canada-per-capita-income

November 1, 2025

[14]:
```
import pandas as pd
import numpy as np
#from sklearn import linear_model
from sklearn.linear_model import LinearRegression
import matplotlib.pyplot as plt
```

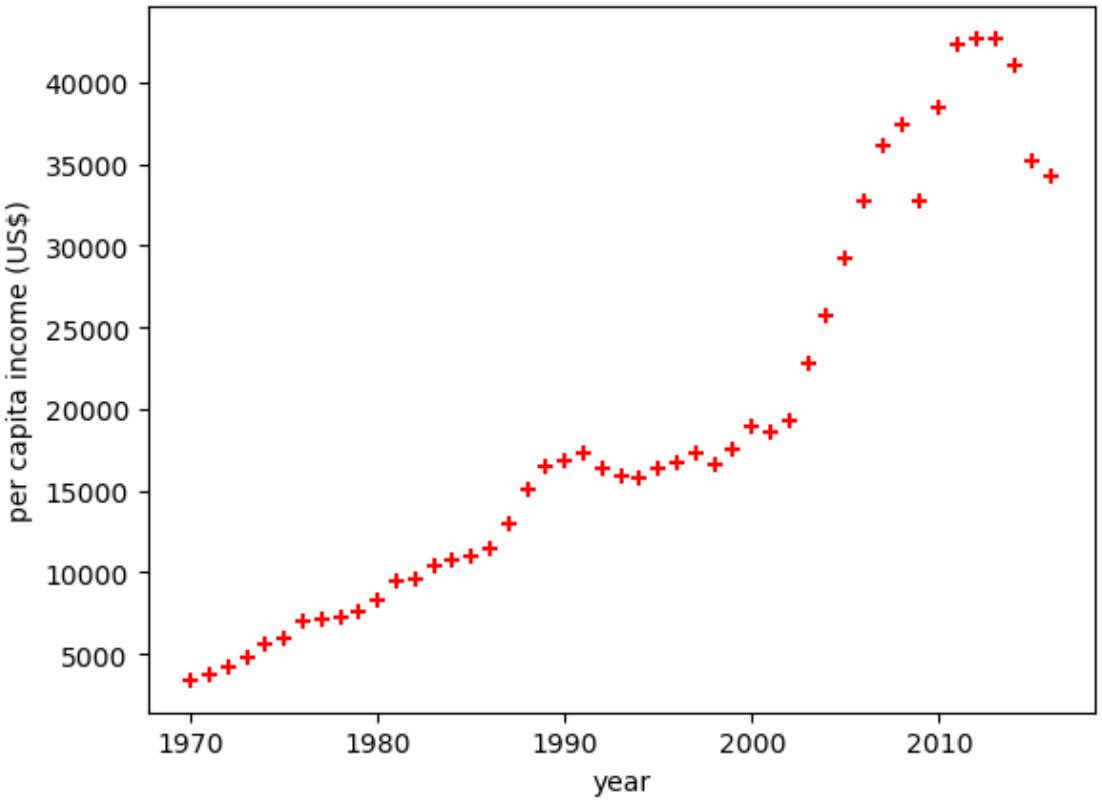
[3]:
```
df = pd.read_csv("D:\Download\canada_per_capita_income.csv")
df.head()
```

[3]:

	year	per capita income (US$)
0	1970	3399.299037
1	1971	3768.297935
2	1972	4251.175484
3	1973	4804.463248
4	1974	5576.514583

[4]:
```
plt.xlabel('year')
plt.ylabel('per capita income (US$)')
plt.scatter(df.year, df['per capita income (US$)'], color='red', marker='+')
```

[4]:
```
<matplotlib.collections.PathCollection at 0x239fb696900>
```



[5]:
```
year = df.drop('per capita income (US$)',axis='columns')
#new_df = df.area
year.head()
```

[5]:
```
   year
0  1970
1  1971
2  1972
3  1973
4  1974
```

[6]:
```
income = df['per capita income (US$)']
income.head()
```

[6]:
```
0    3399.299037
1    3768.297935
2    4251.175484
3    4804.463248
4    5576.514583
Name: per capita income (US$), dtype: float64
```

[7]:
```
training = LinearRegression()
training.fit(year,income)
```

[7]:
```
LinearRegression()
```

[12]:
```
# Predict for the year 2020
training.predict([[2020]])
```

```
D:\Games\anaconda3\Lib\site-packages\sklearn\utils\validation.py:2739:
UserWarning: X does not have valid feature names, but LinearRegression was
fitted with feature names
  warnings.warn(
```

[12]:
```
array([41288.69409442])
```

[9]:
```
year_predict = 2020
income_predicted = training.predict([[2020]])
```

```
D:\Games\anaconda3\Lib\site-packages\sklearn\utils\validation.py:2739:
UserWarning: X does not have valid feature names, but LinearRegression was
fitted with feature names
  warnings.warn(
```

[11]:
```
# Predict for the year 2020
print (income_predicted)
```

```
[41288.69409442]
```

[16]:
```
income_predicted_df = pd.DataFrame(income_predicted)
income_predicted_df.to_csv("prediction.csv", index=False)  # index=False to␣
 ↪avoid saving row indices
```

[ ]:
```

```