practical-4-1

February 17, 2025

[2]:
```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
```

[3]:
```
x=np.array([95,85,80,70,60])
y=np.array([85,95,70,65,70])
```

[4]:
```
model=np.polyfit(x,y,1)
```

[5]:
```
model
```

[5]:
```
array([ 0.64383562, 26.78082192])
```

[6]:
```
predict = np.poly1d(model)
predict(65)
```

[6]:
```
68.63013698630137
```

[7]:
```
y_pred= predict(x)
y_pred
```

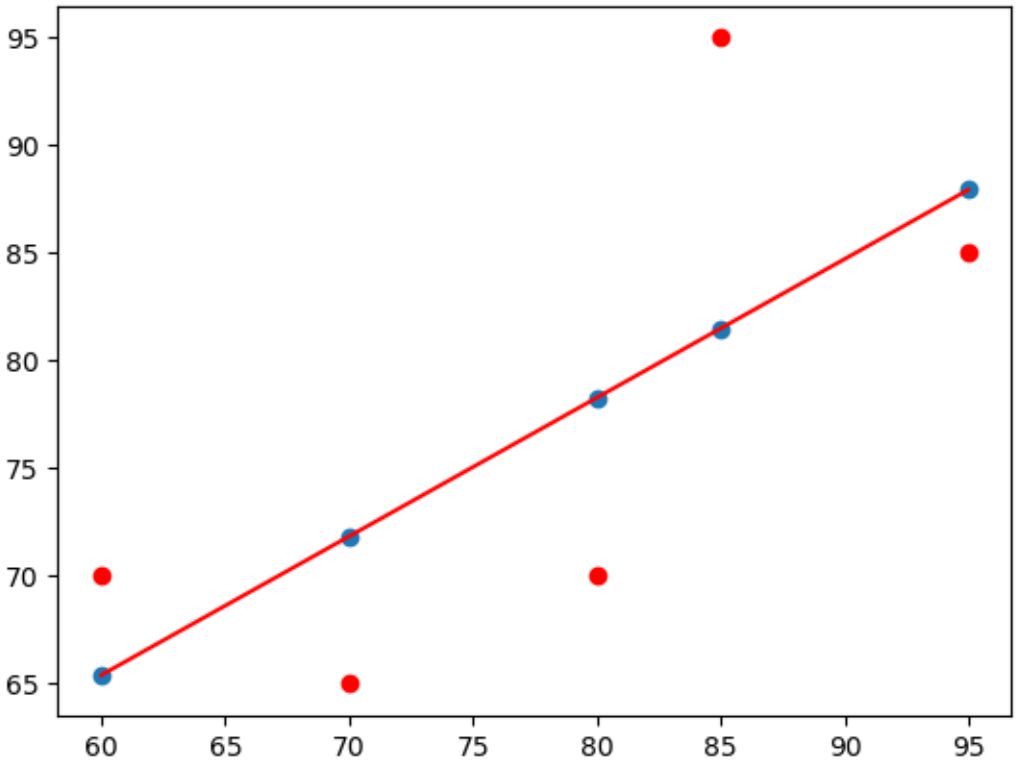
[7]:
```
array([87.94520548, 81.50684932, 78.28767123, 71.84931507, 65.4109589 ])
```

[8]:
```
from sklearn.metrics import r2_score
r2_score(y, y_pred)
```

[8]:
```
0.4803218090889326
```

[9]:
```
y_line = model[1] + model[0]* x
plt.plot(x, y_line, c = 'r')
plt.scatter(x, y_pred)
plt.scatter(x,y,c='r')
```

[9]:
```
<matplotlib.collections.PathCollection at 0x13c847dabd0>
```


95
90
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[ ]: