Deployment on Flask week 4

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Batch Code: LISP01
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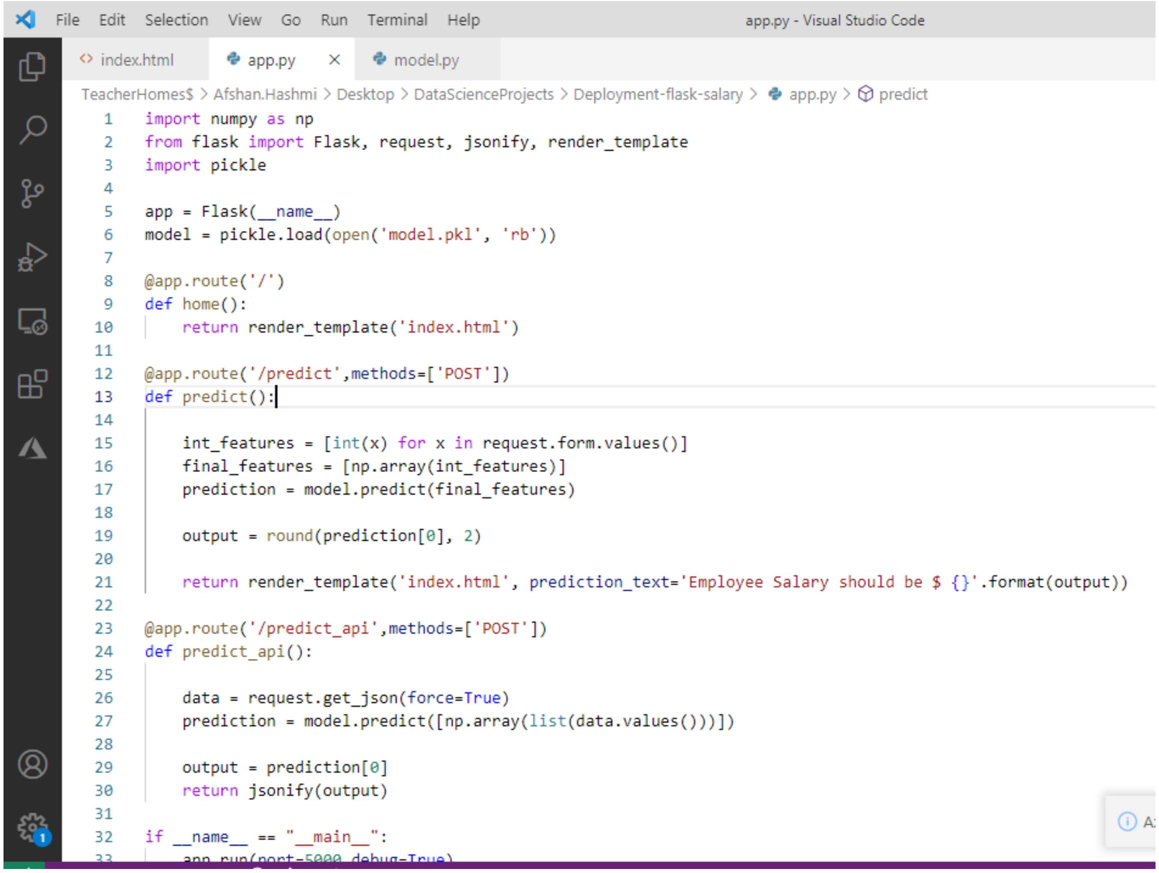
Submitted to: Data Glacier

1.Creating a flask application app.py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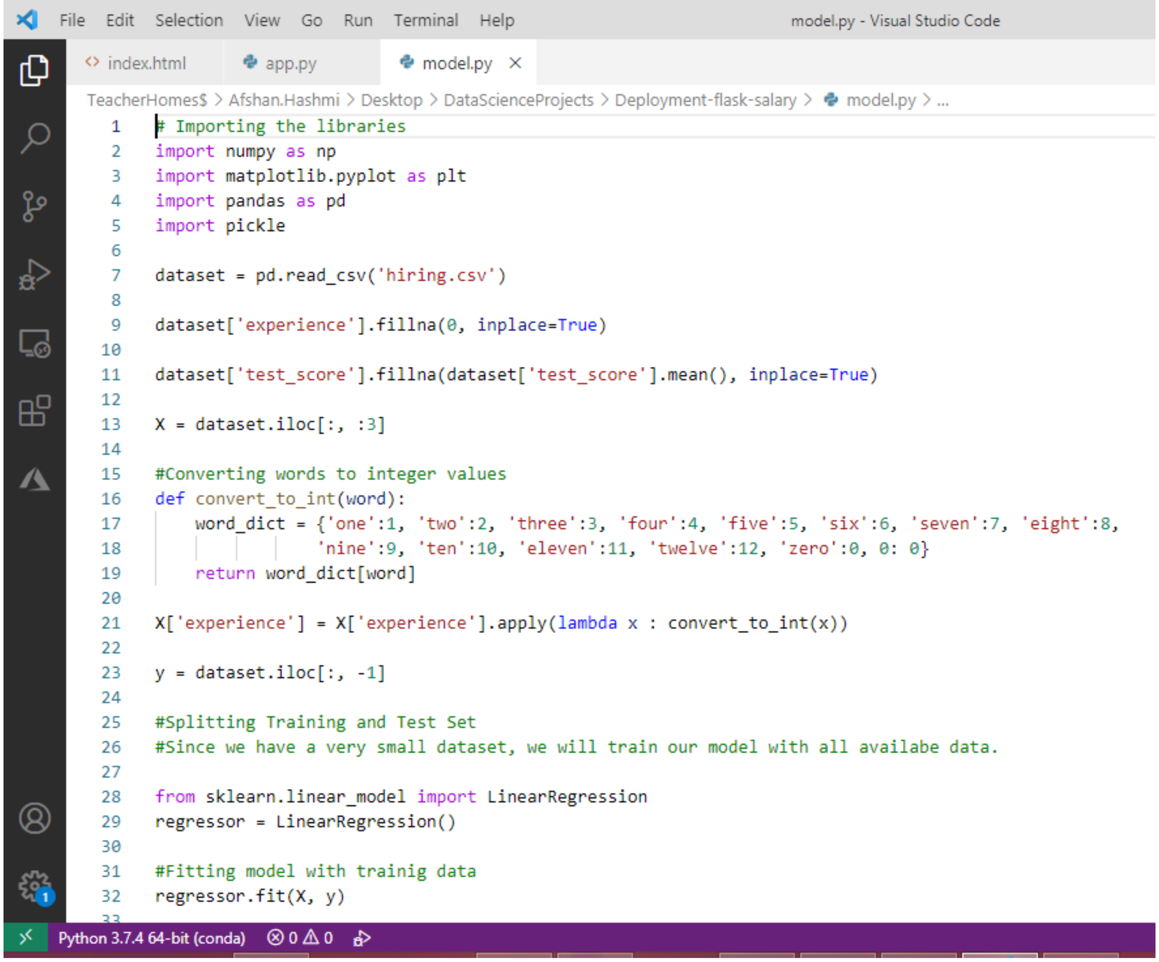
Terminal
Help
app.py - Visual Studio Code
index.html
app.py
model.py
TeacherHomes$ > Afshan.Hashmi > Desktop > DataScienceProjects > Deployment-flask-salary > app.py > predict

```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 be $ {}'.format(output))

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

    data = request.get_json(force=True)
    prediction = model.predict([np.array(list(data.values()))])

    output = prediction[0]
    return jsonify(output)

if __name__ == "__main__":
    app.run(port=5000,debug=True)
```

2. Created a model for salary prediction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Python 3.7.4 64-bit (conda)
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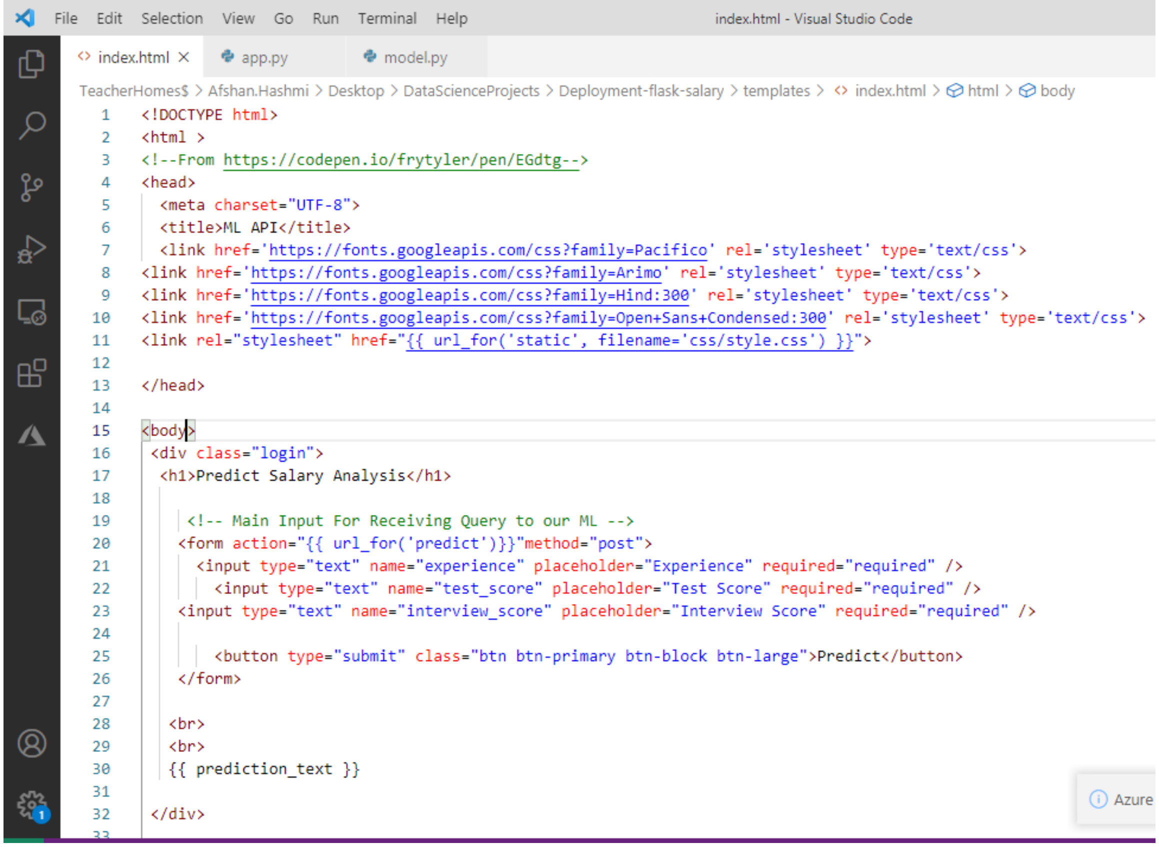
```python
# Importing the libraries
import numpy as np
import matplotlib.pyplot as plt
import pandas as pd
import pickle

dataset = pd.read_csv('hiring.csv')

dataset['experience'].fillna(0, inplace=True)

dataset['test_score'].fillna(dataset['test_score'].mean(), inplace=True)

X = dataset.iloc[:, :3]

#Converting words to integer values
def convert_to_int(word):
    word_dict = {'one':1, 'two':2, 'three':3, 'four':4, 'five':5, 'six':6, 'seven':7, 'eight':8,
                'nine':9, 'ten':10, 'eleven':11, 'twelve':12, 'zero':0, 0: 0}
    return word_dict[word]

X['experience'] = X['experience'].apply(lambda x : convert_to_int(x))

y = dataset.iloc[:, -1]

#Splitting Training and Test Set
#Since we have a very small dataset, we will train our model with all availabe data.

from sklearn.linear_model import LinearRegression
regressor = LinearRegression()

#Fitting model with trainig data
regressor.fit(X, y)
```

Index.html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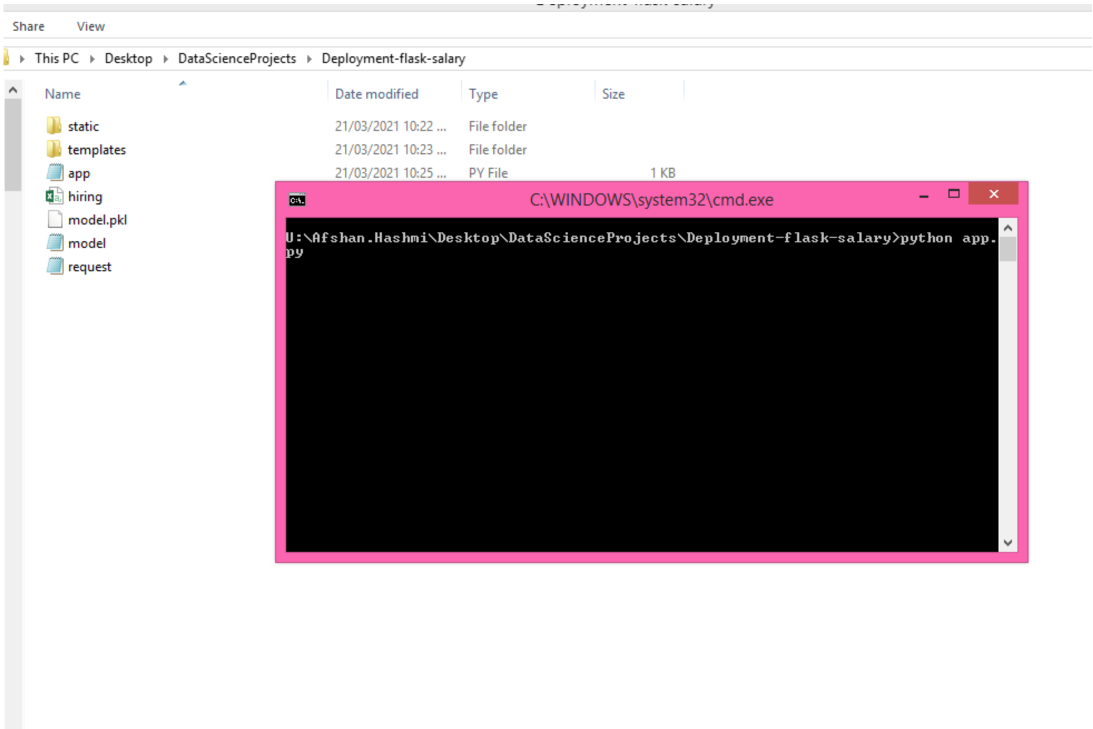
index.html - Visual Studio Code
index.html
app.py
model.py
TeacherHomes$ > Afshan.Hashmi > Desktop > DataScienceProjects > Deployment-flask-salary > templates > index.html > html > body
Azure

```html
<!DOCTYPE html>
<html >
<!--From https://codepen.io/frytyler/pen/EGdtg-->
<head>
  <meta charset="UTF-8">
  <title>ML API</title>
  <link href='https://fonts.googleapis.com/css?family=Pacifico' rel='stylesheet' type='text/css'>
<link href='https://fonts.googleapis.com/css?family=Arimo' rel='stylesheet' type='text/css'>
<link href='https://fonts.googleapis.com/css?family=Hind:300' rel='stylesheet' type='text/css'>
<link href='https://fonts.googleapis.com/css?family=Open+Sans+Condensed:300' rel='stylesheet' type='text/css'>
<link rel="stylesheet" href="{{ url_for('static', filename='css/style.css') }}">

</head>

<body>
 <div class="login">
  <h1>Predict Salary Analysis</h1>

     <!-- Main Input For Receiving Query to our ML -->
    <form action="{{ url_for('predict')}}"method="post">
      <input type="text" name="experience" placeholder="Experience" required="required" />
        <input type="text" name="test_score" placeholder="Test Score" required="required" />
    <input type="text" name="interview_score" placeholder="Interview Score" required="required" />

        <button type="submit" class="btn btn-primary btn-block btn-large">Predict</button>
    </form>

   <br>
   <br>
   {{ prediction_text }}

 </div>
```

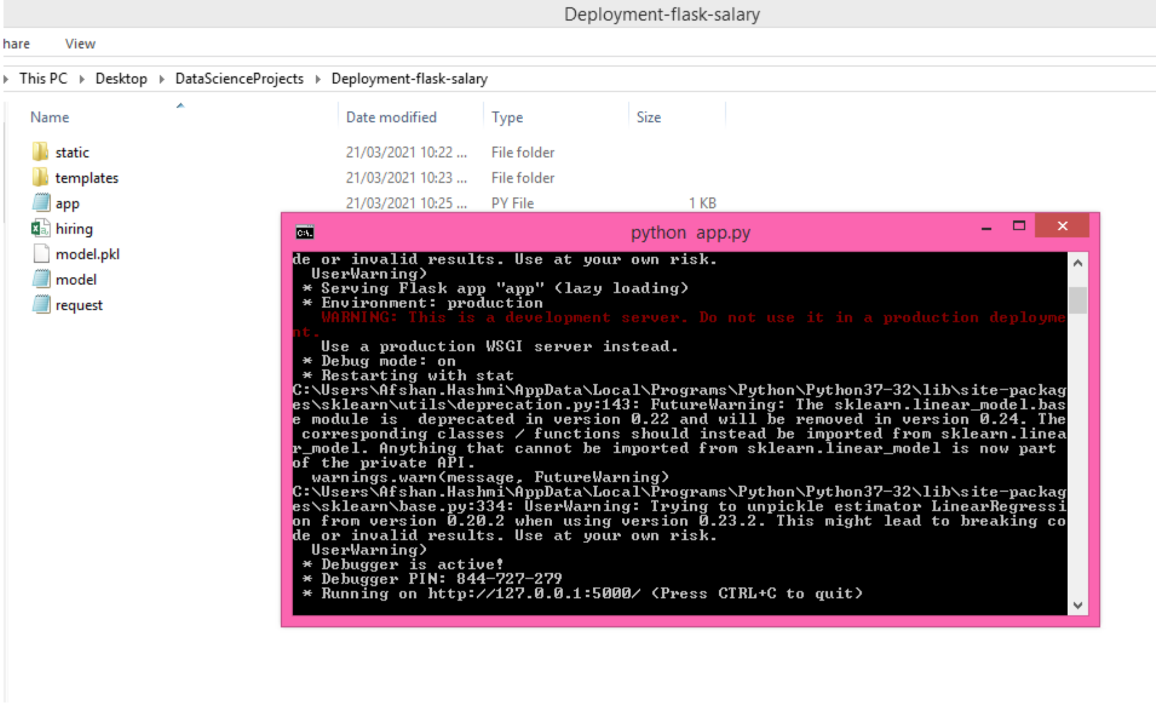
3. Running the server with command prompt


Share
View
This PC > Desktop > DataScienceProjects > Deployment-flask-salary
C:\WINDOWS\system32\cmd.exe

Name	Date modified	Type	Size
static	21/03/2021 10:22 ...	File folder	
templates	21/03/2021 10:23 ...	File folder	
app	21/03/2021 10:25 ...	PY File	1 KB
hiring			
model.pkl			
model			
request			

```
U:\Afshan.Hashmi\Desktop\DataScienceProjects\Deployment-flask-salary>python app.
py
```

4. The server is up now


Deployment-flask-salary
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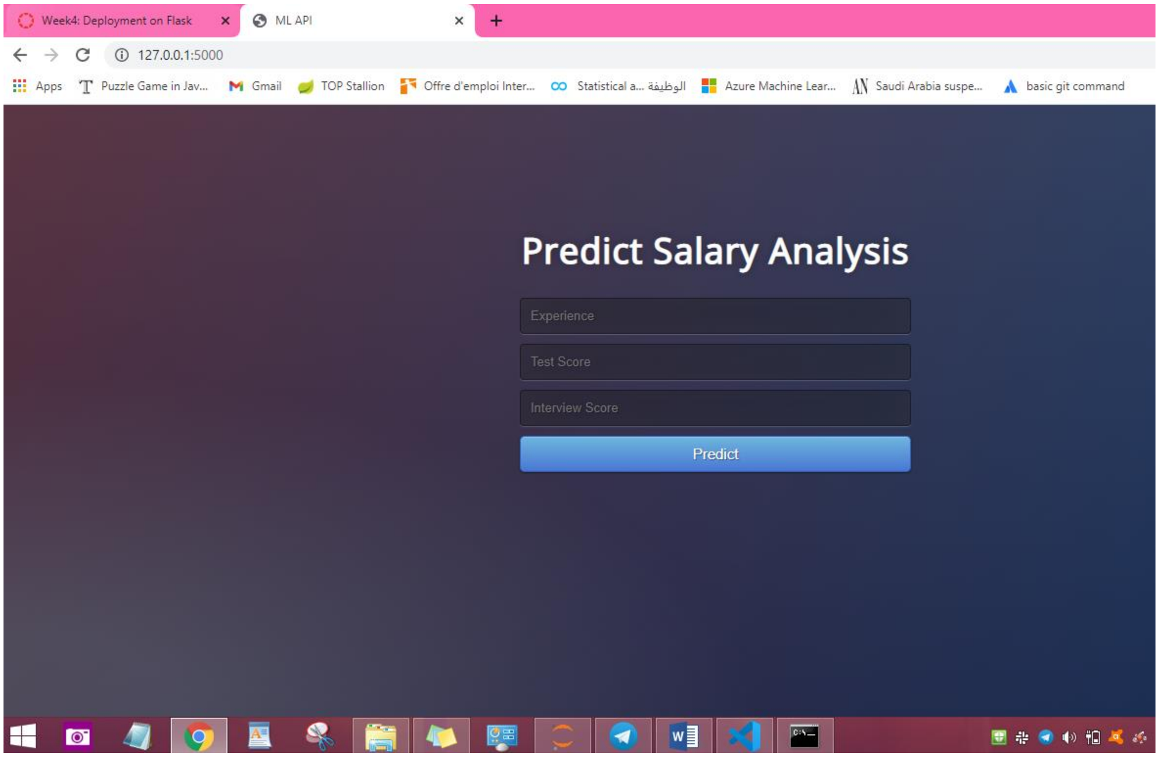
python app.py

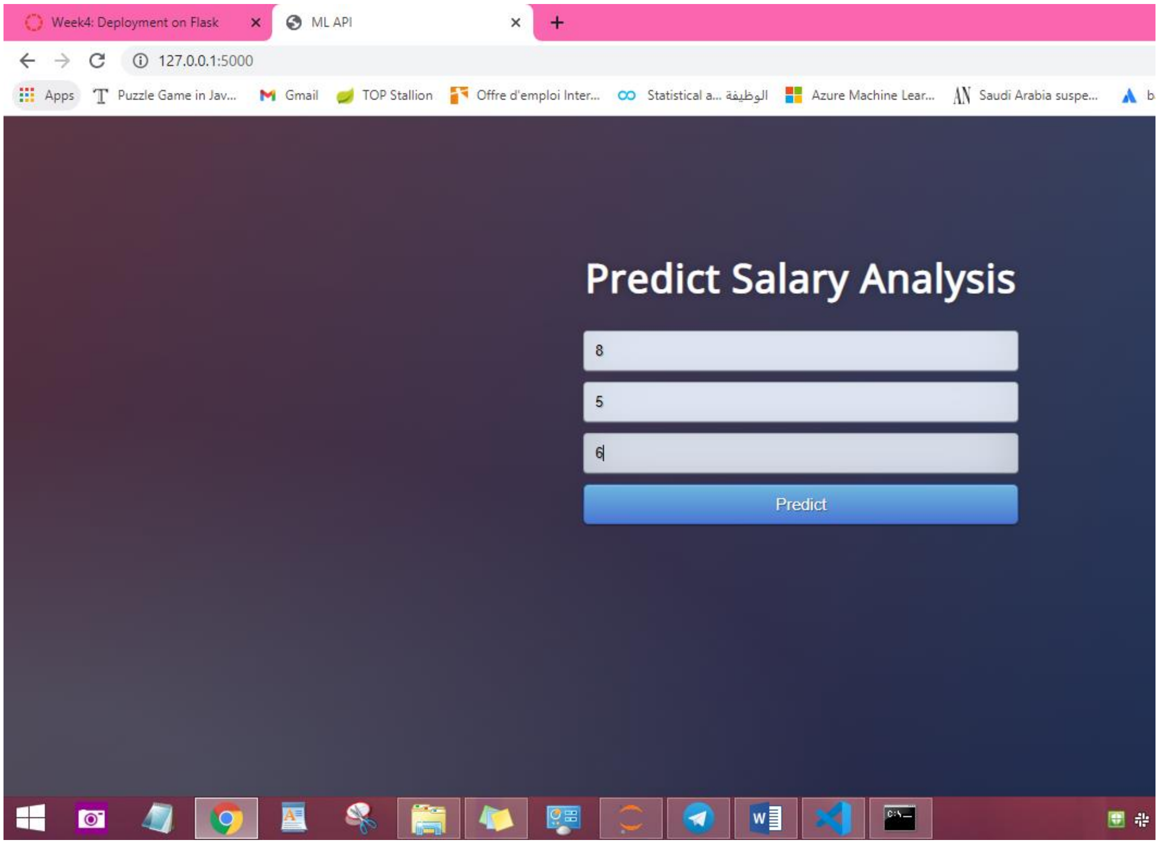
Name	Date modified	Type	Size
static	21/03/2021 10:22 ...	File folder	
templates	21/03/2021 10:23 ...	File folder	
app	21/03/2021 10:25 ...	PY File	1 KB
hiring			
model.pkl			
model			
request			

```
de or invalid results. Use at your own risk.
  UserWarning)
 * Serving Flask app "app" (lazy loading)
 * Environment: production
   WARNING: This is a development server. Do not use it in a production deployme
nt.
   Use a production WSGI server instead.
 * Debug mode: on
 * Restarting with stat
C:\Users\Afshan.Hashmi\AppData\Local\Programs\Python\Python37-32\lib\site-packag
es\sklearn\utils\deprecation.py:143: FutureWarning: The sklearn.linear_model.bas
e module is  deprecated in version 0.22 and will be removed in version 0.24. The
 corresponding classes / functions should instead be imported from sklearn.linea
r_model. Anything that cannot be imported from sklearn.linear_model is now part
of the private API.
  warnings.warn(message, FutureWarning)
C:\Users\Afshan.Hashmi\AppData\Local\Programs\Python\Python37-32\lib\site-packag
es\sklearn\base.py:334: UserWarning: Trying to unpickle estimator LinearRegressi
on from version 0.20.2 when using version 0.23.2. This might lead to breaking co
de or invalid results. Use at your own risk.
  UserWarning)
 * Debugger is active!
 * Debugger PIN: 844-727-279
 * Running on http://127.0.0.1:5000/ (Press CTRL+C to quit)
```

5. Running on local port http://127.0.0.1:5000/



6. Giving input to predict the salary



Predict Salary Analysis

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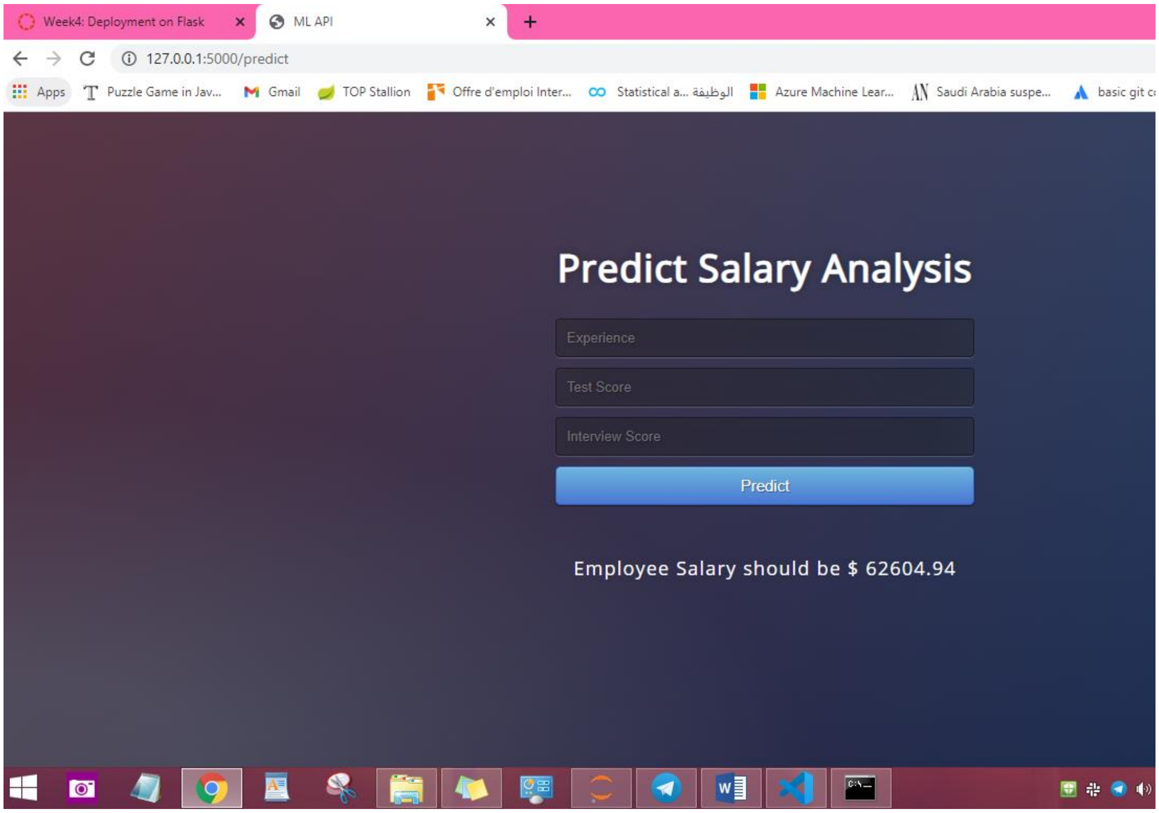
7. Finally got the prediction



Predict Salary Analysis

Experience

Test Score

Interview Score

Predict

Employee Salary should be $ 62604.94