

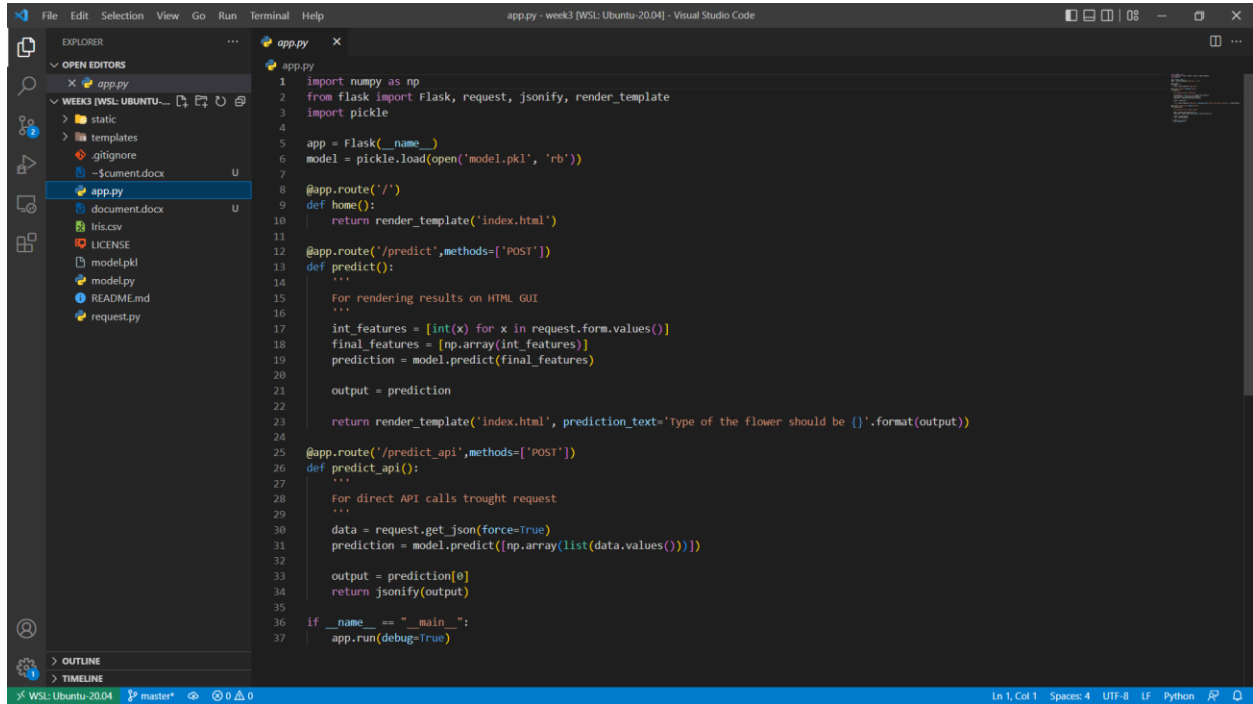
Name: Shiva Ramezani

Batch code: LISUM21

Submission Date: 05/31/2023

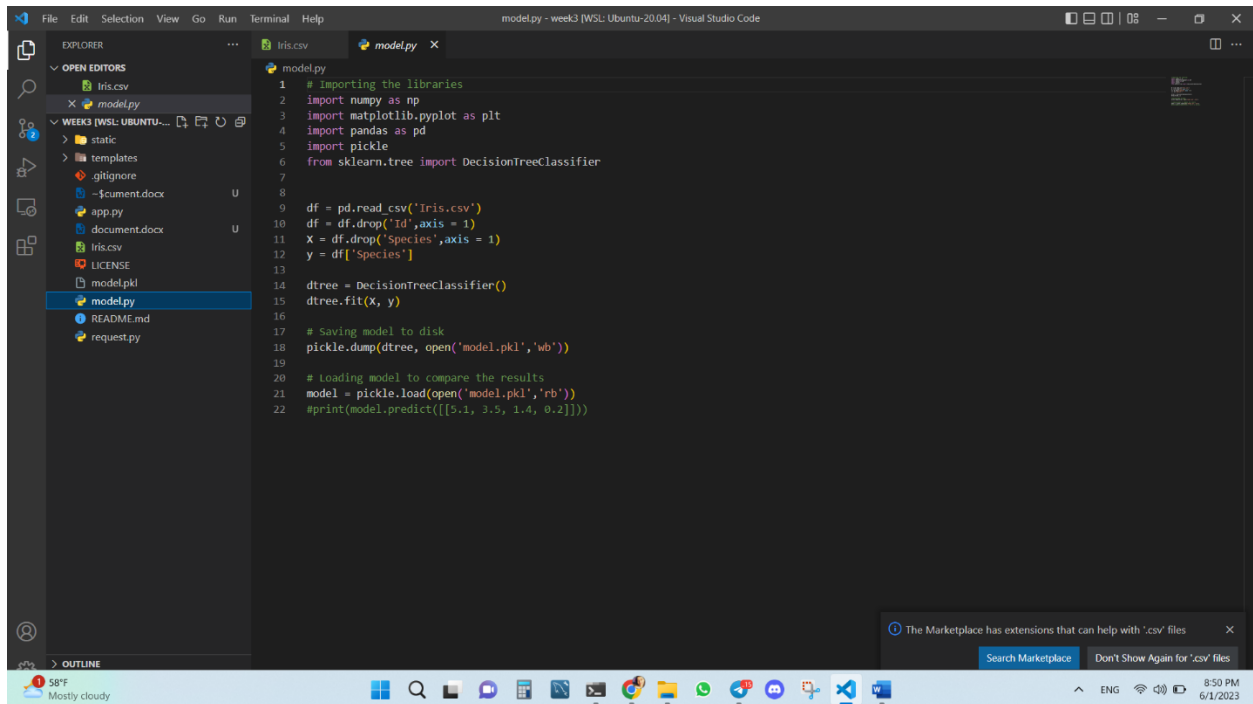
Submitted to: <https://github.com/ShivaRamezani/FlaskDeployementIRIS>

App.py file:



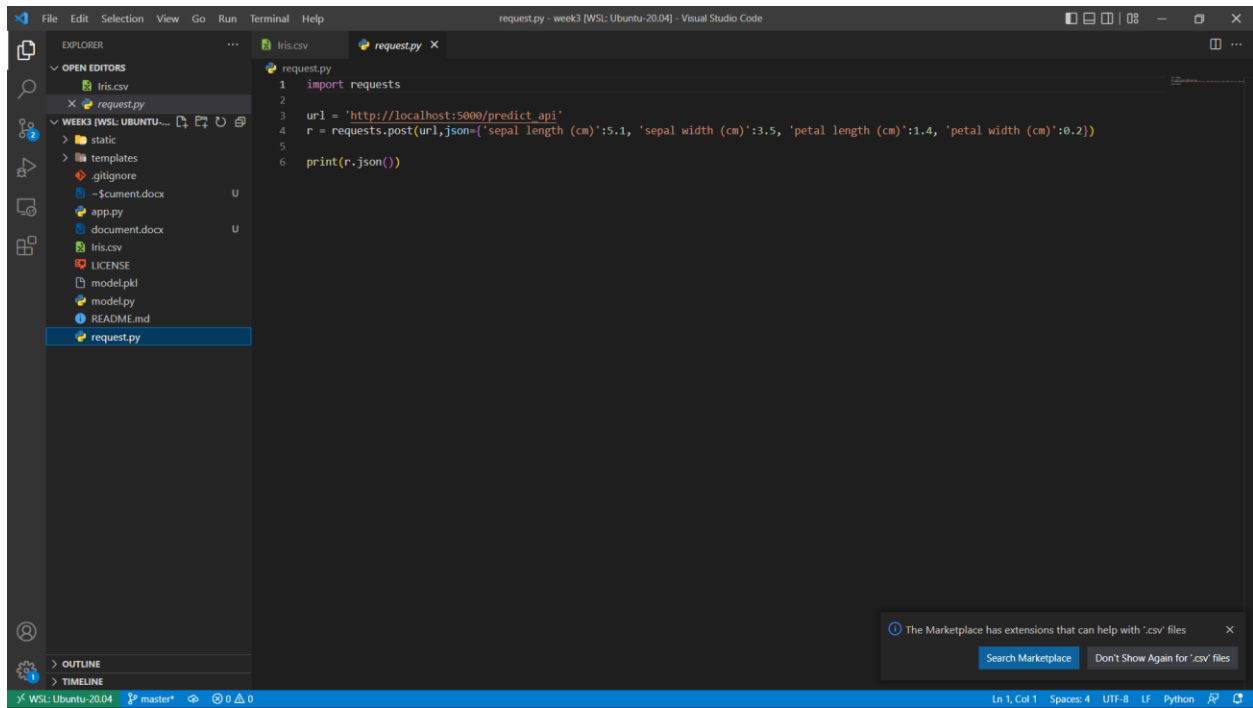
```
1 import numpy as np
2 from flask import Flask, request, jsonify, render_template
3 import pickle
4
5 app = Flask(__name__)
6 model = pickle.load(open('model.pkl', 'rb'))
7
8 @app.route('/')
9 def home():
10     return render_template('index.html')
11
12 @app.route('/predict', methods=['POST'])
13 def predict():
14     """
15     For rendering results on HTML GUI
16     """
17     int_features = [int(x) for x in request.form.values()]
18     final_features = [np.array(int_features)]
19     prediction = model.predict(final_features)
20
21     output = prediction
22
23     return render_template('index.html', prediction_text='Type of the flower should be {}'.format(output))
24
25 @app.route('/predict_api', methods=['POST'])
26 def predict_api():
27     """
28     For direct API calls through request
29     """
30     data = request.get_json(force=True)
31     prediction = model.predict([np.array(list(data.values()))])
32
33     output = prediction[0]
34     return jsonify(output)
35
36 if __name__ == "__main__":
37     app.run(debug=True)
```

Model.py file:



```
1 # Importing the libraries
2 import numpy as np
3 import matplotlib.pyplot as plt
4 import pandas as pd
5 import pickle
6 from sklearn.tree import DecisionTreeClassifier
7
8
9 df = pd.read_csv('iris.csv')
10 df = df.drop('Id', axis = 1)
11 X = df.drop('Species', axis = 1)
12 y = df['Species']
13
14 dtree = DecisionTreeClassifier()
15 dtree.fit(X, y)
16
17 # Saving model to disk
18 pickle.dump(dtree, open('model.pkl', 'wb'))
19
20 # Loading model to compare the results
21 model = pickle.load(open('model.pkl', 'rb'))
22 #print(model.predict([[5.1, 3.5, 1.4, 0.2]]))
```

Request.py file:



```
request.py
1 import requests
2
3 url = 'http://localhost:5000/predict_api'
4 r = requests.post(url,json={'sepal length (cm)':5.1, 'sepal width (cm)':3.5, 'petal length (cm)':1.4, 'petal width (cm)':0.2})
5
6 print(r.json())
```

The Marketplace has extensions that can help with '.csv' files

Search Marketplace Don't Show Again for '.csv' files

Ln 1, Col 1 Spaces: 4 UTF-8 LF Python

Command line prompts:

```
Windows PowerShell
shivaramazani@DESKTOP-GU... C:\Windows\System32\WindowsPowerShell\cmd.exe

reraise(exc_type, exc_value, tb)
File "/home/shivaramazani/anaconda3/lib/python3.7/site-packages/flask/_compat.py", line 39, in reraise
    raise value
File "/home/shivaramazani/anaconda3/lib/python3.7/site-packages/flask/app.py", line 1949, in full_dispatch_request
    rv = self.dispatch_request()
File "/home/shivaramazani/anaconda3/lib/python3.7/site-packages/flask/app.py", line 1935, in dispatch_request
    return self.view_functions[rule.endpoint](**req.view_args)
File "/mnt/c/users/shvra/desktop/shiva/programming/data glacier/week33/Deployment-flask/app.py", line 21, in predict
    output = round(prediction[0], 2)
TypeError: type str doesn't define __round__ method
127.0.0.1 - - [01/Jun/2023 20:16:24] "GET /predict?__debugger__=yes&cmd=resource&f=style.css HTTP/1.1" 200 -
127.0.0.1 - - [01/Jun/2023 20:16:24] "GET /predict?__debugger__=yes&cmd=resource&f=debugger.js HTTP/1.1" 200 -
127.0.0.1 - - [01/Jun/2023 20:16:24] "GET /predict?__debugger__=yes&cmd=resource&f=query.js HTTP/1.1" 200 -
127.0.0.1 - - [01/Jun/2023 20:16:24] "GET /predict?__debugger__=yes&cmd=resource&f=console.png HTTP/1.1" 200 -
127.0.0.1 - - [01/Jun/2023 20:16:24] "GET /predict?__debugger__=yes&cmd=resource&f=ubuntu.ttf HTTP/1.1" 200 -
127.0.0.1 - - [01/Jun/2023 20:16:24] "GET /predict?__debugger__=yes&cmd=resource&f=console.png HTTP/1.1" 200 -
* Detected change in '/mnt/c/users/shvra/desktop/shiva/programming/data glacier/week33/Deployment-flask/app.py', reloading
* Detected change in '/mnt/c/users/shvra/desktop/shiva/programming/data glacier/week33/Deployment-flask/app.py', reloading
* Restarting with inotify loader
* Debugger is active!
* Debugger PIN: 238-776-459
* Detected change in '/mnt/c/users/shvra/desktop/shiva/programming/data glacier/week33/Deployment-flask/app.py', reloading
* Detected change in '/mnt/c/users/shvra/desktop/shiva/programming/data glacier/week33/Deployment-flask/app.py', reloading
* Restarting with inotify loader
* Debugger is active!
* Debugger PIN: 264-213-293
^C(base) shivaramazani@DESKTOP-GUFGRR0: /mnt/c/users/shvra/desktop/shiva/Programming/data glacier/week33/Deployment-flask$ python model.py
(base) shivaramazani@DESKTOP-GUFGRR0: /mnt/c/users/shvra/desktop/shiva/Programming/data glacier/week33/Deployment-flask$ 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
* Running on http://127.0.0.1:5000/ (Press CTRL+C to quit)
* Restarting with inotify loader
* Debugger is active!
* Debugger PIN: 162-419-184
127.0.0.1 - - [01/Jun/2023 20:22:21] "GET / HTTP/1.1" 200 -
/home/shivaramazani/anaconda3/lib/python3.7/site-packages/sklearn/base.py:451: UserWarning: X does not have valid feature names, but DecisionTreeClassifier
was fitted with feature names
  "X does not have valid feature names, but"
127.0.0.1 - - [01/Jun/2023 20:22:30] "POST /predict HTTP/1.1" 200 -
```

```
Windows PowerShell
shivaramazani@DESKTOP-GU... C:\Windows\System32\WindowsPowerShell\cmd.exe

hint: Updates were rejected because the remote contains work that you do
hint: not have locally. This is usually caused by another repository pushing
hint: to the same ref. You may want to first integrate the remote changes
hint: (e.g., 'git pull ...') before pushing again.
hint: See the 'Note about fast-forwards' in 'git push --help' for details.
(base) shivaramazani@DESKTOP-GUFGRR0: /mnt/c/users/shvra/desktop/shiva/Programming/data glacier/week3$ git pull origin master --allow-unrelated-histories
Warning: the ECDSA host key for 'github.com' differs from the key for the IP address '192.38.255.113'
Offending key for IP in /home/shivaramazani/.ssh/known_hosts:2
Matching host key in /home/shivaramazani/.ssh/known_hosts:6
Are you sure you want to continue connecting (yes/no)? yes
warning: no common commits
remote: Enumerating objects: 5, done.
remote: Counting objects: 100% (5/5), done.
remote: Compressing objects: 100% (4/4), done.
remote: Total 5 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (5/5), 2.73 KiB | 111.00 KiB/s, done.
From github.com:Shivaramazani/FlaskDeploymentIRIS
* branch      master      -> FETCH_HEAD
* [new branch] master      -> origin/master
Merge made by the 'recursive' strategy.
 .gitignore | 160 ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
 LICENSE   | 21 +++++++++++++++++++++++++++++++++++++
 README.md | 1 +
 3 files changed, 182 insertions(+)
 create mode 100644 .gitignore
 create mode 100644 LICENSE
 create mode 100644 README.md
(base) shivaramazani@DESKTOP-GUFGRR0: /mnt/c/users/shvra/desktop/shiva/Programming/data glacier/week3$ git push origin master
Warning: the ECDSA host key for 'github.com' differs from the key for the IP address '192.38.255.113'
Offending key for IP in /home/shivaramazani/.ssh/known_hosts:2
Matching host key in /home/shivaramazani/.ssh/known_hosts:6
Are you sure you want to continue connecting (yes/no)? yes
Enumerating objects: 15, done.
Counting objects: 100% (15/15), done.
Delta compression using up to 8 threads
Compressing objects: 100% (11/11), done.
Writing objects: 100% (14/14), 5.91 KiB | 378.00 KiB/s, done.
Total 14 (delta 2), reused 0 (delta 0)
remote: Resolving deltas: 100% (2/2), done.
To github.com:Shivaramazani/FlaskDeploymentIRIS.git
aa7eb14..6ecalc5f master -> master
(base) shivaramazani@DESKTOP-GUFGRR0: /mnt/c/users/shvra/desktop/shiva/Programming/data glacier/week3$
```

Web App:

Predict Flower Type

5

2

3

2

Predict

Predict Flower Type

sepal length (cm)

sepal width (cm)

petal length (cm)

petal width (cm)

Predict

سورن | Watch | Debu | ut | interview | base | job | Week | Shiva | Flask | (1) De | krishi | (1) H | Mach | Progi | IRISD | Iris D | M x | + | - | x

127.0.0.1:5000/predict

Coursera | Online C... | Inbox (1,626) - shvr... | California State Uni... | MyNorthridge | Welcome Back | Login - CAS - Centr... | USCIS | myUSCIS H... | EDD Debit Card - SI... | Employment Devel... | Other bookmarks

Predict Flower Type

sepal length (cm)

sepal width (cm)

petal length (cm)

petal width (cm)

Predict

Type of the flower should be ['Iris-virginica']