canada capita

June 4, 2022

[1]:
```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
%matplotlib inline
from sklearn import linear_model
```

[2]:
```
df=pd.read_csv('https://raw.githubusercontent.com/codebasics/py/master/ML/
↪1_linear_reg/Exercise/canada_per_capita_income.csv')
```

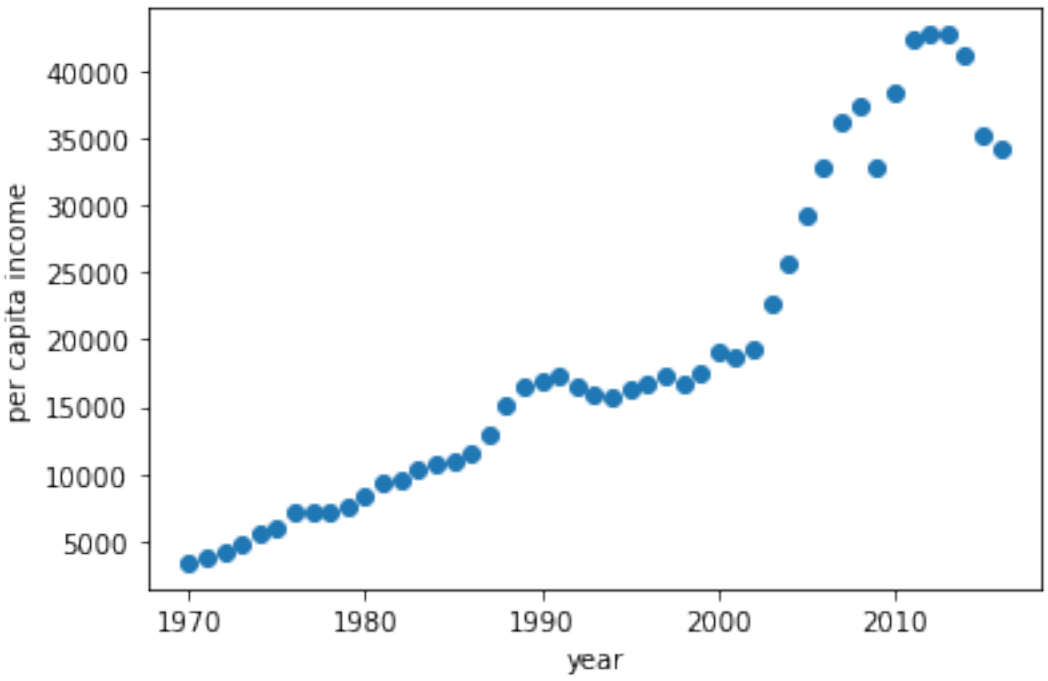
[3]:
```
df.head()
```

[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')
plt.scatter(df.year,df[['per capita income (US$)']])
```

[4]:
```
<matplotlib.collections.PathCollection at 0x2025b1106a0>
```



[6]:
```
reg=linear_model.LinearRegression()
```

[7]:
```
reg.fit(df[['year']],df[['per capita income (US$)']])
```

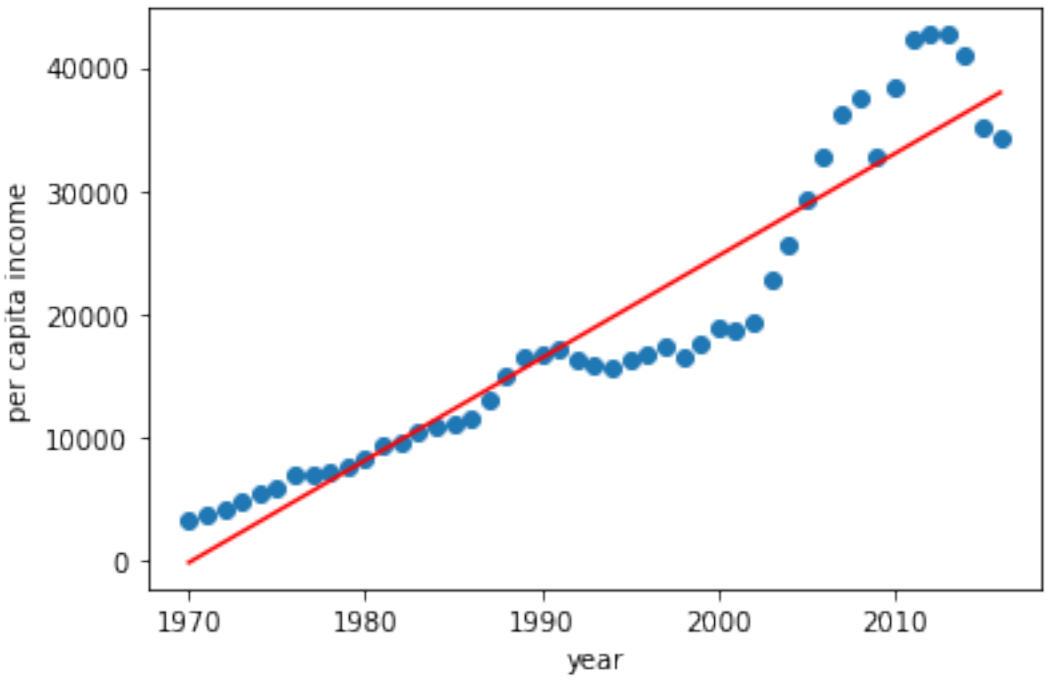
[7]:
```
LinearRegression()
```

[8]:
```
reg.predict([[2020]])   #2020 capita prediction
```

[8]:
```
array([[41288.69409442]])
```

[9]:
```
plt.xlabel('year')
plt.ylabel('per capita income')
plt.scatter(df.year,df[['per capita income (US$)']])
plt.plot(df.year,reg.predict(df[['year']]),color="r")
```

[9]:
```
[<matplotlib.lines.Line2D at 0x2025b8a7790>]
```


40000
30000
20000
10000
0
per capita income
1970
1980
1990
2000
2010
year

[ ]: