```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt

df = pd.read_csv("ElectricCarData_Clean.csv")

df.head()
```

```
         Brand                               Model  AccelSec  TopSpeed_KmH
\
0       Tesla   Model 3 Long Range Dual Motor       4.6           233

1  Volkswagen                          ID.3 Pure      10.0           160

2    Polestar                                2       4.7           210

3         BMW                             iX3        6.8           180

4       Honda                               e        9.5           145


   Range_Km  Efficiency_WhKm FastCharge_KmH RapidCharge PowerTrain  \
0       450              161            940         Yes        AWD
1       270              167            250         Yes        RWD
2       400              181            620         Yes        AWD
3       360              206            560         Yes        RWD
4       170              168            190         Yes        RWD

     PlugType  BodyStyle Segment  Seats  PriceEuro
0  Type 2 CCS      Sedan       D      5      55480
1  Type 2 CCS  Hatchback       C      5      30000
2  Type 2 CCS   Liftback       D      5      56440
3  Type 2 CCS        SUV       D      5      68040
4  Type 2 CCS  Hatchback       B      4      32997
```

```
df.info
```

```
<bound method DataFrame.info of            Brand
Model  AccelSec  TopSpeed_KmH  \
0         Tesla     Model 3 Long Range Dual Motor       4.6
233
1    Volkswagen                          ID.3 Pure      10.0
160
2      Polestar                                2       4.7
210
3           BMW                             iX3        6.8
180
4         Honda                               e        9.5
145
..           ...                             ...       ...
...
```

```
98       Nissan                        Ariya 63kWh       7.5
160
99         Audi     e-tron S Sportback 55 quattro       4.5
210
100      Nissan               Ariya e-4ORCE 63kWh       5.9
200
101      Nissan   Ariya e-4ORCE 87kWh Performance       5.1
200
102       Byton                  M-Byte 95 kWh 2WD       7.5
190

     Range_Km  Efficiency_WhKm FastCharge_KmH RapidCharge
PowerTrain  \
0         450              161            940         Yes        AWD

1         270              167            250         Yes        RWD

2         400              181            620         Yes        AWD

3         360              206            560         Yes        RWD

4         170              168            190         Yes        RWD

..        ...              ...            ...         ...        ...

98        330              191            440         Yes        FWD

99        335              258            540         Yes        AWD

100       325              194            440         Yes        AWD

101       375              232            450         Yes        AWD

102       400              238            480         Yes        AWD


       PlugType  BodyStyle Segment  Seats  PriceEuro
0    Type 2 CCS      Sedan       D      5      55480
1    Type 2 CCS  Hatchback       C      5      30000
2    Type 2 CCS   Liftback       D      5      56440
3    Type 2 CCS        SUV       D      5      68040
4    Type 2 CCS  Hatchback       B      4      32997
..          ...        ...     ...    ...        ...
98   Type 2 CCS  Hatchback       C      5      45000
99   Type 2 CCS        SUV       E      5      96050
100  Type 2 CCS  Hatchback       C      5      50000
101  Type 2 CCS  Hatchback       C      5      65000
102  Type 2 CCS        SUV       E      5      62000
```

```
[103 rows x 14 columns]>
```

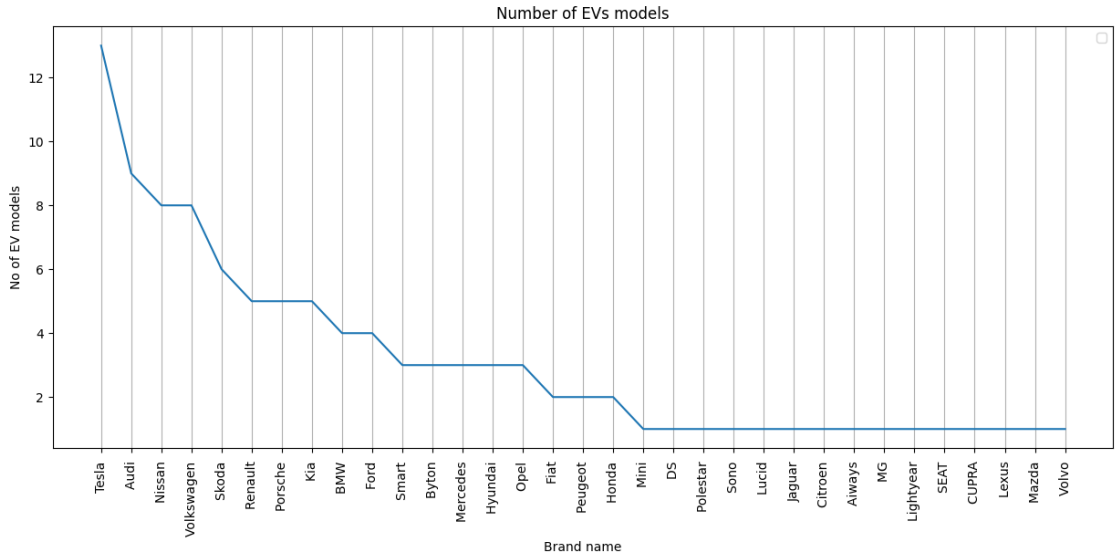
```
df.head()
```

```
         Brand                               Model  AccelSec  TopSpeed_KmH
\
0       Tesla   Model 3 Long Range Dual Motor       4.6           233

1  Volkswagen                         ID.3 Pure      10.0           160

2    Polestar                                2       4.7           210

3         BMW                             iX3        6.8           180

4       Honda                               e        9.5           145


   Range_Km  Efficiency_WhKm FastCharge_KmH RapidCharge PowerTrain  \
0       450              161            940         Yes        AWD
1       270              167            250         Yes        RWD
2       400              181            620         Yes        AWD
3       360              206            560         Yes        RWD
4       170              168            190         Yes        RWD

     PlugType  BodyStyle Segment  Seats  PriceEuro
0  Type 2 CCS      Sedan       D      5      55480
1  Type 2 CCS  Hatchback       C      5      30000
2  Type 2 CCS   Liftback       D      5      56440
3  Type 2 CCS        SUV       D      5      68040
4  Type 2 CCS  Hatchback       B      4      32997
```

```
#total numbers of model from repected brand
plt.figure(figsize=(15,6))
plt.xticks(rotation = 90)
plt.grid(axis="x")
plt.legend()
plt.xlabel('Brand name')
plt.ylabel("No of EV models")
plt.title("Number of EVs models")
plt.plot(df['Brand'].value_counts(), label='No. of Models')
```

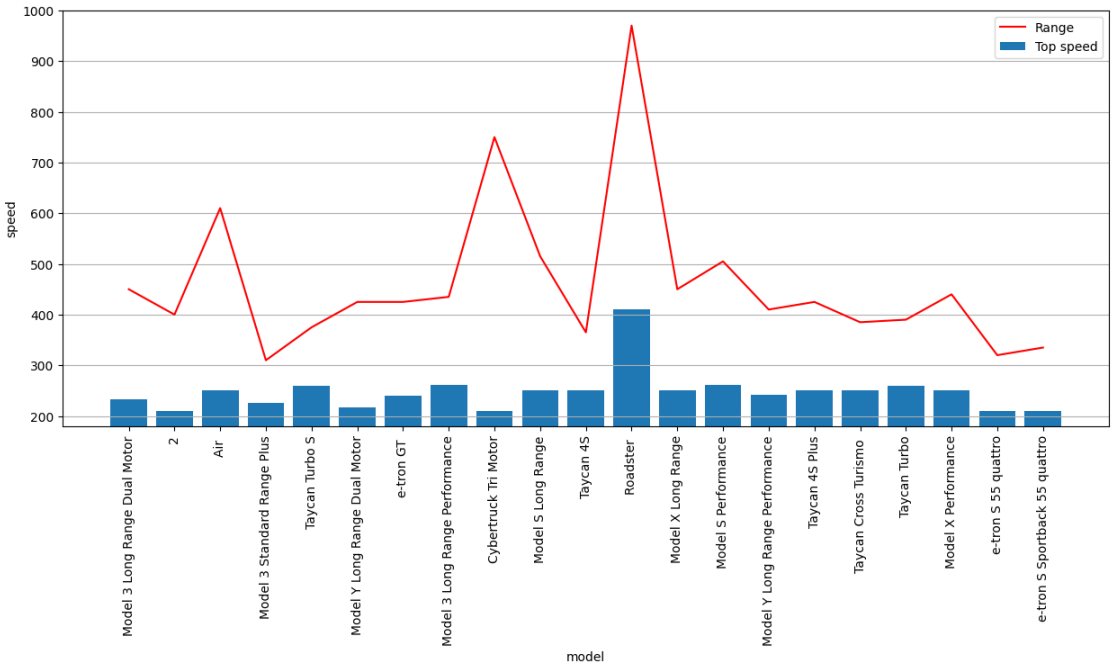
```
No artists with labels found to put in legend.  Note that artists
whose label start with an underscore are ignored when legend() is
called with no argument.
