

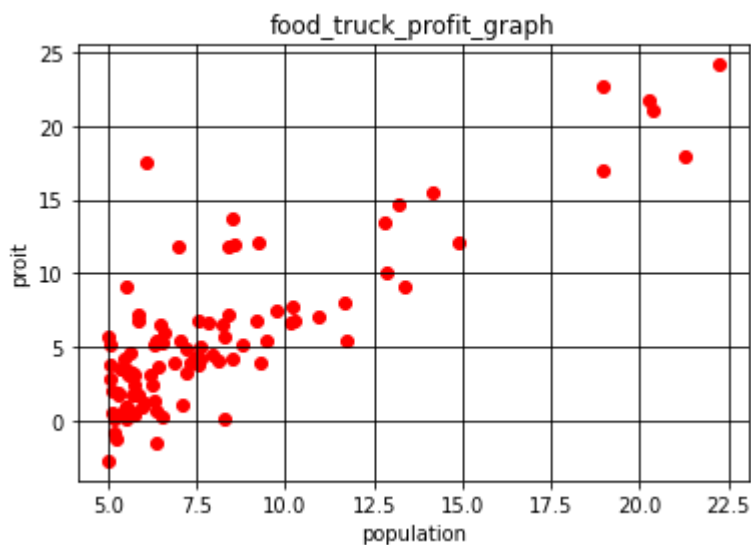
In [1]:

```
import numpy as np
from matplotlib import pyplot as plt
import pandas as pd
from sklearn.model_selection import train_test_split
from sklearn.linear_model import LinearRegression
data=pd.read_csv("profitdataset.txt")
print(data.shape)
```

(97, 2)

In [4]:

```
x=data[['population']].values
y=data[['profit']].values
plt.scatter(x,y,c='r',label='scatter_data')
plt.xlabel("population")
plt.ylabel("profit")
plt.title("food_truck_profit_graph")
plt.grid(True,color='k')
plt.show()
```



In [5]:

```
k=LinearRegression()
k.fit(x,y)
```

Out[5]:

LinearRegression()

In [7]:

```
print('cvalue:',k.intercept_)
```

cvalue: [-3.89578088]

In [8]:

```
print('m value:',k.coef_)
```

m value: [[1.19303364]]

In [10]:

```
y_pred=k.predict(x)
plt.scatter(x,y,color='red')
plt.plot(x,y_pred,color='blue')
plt.title('salary vs experience(trainingset)')
plt.xlabel('years of experience')
plt.ylabel('salary')
plt.show()
```



In [11]:

```
from sklearn.metrics import r2_score
r_sq=r2_score(y,y_pred)
r_sq
```

Out[11]:

0.7020315537841397

In [14]:

```
from sklearn.metrics import mean_squared_error
rmse=mean_squared_error(y,y_pred)
rmse
```

Out[14]:

8.953942751950358

In [15]:

```
n1=4.5  
n2=6.5  
print('profit from 4500 people city is',k.predict([[n1]])*10000,'$')  
print('profit from 65000 people city is',k.predict([[n2]])*10000,'$')
```

```
profit from 4500 people city is [[14728.70520541]] $  
profit from 65000 people city is [[38589.37808921]] $
```

In []: