



Data Glacier

Your Deep Learning Partner

VIRTUAL INTERNSHIP

DATA ANALYSIS

LISUM01

DEPLOYMENT ON FLASK

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2021/07/02

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Batch Code: LISUM01

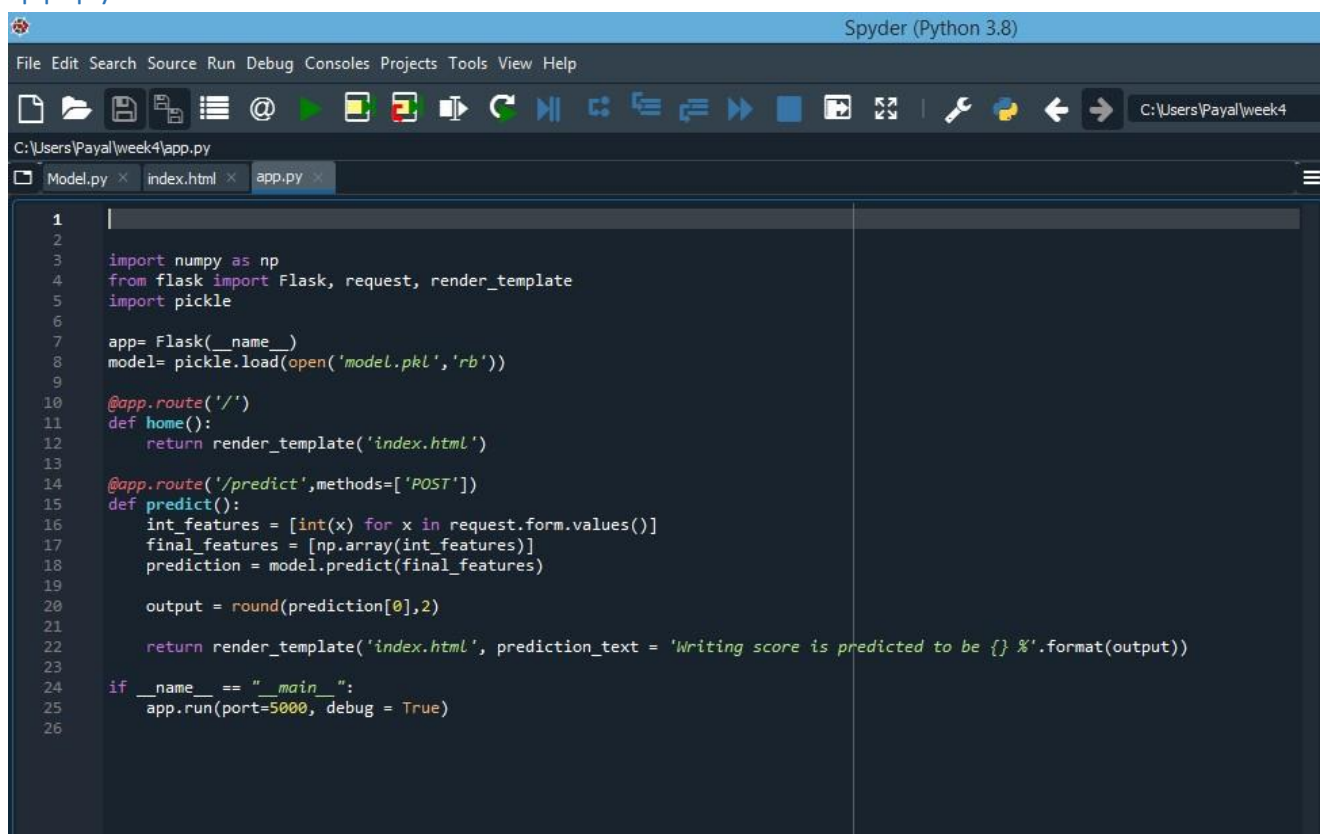
Submission Date: 2021/07/02

Submitted to: <https://github.com/payal-upadhyay/Week4>

Introduction

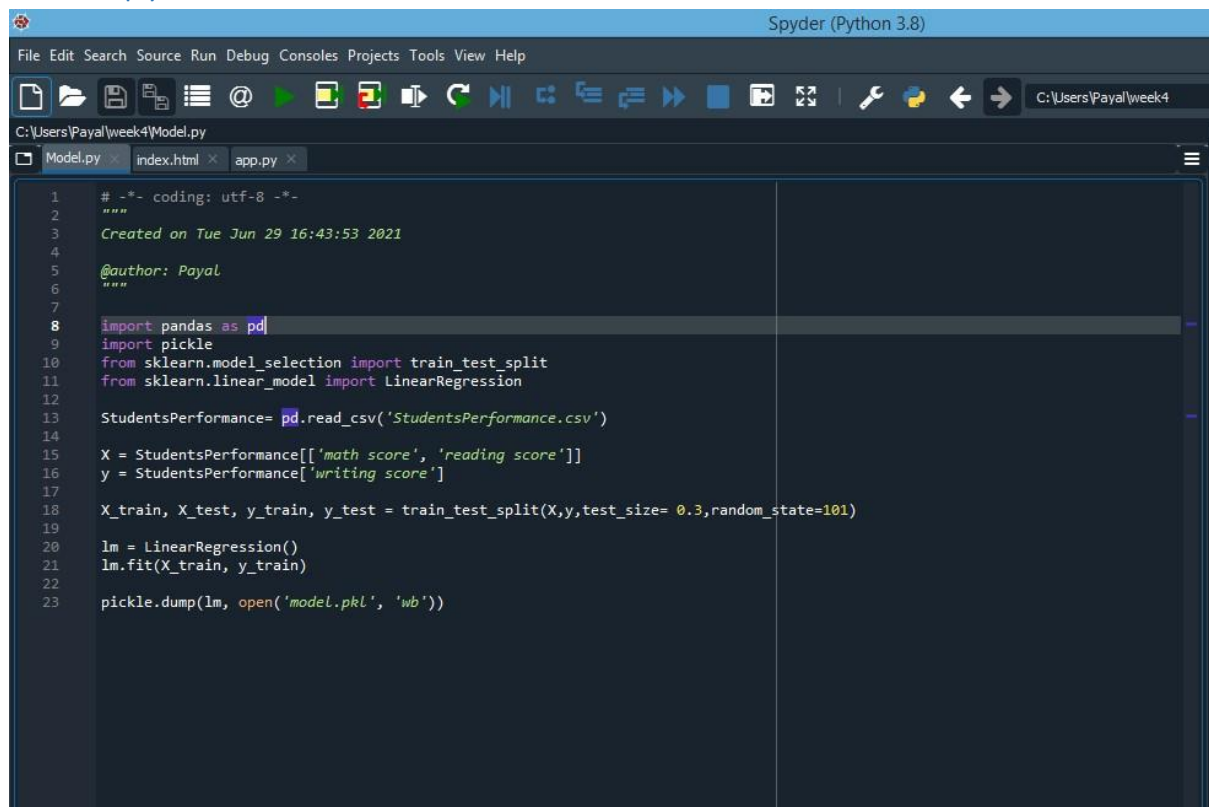
I used the file StudentPerformance.csv (available on www.kaggle.com) to deploy the model using flask. The objective was to predict the writing score based on reading score and math score. The data was split into a training set (70%) and a test set (30%). I used linear regression to make the prediction. Snapshots of the files created in the process and the final outcome is provided below.

app.py



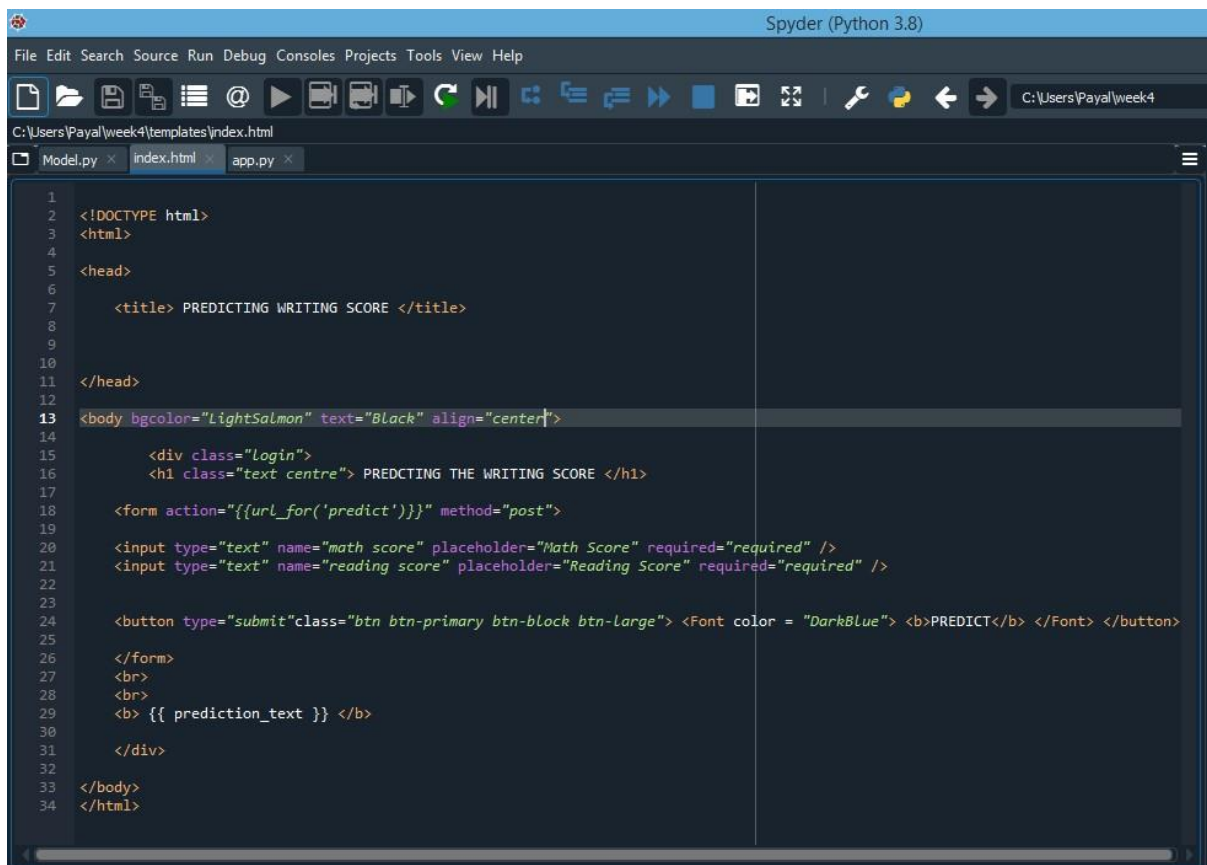
```
1 |
2 |
3 | import numpy as np
4 | from flask import Flask, request, render_template
5 | import pickle
6 |
7 | app = Flask(__name__)
8 | model = pickle.load(open('model.pkl', 'rb'))
9 |
10 | @app.route('/')
11 | def home():
12 |     return render_template('index.html')
13 |
14 | @app.route('/predict', methods=['POST'])
15 | def predict():
16 |     int_features = [int(x) for x in request.form.values()]
17 |     final_features = [np.array(int_features)]
18 |     prediction = model.predict(final_features)
19 |
20 |     output = round(prediction[0], 2)
21 |
22 |     return render_template('index.html', prediction_text = 'Writing score is predicted to be {}'.format(output))
23 |
24 | if __name__ == "__main__":
25 |     app.run(port=5000, debug = True)
26 |
```

Model.py



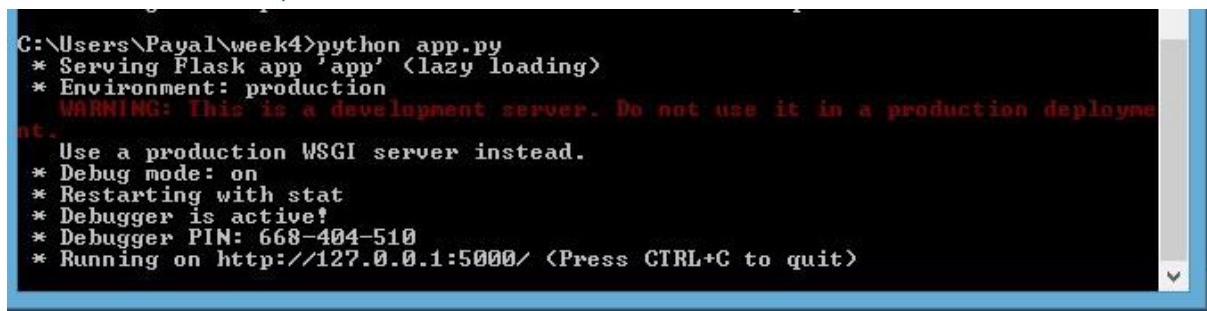
```
1  -*- coding: utf-8 -*-
2  """
3  Created on Tue Jun 29 16:43:53 2021
4
5  @author: Payal
6  """
7
8  import pandas as pd
9  import pickle
10 from sklearn.model_selection import train_test_split
11 from sklearn.linear_model import LinearRegression
12
13 StudentsPerformance= pd.read_csv('StudentsPerformance.csv')
14
15 X = StudentsPerformance[['math score', 'reading score']]
16 y = StudentsPerformance['writing score']
17
18 X_train, X_test, y_train, y_test = train_test_split(X,y,test_size= 0.3,random_state=101)
19
20 lm = LinearRegression()
21 lm.fit(X_train, y_train)
22
23 pickle.dump(lm, open('model.pkl', 'wb'))
```

index.html



```
1
2 <!DOCTYPE html>
3 <html>
4
5 <head>
6
7   <title> PREDICTING WRITING SCORE </title>
8
9
10
11 </head>
12
13 <body bgcolor="LightSalmon" text="Black" align="center">
14
15   <div class="login">
16     <h1 class="text centre"> PREDCTING THE WRITING SCORE </h1>
17
18     <form action="{{url_for('predict')}}" method="post">
19
20       <input type="text" name="math score" placeholder="Math Score" required="required" />
21       <input type="text" name="reading score" placeholder="Reading Score" required="required" />
22
23
24       <button type="submit" class="btn btn-primary btn-block btn-Large"> <Font color = "DarkBlue"> <b>PREDICT</b> </Font> </button>
25
26     </form>
27     <br>
28     <br>
29     <b> {{ prediction_text }} </b>
30
31   </div>
32
33 </body>
34 </html>
```

Command Prompt:



```
C:\Users\Payal\week4>python app.py
* Serving Flask app 'app' (lazy loading)
* Environment: production
  WARNING: This is a development server. Do not use it in a production deployment.
  Use a production WSGI server instead.
* Debug mode: on
* Restarting with stat
* Debugger is active!
* Debugger PIN: 668-404-510
* Running on http://127.0.0.1:5000/ (Press CTRL+C to quit)
```

Final webpage outcome:

PREDCTING THE WRITING SCORE

Writing score is predicted to be 85.12 %