```

```
[<matplotlib.lines.Line2D at 0x1ebb922d420>]
```




```
# Top Speed and Range filtration
df2 = df[df['TopSpeed_KmH']>200]

plt.figure(figsize=(15,6))
plt.ylim(bottom=180,top=1000)
plt.xticks(rotation = 90)
plt.xlabel('model')
plt.ylabel('speed')
plt.grid(axis = 'y')
plt.bar(df2['Model'],df2['TopSpeed_KmH'],label = 'Top speed')



plt.plot(df2['Model'],df2['Range_Km'],c = 'r',label= 'Range')

plt.legend()
```

```
<matplotlib.legend.Legend at 0x1ebbb70fa60>
```



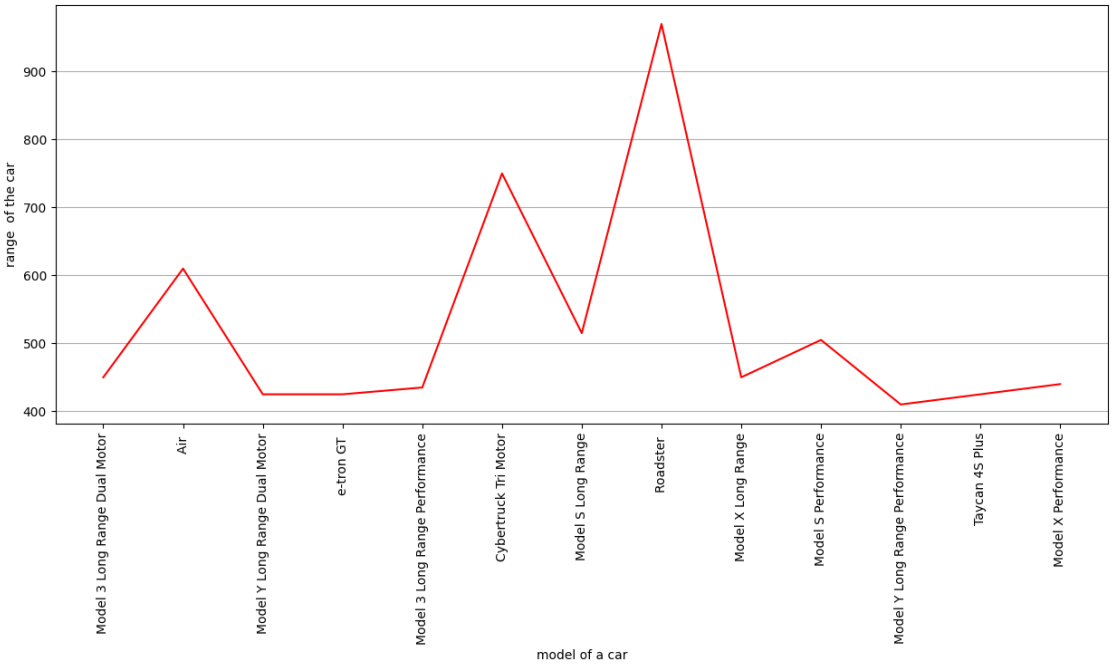

```
# Filteration of models related to Range

df3 = df2[df2["Range_Km"]>400]

df3.head(3)
```

```
     Brand                            Model  AccelSec  TopSpeed_KmH
Range_Km  \
0   Tesla   Model 3 Long Range Dual Motor       4.6           233
450
5   Lucid                             Air       2.8           250
610
21  Tesla   Model Y Long Range Dual Motor       5.1           217
425

    Efficiency_WhKm FastCharge_KmH RapidCharge PowerTrain     PlugType
\
0               161            940         Yes        AWD  Type 2 CCS

5               180            620         Yes        AWD  Type 2 CCS

21              171            930         Yes        AWD  Type 2 CCS


   BodyStyle Segment  Seats  PriceEuro
0      Sedan       D      5      55480
5      Sedan       F      5     105000
21       SUV       D      7      58620
```

```
#Models having range higher than 400Km with speed above 200KmH
```

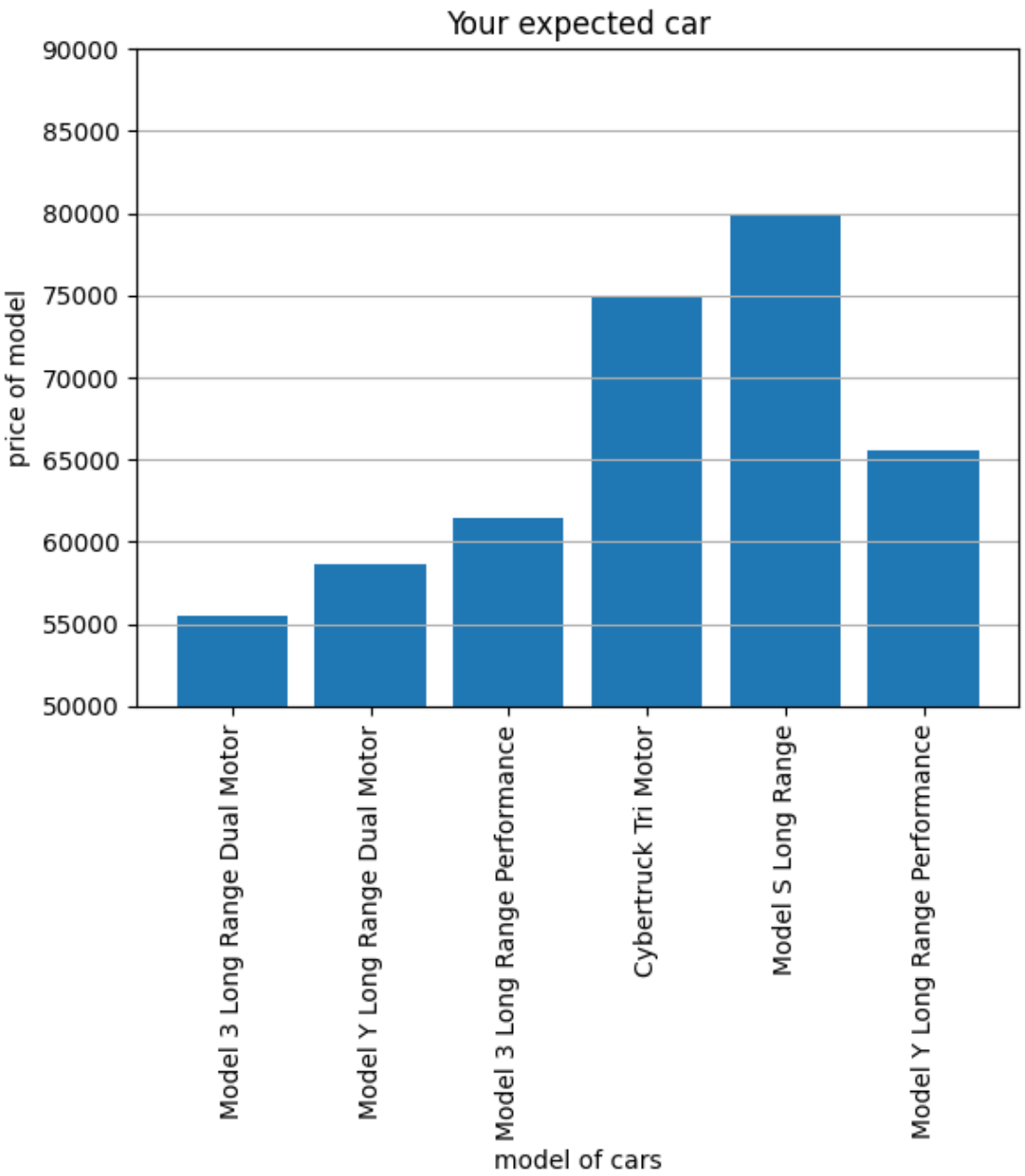
```
plt.figure(figsize = (15,6))
plt.xlabel('model of a car')
plt.ylabel("range  of the car")
plt.xticks(rotation = 90)
plt.grid(axis = 'y')


plt.plot(df3['Model'],df3['Range_Km'],c='r')
```

```
[<matplotlib.lines.Line2D at 0x1ebbd7b04c0>]
```




```
#Filteration according to Price Range

df4 = df3[df3['PriceEuro']>50000]
df5 = df4[df4['PriceEuro']<80000]

plt.xlabel('model of cars')
plt.ylabel('price of model')
plt.title('Your expected car')
plt.xticks(rotation = 90)
plt.grid(axis = 'y')
plt.ylim(bottom=50000,top=90000)
plt.bar(df5['Model'],df5["PriceEuro"])
```

```
<BarContainer object of 6 artists>
```




```
df5.style.hide_index()
```

```
C:\Users\ASUS\AppData\Local\Temp\ipykernel_888\2622142094.py:1:
FutureWarning: this method is deprecated in favour of
`Styler.hide(axis='index')`
  df5.style.hide_index()
```

```
<pandas.io.formats.style.Styler at 0x1ebc6034c40>
```