12.75 KB)
inable params: 0 (0.00 Byte)
_____
/25
25 [=============================] - ETA: 0s - loss: 51803.6602 - mae: 138.4844/usr/local/lib/python3.10/dist-packages/keras/src/engine
g_api.save_model(
 Adding directory to artifact (/content/wandb/run-20231122_033524-27flg413/files/model-best)... Done. 0.0s
25 [=============================] - 30s 4ms/step - loss: 51803.6602 - mae: 138.4844 - val_loss: 42161.4453 - val_mae: 138.9924
/25
```

▾ 4.4 Entrenar

Entrenamos con los mejores hiperparámetros

```python
from tensorflow.keras.models import Sequential
from tensorflow.keras.layers import Dense, Dropout
from tensorflow.keras.optimizers import Adam
from tensorflow.keras.callbacks import EarlyStopping

# Definir el optimizador y las capas ocultas
opt = Adam(clipvalue=0.0, learning_rate=0.001)

model = Sequential()
model.add(Dense(64, activation='relu', input_shape=(X_train.shape[1],)))
model.add(Dropout(0.1))

# Hidden layer with dropout
model.add(Dense(32, activation='relu'))
model.add(Dropout(0.1))

# Output layer
model.add(Dense(1, activation='relu'))
model.add(Dropout(0.1))

model.compile(loss='mean_squared_error', optimizer=opt, metrics=['mae'])

early_stopping = EarlyStopping(monitor='val_loss', patience=3, verbose=1, restore_best_weights=True)

history = model.fit(X_train, y_train, epochs=30, batch_size=128, callbacks=[early_stopping], validation_split=0.2)
```

```
Epoch 1/30
1632/1632 [==============================] - 9s 5ms/step - loss: 18979.3105 - mae: 81.5476 - val_loss: 13610.0684 - val_mae: 64.7407
Epoch 2/30
1632/1632 [==============================] - 6s 4ms/step - loss: 15566.6982 - mae: 73.4907 - val_loss: 12228.4902 - val_mae: 61.0434
Epoch 3/30
1632/1632 [==============================] - 12s 8ms/step - loss: 14156.6211 - mae: 70.2464 - val_loss: 10717.5752 - val_mae: 58.4257
Epoch 4/30
1632/1632 [==============================] - 8s 5ms/step - loss: 13340.0088 - mae: 68.4460 - val_loss: 9827.1738 - val_mae: 55.9574
Epoch 5/30
1632/1632 [==============================] - 6s 4ms/step - loss: 12642.3604 - mae: 66.2799 - val_loss: 9058.3232 - val_mae: 53.6339
Epoch 6/30
1632/1632 [==============================] - 7s 4ms/step - loss: 11935.7227 - mae: 64.3137 - val_loss: 8430.1387 - val_mae: 51.2804
Epoch 7/30
1632/1632 [==============================] - 4s 3ms/step - loss: 11172.4424 - mae: 62.0627 - val_loss: 7720.0571 - val_mae: 49.0934
Epoch 8/30
1632/1632 [==============================] - 5s 3ms/step - loss: 10831.9707 - mae: 60.4045 - val_loss: 7321.9697 - val_mae: 47.7796
Epoch 9/30
1632/1632 [==============================] - 7s 4ms/step - loss: 10648.8945 - mae: 59.4204 - val_loss: 7402.6968 - val_mae: 46.9682
Epoch 10/30
1632/1632 [==============================] - 6s 3ms/step - loss: 10335.7295 - mae: 58.3980 - val_loss: 7046.5562 - val_mae: 46.2434
Epoch 11/30
1632/1632 [==============================] - 4s 3ms/step - loss: 10381.8975 - mae: 58.0868 - val_loss: 6963.8003 - val_mae: 45.9830
Epoch 12/30
1632/1632 [==============================] - 6s 3ms/step - loss: 10336.4580 - mae: 57.7389 - val_loss: 6807.2344 - val_mae: 45.7177
Epoch 13/30
1632/1632 [==============================] - 7s 4ms/step - loss: 10310.5361 - mae: 57.3277 - val_loss: 6850.2969 - val_mae: 45.4550
Epoch 14/30
1632/1632 [==============================] - 5s 3ms/step - loss: 10166.9277 - mae: 57.0475 - val_loss: 6744.7256 - val_mae: 45.1894
Epoch 15/30
1632/1632 [==============================] - 6s 3ms/step - loss: 10183.2529 - mae: 56.7860 - val_loss: 6895.8149 - val_mae: 45.2963
Epoch 16/30
1632/1632 [==============================] - 7s 5ms/step - loss: 10198.4160 - mae: 56.7854 - val_loss: 7115.2378 - val_mae: 45.8039
Epoch 17/30
1619/1632 [===========================>.] - ETA: 0s - loss: 10178.8887 - mae: 56.7009Restoring model weights from the end of the best
1632/1632 [==============================] - 5s 3ms/step - loss: 10185.3525 - mae: 56.7069 - val_loss: 7103.7026 - val_mae: 45.6551
Epoch 17: early stopping
```

```python
loss = history.history['loss']
val_loss = history.history['val_loss']
sns.set(style='whitegrid')
mae = history.history['mae']
val_mae = history.history['val_mae']
```

```
plt.figure(figsize=(8, 6))
plt.subplot(1, 2, 1)
sns.lineplot(x=range(1, len(loss) + 1), y=loss, label='Loss (Train)')
sns.lineplot(x=range(1, len(val_loss) + 1), y=val_loss, label='Loss (Validation)')
plt.xlabel('Epochs')
plt.ylabel('Loss')
plt.legend()


plt.subplot(1, 2, 2)
sns.lineplot(x=range(1, len(mae) + 1), y=mae, label='MAE (Train)')
sns.lineplot(x=range(1, len(val_mae) + 1), y=val_mae, label='MAE (Validation)')
plt.xlabel('Epochs')
plt.ylabel('MAE')
plt.legend()

plt.tight_layout()
plt.show()
```
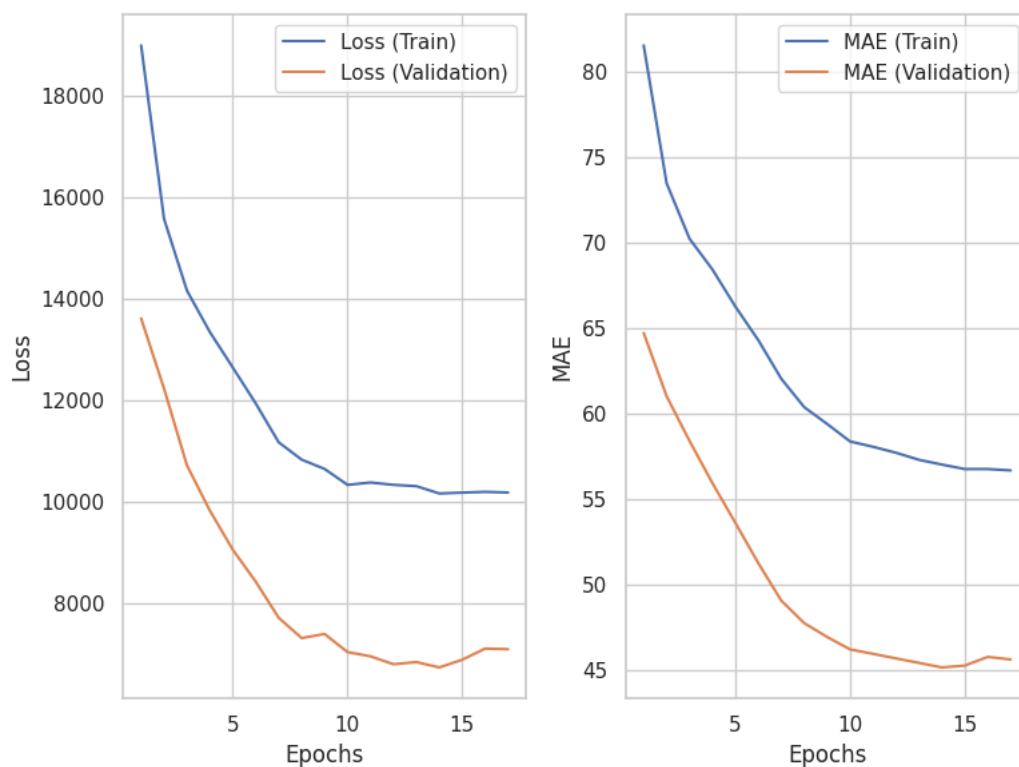

4.5 Evaluar en Test

