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# Batch: LISUM21

# Submitted on: 27th May 2023

# Submitted to: Data Glacier

Dataset

```
In [3]:   1  dataset = pd.read_csv('hiring.csv')
          2  dataset
```

Out[3]:

|   | experience | test_score | interview_score | salary |
|---|---|---|---|---|
| 0 | NaN | 8.0 | 9 | 50000 |
| 1 | NaN | 8.0 | 6 | 45000 |
| 2 | five | 6.0 | 7 | 60000 |
| 3 | two | 10.0 | 10 | 65000 |
| 4 | seven | 9.0 | 6 | 70000 |
| 5 | three | 7.0 | 10 | 62000 |
| 6 | ten | NaN | 7 | 72000 |
| 7 | eleven | 7.0 | 8 | 80000 |

Flask Deployment Steps:

1. Code
   a. Model.ipynb

```
In [2]:   import pandas as pd
          from sklearn.linear_model import LinearRegression
          import pickle
```

```
In [3]:   dataset = pd.read_csv('hiring.csv')
          dataset
```

Out[3]:

| | experience | test_score | interview_score | salary |
|---|---|---|---|---|
| 0 | NaN | 8.0 | 9 | 50000 |
| 1 | NaN | 8.0 | 6 | 45000 |
| 2 | five | 6.0 | 7 | 60000 |
| 3 | two | 10.0 | 10 | 65000 |
| 4 | seven | 9.0 | 6 | 70000 |
| 5 | three | 7.0 | 10 | 62000 |
| 6 | ten | NaN | 7 | 72000 |
| 7 | eleven | 7.0 | 8 | 80000 |

```
In [4]:   # Data Cleaaning
          # remove all nun values to numeric value 0
          dataset.experience.fillna(0, inplace = True)
          dataset.test_score.fillna(int(dataset.test_score.mean()), inplace = True)
          dataset
```

Out[4]:

| | experience | test_score | interview_score | salary |
|---|---|---|---|---|
| 0 | 0 | 8.0 | 9 | 50000 |
| 1 | 0 | 8.0 | 6 | 45000 |
| 2 | five | 6.0 | 7 | 60000 |
| 3 | two | 10.0 | 10 | 65000 |
| 4 | seven | 9.0 | 6 | 70000 |
| 5 | three | 7.0 | 10 | 62000 |
| 6 | ten | 7.0 | 7 | 72000 |
| 7 | eleven | 7.0 | 8 | 80000 |

```
In [6]:   # convert string to integers for calculation
          def w2n(x):
              word_2_num = {'one':1,'two':2,'three':3,'four':4,'five':5,'six':6,'seven':7,'eight':8,'nine':9,'ten':10,'elev
              return word_2_num[x]

          dataset.experience = dataset.experience.apply(lambda x: w2n(x))
          dataset
```

Out[6]:

| | experience | test_score | interview_score | salary |
|---|---|---|---|---|
| 0 | 0 | 8.0 | 9 | 50000 |
| 1 | 0 | 8.0 | 6 | 45000 |
| 2 | 5 | 6.0 | 7 | 60000 |
| 3 | 2 | 10.0 | 10 | 65000 |
| 4 | 7 | 9.0 | 6 | 70000 |
| 5 | 3 | 7.0 | 10 | 62000 |
| 6 | 10 | 7.0 | 7 | 72000 |
| 7 | 11 | 7.0 | 8 | 80000 |

In [8]:
```python
# Spliting to train and test dataset
X = dataset.iloc[:,:3]
y = dataset.iloc[:,-1]
print(X)
print(y)
```
```
   experience  test_score  interview_score
0           0         8.0                9
1           0         8.0                6
2           5         6.0                7
3           2        10.0               10
4           7         9.0                6
5           3         7.0               10
6          10         7.0                7
7          11         7.0                8
0    50000
1    45000
2    60000
3    65000
4    70000
5    62000
6    72000
7    80000
Name: salary, dtype: int64
```

In [9]:
```python
regressor = LinearRegression()

# Running the modet and fiiting the model
regressor = LinearRegression()
regressor.fit(X, y)
```

Out[9]: LinearRegression()

In [10]:
```python
# Saving model to disk
pickle.dump(regressor, open('model.pkl','wb'))
```

In [11]:
```python
# loading the model
model = pickle.load(open('model.pkl','rb'))
```

In [ ]:

b. App.py

```python
import numpy as np
from flask import Flask, request, jsonify, render_template
import pickle

app = Flask(__name__)
model = pickle.load(open('model.pkl', 'rb'))

@app.route('/')
def home():
    return render_template('index.html')

@app.route('/predict',methods=['POST'])
def predict():

    int_features = [int(x) for x in request.form.values()]
    final_features = [np.array(int_features)]
    prediction = model.predict(final_features)

    output = round(prediction[0], 2)

    return render_template('index.html', prediction_text='Employee Salary should

if __name__ == "__main__":
    app.run(debug=True)
```

2. Insert the values:

# Predict Salary Analysis

| Experience | Test Score | Interview Score | Predict |

# Predict Salary Analysis

| 3 | 6 | 5 | Predict |

3. Results

# Predict Salary Analysis

| Experience | Test Score | Interview Score | Predict |

Employee Salary should be $ 47824.73