

Week 5: Deployment on Cloud

Name: Shoug Alotaibi

Batch Code: LISUM01

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Submitted to: Data Glacier

1. Choosing a simple data set.

Our job is to build ML model to predict the salary

| | A | B | C | D | |
|---|------------|------------|-----------------|--------|--|
| 1 | experience | test_score | interview_score | salary | |
| 2 | 0 | 8 | 9 | 50000 | |
| 3 | 0 | 8 | 6 | 45000 | |
| 4 | 5 | 6 | 7 | 60000 | |
| 5 | 2 | 10 | 10 | 65000 | |
| 6 | 7 | 9 | 6 | 70000 | |
| 7 | 3 | 7 | 10 | 62000 | |
| 8 | 10 | 7 | 7 | 72000 | |
| 9 | 11 | 7 | 8 | 80000 | |

2. Saving the model.

Importing pandas, pickle and csv file

```
import pandas as pd
import pickle

data = pd.read_csv('hiring.csv')
```

Split our data into training and testing datasets

```
X = data.iloc[:, :3]

y = data.iloc[:, -1]
```

```
from sklearn.linear_model import LinearRegression
regressor = LinearRegression()

regressor.fit(X, y)
```

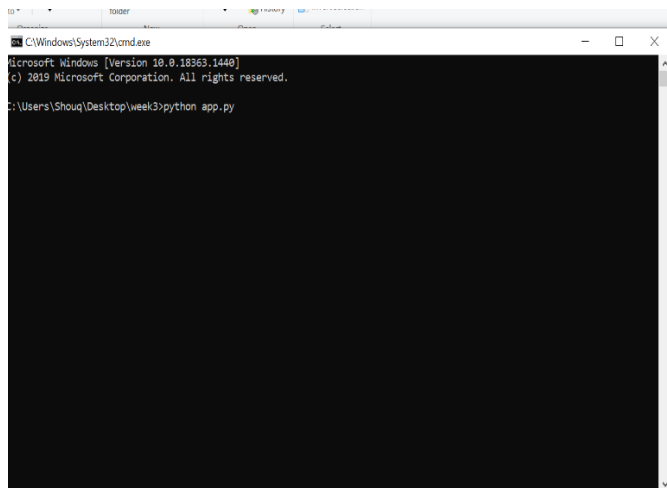
And finally pickle our model

```
pickle_file = open('model.pkl','wb')
pickle.dump(regressor,pickle_file)
```

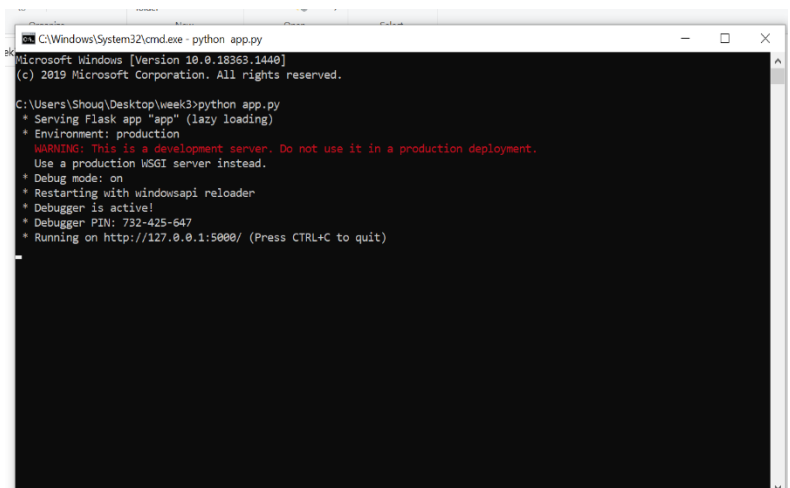
3. Deployment using Flask.

```
1 import numpy as np
2 import pandas as pd
3 from flask import Flask , request, jsonify
4 import pickle
5
6 app = Flask(__name__)
7 @app.route('/', methods=['GET','POST'])
8 def home():
9     if(request.method == 'GET'):
10         da = "hello world"
11         return jsonify({'data': da})
12
13
14 @app.route('/predict/')
15 def predict_salary():
16
17     unpickled_file = open('model.pkl', 'rb')
18     model=pickle.load(unpickled_file)
19
20     experience = request.args.get('experience')
21     test_score = request.args.get('test_score')
22     interview_score = request.args.get('interview_score')
23
24     test_df = pd.DataFrame({'Experience':[experience], 'Test Score':[test_score], 'Interview Score':[interview_score]})
25
26     prediction = int(model.predict(test_df)[0])
27     return 'Employee Salary should be : ' + str(prediction)
28 if __name__ == "__main__":
29     app.run(port=5000, debug=True)
30
```

Running app.py in terminal window.



