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simple-linear-regression

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1 Simple Linear Regression

1.1 Importing the libraries

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

1.2 Importing the dataset

[ ]:
```
dataset = pd.read_csv('Salary_Data.csv')
X = dataset.iloc[:, :-1].values
y = dataset.iloc[:, -1].values
```

1.3 Splitting the dataset into the Training set and Test set

[ ]:
```
from sklearn.model_selection import train_test_split
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size = 1/3,␣
 ↪random_state = 0)
```

1.4 Training the Simple Linear Regression model on the Training set

[ ]:
```
from sklearn.linear_model import LinearRegression
regressor = LinearRegression()
regressor.fit(X_train, y_train)
```

[ ]:
```
LinearRegression(copy_X=True, fit_intercept=True, n_jobs=None, normalize=False)
```

1.5 Predicting the Test set results

[ ]:
```
y_pred = regressor.predict(X_test)
```

1.6 Visualising the Training set results

```
[ ]: plt.scatter(X_train, y_train, color = 'red')
plt.plot(X_train, regressor.predict(X_train), color = 'blue')
plt.title('Salary vs Experience (Training set)')
plt.xlabel('Years of Experience')
plt.ylabel('Salary')
plt.show()
```

1.7 Visualising the Test set results

```
[ ]: plt.scatter(X_test, y_test, color = 'red')
plt.plot(X_train, regressor.predict(X_train), color = 'blue')
plt.title('Salary vs Experience (Test set)')
plt.xlabel('Years of Experience')
plt.ylabel('Salary')
plt.show()
```

Dataset Link:
https://github.com/Nadhim/ML-Lab/blob/main/Experiment_1%20-%20Linear%20Regression/Salary_Data.csv

Project Link:
https://github.com/Nadhim/ML-Lab/tree/main/Experiment_1%20-%20Linear%20Regression