


```
import pandas as pd
import numpy as np
import matplotlib.pyplot as mtp
%matplotlib inline

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).

dataset=pd.read_csv("/content/drive/MyDrive/Personal/Studies/MSC Data Science Material/SEM2/ML/Practical/data_set/petrol_consumption.csv")

dataset.head()
```



	Petrol_tax	Average_income	Paved_Highways	Population_Driver_licence(%)	Petrol_
0	9.0	3571	1976	0.525	
1	9.0	4092	1250	0.572	
2	9.0	3865	1586	0.580	
3	7.5	4870	2351	0.529	
4	8.0	4399	431	0.544	

```
dataset.describe()
```

	Petrol_tax	Average_income	Paved_Highways	Population_Driver_licence(%)	Pet
count	48.000000	48.000000	48.000000	48.000000	
mean	7.668333	4241.833333	5565.416667	0.570333	
std	0.950770	573.623768	3491.507166	0.055470	
min	5.000000	3063.000000	431.000000	0.451000	
25%	7.000000	3739.000000	3110.250000	0.529750	
50%	7.500000	4298.000000	4735.500000	0.564500	
75%	8.125000	4578.750000	7156.000000	0.595250	
max	10.000000	5342.000000	17782.000000	0.724000	

```
#Prepare data
x=dataset[["Petrol_tax", "Average_income", "Paved_Highways", "Population_Driver_licence(%)"]]
y=dataset["Petrol_Consumption"]
```

```
from sklearn.model_selection import train_test_split
x_train, x_test, y_train, y_test=train_test_split(x,y, test_size=0.2, random_state=0)
```

```
#Train Algorithm
from sklearn.linear_model import LinearRegression
regressor=LinearRegression()
regressor.fit(x_train, y_train)
```

▾ LinearRegression

LinearRegression()

```
coeff_df=pd.DataFrame(regressor.coef_, x.columns, columns=["Coefficient"])
coeff_df
```

	Coefficient
Petrol_tax	-40.016660
Average_income	-0.065413
Paved_Highways	-0.004741
Population_Driver_licence(%)	1341.862121

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