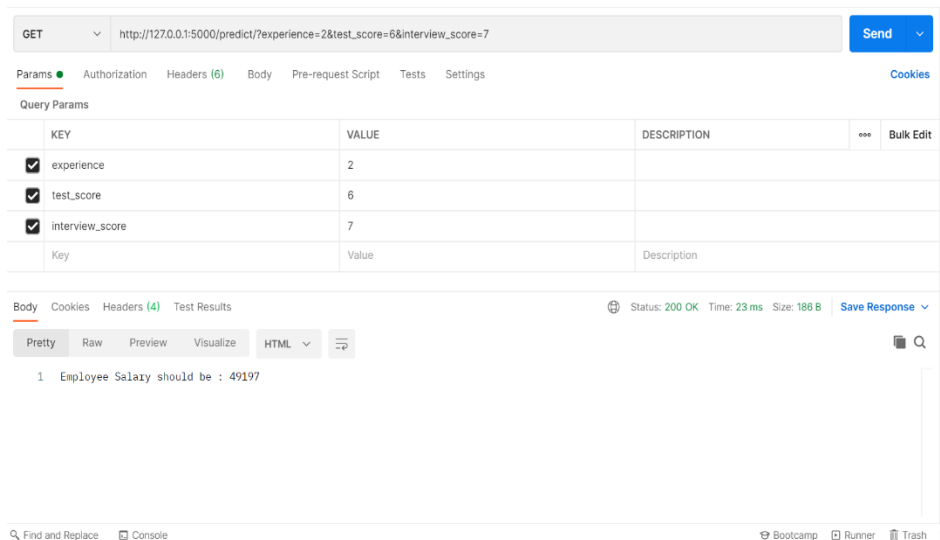
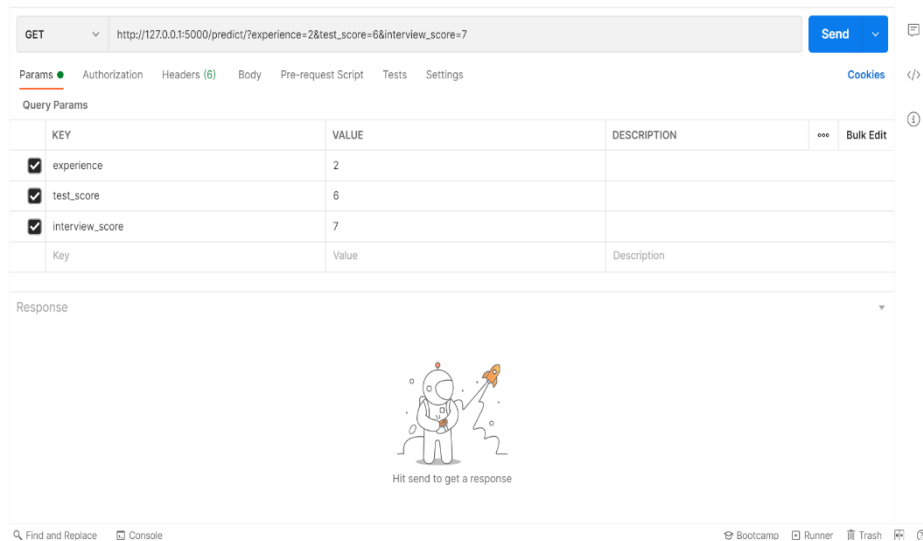
A terminal window titled "cmd.exe" showing the command prompt. The user has entered the command `C:\Users\Shouq\Desktop\week3>python app.py`. The output shows the Microsoft Windows version (10.0.18363.1440) and copyright information (© 2019 Microsoft Corporation. All rights reserved.).



A terminal window titled "cmd.exe - python app.py" showing the output of running the Flask application. The output includes the following information:

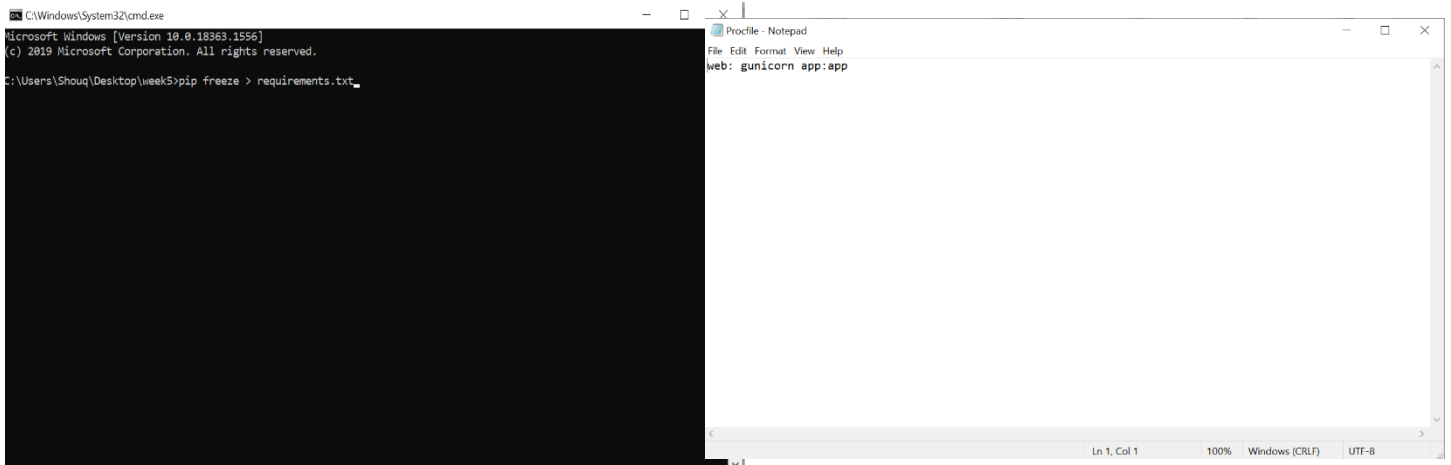
- Microsoft Windows [Version 10.0.18363.1440]
- (c) 2019 Microsoft Corporation. All rights reserved.
- C:\Users\Shouq\Desktop\week3>python app.py
- * Serving Flask app "app" (lazy loading)
- * Environment: production
- WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
- * Debug mode: on
- * Restarting with windowsapi reloader
- * Debugger is active!
- * Debugger PIN: 732-425-647
- * Running on http://127.0.0.1:5000/ (Press CTRL+C to quit)

4. Testing API using postman.



5. Deployment on Cloud.

Create requirement and profile files.



Upload on GitHub.

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main 1 branch 0 tags Go to file Add file Code

Shouqqz Update requirements.txt b648793 yesterday 3 commits

| | | |
|------------------|-------------------------|-----------|
| static/css | Add files via upload | yesterday |
| templates | Add files via upload | yesterday |
| Procfile | Add files via upload | yesterday |
| app.py | Add files via upload | yesterday |
| hiring.csv | Add files via upload | yesterday |
| importing.py | Add files via upload | yesterday |
| model.pkl | Add files via upload | yesterday |
| requirements.txt | Update requirements.txt | yesterday |

Connect Heroku with Github.

Heroku Git
Use Heroku CLI

GitHub
Connected

Container Registry
Use Heroku CLI

Connected to [Shouqqz/week5](#) by [Shouqqz](#) Disconnect...

Releases in the [activity feed](#) link to GitHub to view commit diffs

Automatically deploys from main

Deploy the model.

Deploy a GitHub branch

This will deploy the current state of the branch you specify below. [Learn more.](#)

Choose a branch to deploy

main Deploy Branch

Receive code from GitHub ✓

Build **main** b648793c ...

```
-----> Building on the Heroku-20 stack
-----> Using buildpack: heroku/python
-----> Python app detected
```


☒ Autoscroll with output

[View build log](#)

Deploy a GitHub branch

This will deploy the current state of the branch you specify below. [Learn more.](#)

Choose a branch to deploy

 main

Deploy Branch

Receive code from GitHub



Build main b648793c



Release phase



Deploy to Heroku



Your app was successfully deployed.

 View