```
y_pred = model.predict(X_test)
```

```
2040/2040 [==============================] - 4s 2ms/step
```

```
from sklearn.metrics import mean_absolute_error
```

```
error = mean_absolute_error(y_test, y_pred)
error
```

```
44.76521498025058
```

5 Generación de salida para competencia en Kaggle

```
from google.colab import drive
drive.mount("/content/drive")
```

```
Drive already mounted at /content/drive; to attempt to forcibly remount, call drive.mount("/content/drive", force_remount=True).
```

```python
!cp '/content/drive/MyDrive/Data/private_data_to_predict.csv' '/content/'
data_for_kaggle = pd.read_csv('private_data_to_predict.csv')


data_for_kaggle=data_for_kaggle.drop(cols_eliminar1, axis=1)


data_for_kaggle=data_for_kaggle.drop(cols_eliminar2,axis=1)


data_for_kaggle=data_for_kaggle.drop(cols_eliminar3,axis=1)


data_for_kaggle=data_for_kaggle.drop('Country',axis=1)


data_for_kaggle=data_for_kaggle.drop(cols_eliminar4, axis=1)


data_for_kaggle=data_for_kaggle.drop(['Geolocation'],axis=1)


data_for_kaggle=data_for_kaggle.drop(['Calendar Updated'],axis=1)


data_for_kaggle=data_for_kaggle.drop(['Name','Summary','Space','Description'],axis=1)


data_for_kaggle=data_for_kaggle.drop(['Beds','Bedrooms'],axis=1)


data_for_kaggle=data_for_kaggle.drop(['Minimum Nights','Maximum Nights'],axis=1)


canc_types = ['strict', 'flexible', 'moderate','moderate_new','strict_new','flexible_new']
data_for_kaggle.loc[~data_for_kaggle['Cancellation Policy'].isin(canc_types), 'Cancellation Policy'] = 'strict'


mapeo = {'flexible_new': 1, 'flexible': 2,'moderate_new':3, 'moderate':4,'strict_new':5,'strict':6}
data_for_kaggle['Cancellation Policy'] = data_for_kaggle['Cancellation Policy'].map(mapeo)


data_for_kaggle=data_for_kaggle.drop(data_for_kaggle[data_for_kaggle['Room Type'] == '9'].index)


mapeo = {'Shared room': 1, 'Private room': 2,'Entire home/apt':3}
data_for_kaggle['Room Type'] = data_for_kaggle['Room Type'].map(mapeo)


data_for_kaggle=data_for_kaggle.drop(['Bed Type'],axis=1)


data_for_kaggle=data_for_kaggle.drop(['Experiences Offered'],axis=1)


amenities_split = data_for_kaggle['Amenities'].str.split(',')
all_amenities = [item for sublist in amenities_split.dropna() for item in sublist]
unique_amenities = set(all_amenities)


data_for_kaggle['Has_Pool'] = data_for_kaggle['Amenities'].str.contains('Pool')
data_for_kaggle['Amenities'] = data_for_kaggle['Amenities'].str.replace('Hot tub', 'Hot_Tub')
data_for_kaggle['Hot_Tub'] = data_for_kaggle['Amenities'].str.contains('Hot_Tub')


data_for_kaggle=data_for_kaggle.drop(['Amenities'],axis=1)


filtered_df = data_for_kaggle[data_for_kaggle['Property Type'].isin(['Apartment', 'House', 'Condominium','Loft','Bed & Breakfast','Townhous


data_for_kaggle.loc[~data_for_kaggle['Property Type'].isin(prop_types), 'Property Type'] = 'Apartment'


data_for_kaggle=data_for_kaggle.drop(availability,axis=1)


data_for_kaggle=data_for_kaggle.drop(cols_elim5, axis=1)


data_for_kaggle=data_for_kaggle.drop(['First Review','Last Review'], axis=1)


data_for_kaggle=data_for_kaggle.drop(['Last Scraped'],axis=1)
```

```python
data_for_kaggle=data_for_kaggle.drop(['Calendar last Scraped'],axis=1)


data_for_kaggle=data_for_kaggle.drop(host, axis=1)


data_for_kaggle=data_for_kaggle.drop(['Calculated host listings count','Host Total Listings Count'], axis=1)


data_for_kaggle=data_for_kaggle[~data_for_kaggle['Country Code'].isin(['CN', 'MX', 'It','UY','VU'])]


geo=['Street','City','State','Zipcode','Smart Location','Neighbourhood Cleansed','Host Neighbourhood','Market','Host Location']


data_for_kaggle=data_for_kaggle.drop(geo, axis=1)


data_for_kaggle['Hot_Tub'].fillna(False, inplace=True)
data_for_kaggle['Has_Pool'].fillna(False, inplace=True)
data_for_kaggle['Bathrooms'].fillna(1,inplace=True)
data_for_kaggle['Host Listings Count'].fillna(1,inplace=True)
data_for_kaggle['Accommodates'].fillna(2,inplace=True)
data_for_kaggle['Extra People'].fillna(0,inplace=True)


data_for_kaggle=data_for_kaggle.drop(['Review Scores Rating','Review Scores Location','Reviews per Month'],axis=1)


data_for_kaggle = pd.get_dummies(data_for_kaggle, columns=['Property Type'], drop_first=True)
data_for_kaggle = pd.get_dummies(data_for_kaggle, columns=['Has_Pool'], drop_first=True)
data_for_kaggle = pd.get_dummies(data_for_kaggle, columns=['Hot_Tub'], drop_first=True)


data_for_kaggle=data_for_kaggle.drop('Property Type_Townhouse',axis=1)


data_for_kaggle=data_for_kaggle.drop('Features',axis=1)


data_for_kaggle.isnull().sum()
```

```
    id                                0
    Host Listings Count               0
    Country Code                      0
    Latitude                          0
    Longitude                         0
    Room Type                         0
    Accommodates                      0
    Bathrooms                         0
    Guests Included                   0
    Extra People                      0
    Number of Reviews                 0
    Cancellation Policy               0
    Property Type_Bed & Breakfast     0
    Property Type_Condominium         0
    Property Type_House               0
    Property Type_Loft                0
    Has_Pool_True                     0
    Hot_Tub_True                      0
    dtype: int64
```

```python
paises_unicos = data_for_kaggle['Country Code'].unique()
codigo_pais = {pais: codigo for codigo, pais in enumerate(paises_unicos)}
data_for_kaggle['Country_Code'] = data_for_kaggle['Country Code'].map(codigo_pais)


data_for_kaggle = data_for_kaggle.drop('Country Code', axis = 1)


var_escalar = ['Host Listings Count','Accommodates','Number of Reviews','Bathrooms','Extra People','Guests Included','Cancellation Policy',
data_for_kaggle[var_escalar] = scaler.fit_transform(data_for_kaggle[var_escalar])


len(data_for_kaggle.columns)
```

```
    18
```

```python
target = 'Price'
features = [c for c in data_for_kaggle.columns if c != 'id' and c != 'Price']
features
```

```
['Host Listings Count',
 'Latitude',
 'Longitude',
 'Room Type',
 'Accommodates',
 'Bathrooms',
 'Guests Included',
 'Extra People',
 'Number of Reviews',
 'Cancellation Policy',
 'Property Type_Bed & Breakfast',
 'Property Type_Condominium',
 'Property Type_House',
 'Property Type_Loft',
 'Has_Pool_True',
 'Hot_Tub_True',
 'Country_Code']
```

```python
kaggle_results = model.predict(data_for_kaggle[features])
```

```
5022/5022 [==============================] - 9s 2ms/step
```

```python
print(kaggle_results)
```

```
[[144.6323  ]
 [ 52.771606]
 [ 71.46565 ]
 ...
 [ 26.860523]
 [ 91.54478 ]
 [162.23746 ]]
```

```python
from google.colab import drive
drive.mount('/content/drive')
```

```
Drive already mounted at /content/drive; to attempt to forcibly remount, call drive.mount("/content/drive", force_remount=True).
```

```python
! pwd
```

```
/content
```

```python
if 'cells' in locals() and len(cells) > 232 and 'outputs' in cells[232]:
    cells[232]['outputs'] = []
```

```python
!jupyter nbconvert --to html --no-prompt --no-input /content/Obligatorio_DeepLearning.ipynb
```

```
[NbConvertApp] Converting notebook /content/Obligatorio_DeepLearning.ipynb to html
[NbConvertApp] ERROR | Notebook JSON is invalid: Additional properties are not allowed ('metadata' was unexpected)

Failed validating 'additionalProperties' in stream:

On instance['cells'][232]['outputs'][0]:
{'metadata': {'tags': None},
 'name': 'stderr',
 'output_type': 'stream',
 'text': '\x1b[34m\x1b[1mwandb\x1b[0m: Agent Starting Run: 4n4o2mwu with '
```