NAME : BURAK DEMİR

BATCH CODE : LISP01

SUBMISSION DATE : 21/03/2021

SUBMITTED TO : DATA GLACIER

I USED MODEL OF WEEK 4

Creating The Model

```python
import pandas as pd
from sklearn.linear_model import LogisticRegression
from sklearn.metrics import classification_report
from sklearn.metrics import accuracy_score
from sklearn.model_selection import train_test_split
import pickle
```

```python
data=pd.read_csv('iris.csv')
a = data.copy()
a.drop('Id',axis=1, inplace = True)
X = a.iloc[:,:-1]
y = data.iloc[:, -1]
#Split the data into 80% training and 20% testing
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state=42)
```

```python
#Train the model
model = LogisticRegression()
model.fit(X_train, y_train)
#Test the model
predictions = model.predict(X_test)
print( classification_report(y_test, predictions) )
print( accuracy_score(y_test, predictions))
```

```
                 precision    recall  f1-score   support

    Iris-setosa       1.00      1.00      1.00        10
Iris-versicolor       1.00      1.00      1.00         9
 Iris-virginica       1.00      1.00      1.00        11

       accuracy                           1.00        30
      macro avg       1.00      1.00      1.00        30
   weighted avg       1.00      1.00      1.00        30

1.0
```

```python
pickle.dump(model,open('model.pkl','wb'))
```

```python
p=model.predict([[5.1,3.5,1.4,0.2]])
print(p[0])
```

```
Iris-setosa
```

index.html

```html
<!DOCTYPE html>
<html >
<head>
<meta charset="UTF-8">
<title>Iris Flower ML API</title>
</head>
<body>
<div class="login">
<h1>Predict The Flower (Iris)</h1>
<!-- Main Input For Receiving Query to our ML -->
<form action="{{ url_for('predict')}}"method="post">
<input type="text" name="SepalLength" placeholder="SepalLength" required="required" style="font-family:verdana" />
<input type="text" name="SepalWidth" placeholder="SepalWidth" required="required" style="font-family:verdana" />
<input type="text" name="PetalLength" placeholder="PetalLength" required="required" style="font-family:verdana" />
<input type="text" name="PetalWidth" placeholder="PetalWidth" required="required" style="font-family:verdana" />
<button type="submit" class="btn btn-primary btn-block btn-large" style="font-family:verdana">Predict</button>
</form>
<br>
<br>
{{ prediction_text }}
</div>
</body>
</html>
```

Flask App

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

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


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

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

def predict():
    int_features = [float(x) for x in request.form.values()]

    final_features = [np.array(int_features)]
    prediction = model.predict(final_features)

    output =prediction[0]

    return render_template('index.html', prediction_text='The flower is : {}'.format(output))

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

python app.py

```
(base) C:\Users\burak>cd FlaskWorkspace

(base) C:\Users\burak\FlaskWorkspace>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: 239-397-975
 * Running on http://127.0.0.1:5000/ (Press CTRL+C to quit)
127.0.0.1 - - [21/Mar/2021 15:39:42] "←[37mGET / HTTP/1.1←[0m" 200 -
127.0.0.1 - - [21/Mar/2021 15:39:42] "←[37mGET / HTTP/1.1←[0m" 200 -
127.0.0.1 - - [21/Mar/2021 15:39:51] "←[37mPOST /predict HTTP/1.1←[0m" 200 -
127.0.0.1 - - [21/Mar/2021 15:40:01] "←[37mPOST /predict HTTP/1.1←[0m" 200 -
127.0.0.1 - - [21/Mar/2021 15:40:06] "←[37mPOST /predict HTTP/1.1←[0m" 200 -
```

Predict The Flower (Iris)

| SepalLength | SepalWidth | PetalLength | PetalWidth | Predict |

Predict The Flower (Iris)

| 3.2 | 2.2 | 4.2 | 3.5 | Predict |

The flower is : Iris-virginica

Creating Heroku App

App name

cloudflaskapi

Choose a region

🇺🇸 United States

Add to pipeline...

Create app

Procfile and requirements.txt

```
web: gunicorn app:app
```

requirements - Not Defteri

Dosya   Düzen   Biçim   Görünüm   Yardım

```
Flask
gunicorn
pandas
requests
scikit-learn
scipy
numpy
```

```
(base) C:\Users\burak\FlaskWorkspace>pip install -r requirements.txt
Requirement already satisfied: Flask in c:\users\burak\anaconda3\lib\site-packages (from -r requirements.txt (line 1)
1.1.2)
Requirement already satisfied: gunicorn in c:\users\burak\anaconda3\lib\site-packages (from -r requirements.txt (line
) (20.1.0)
Requirement already satisfied: pandas in c:\users\burak\anaconda3\lib\site-packages (from -r requirements.txt (line 3
(1.2.4)
Requirement already satisfied: requests in c:\users\burak\anaconda3\lib\site-packages (from -r requirements.txt (line
) (2.25.1)
Requirement already satisfied: scikit-learn in c:\users\burak\anaconda3\lib\site-packages (from -r requirements.txt (
e 5)) (0.24.1)
Requirement already satisfied: scipy in c:\users\burak\anaconda3\lib\site-packages (from -r requirements.txt (line 6)
1.6.2)
Requirement already satisfied: numpy in c:\users\burak\anaconda3\lib\site-packages (from -r requirements.txt (line 7)
1.19.3)
```

Pushing to the Heroku

```
(base) C:\Users\burak\FlaskWorkspace>git add .

(base) C:\Users\burak\FlaskWorkspace>git commit -m "update"
[master 719732f] update
 1 file changed, 2 deletions(-)
```

```
(base) C:\Users\burak\FlaskWorkspace>git push heroku master
Enumerating objects: 8, done.
Counting objects: 100% (8/8), done.
Delta compression using up to 4 threads
Compressing objects: 100% (6/6), done.
Writing objects: 100% (6/6), 546 bytes | 546.00 KiB/s, done.
Total 6 (delta 3), reused 0 (delta 0), pack-reused 0
remote: Compressing source files... done.
remote: Building source:
remote:
remote: -----> Building on the Heroku-20 stack
remote: -----> Using buildpack: heroku/python
remote: -----> Python app detected
remote: -----> Requirements file has been changed, clearing cached dependencies
remote: -----> Installing python-3.6.13
remote: -----> Installing pip 20.2.4, setuptools 47.1.1 and wheel 0.36.2
remote:        > Installing SQLite?
```
.
.
```
remote:
remote: -----> Compressing...
remote:        Done: 130.5M
remote: -----> Launching...
remote:        Released v9
remote:        https://cloudflaskapi.herokuapp.com/ deployed to Heroku
remote:
remote: Verifying deploy... done.
To https://git.heroku.com/cloudflaskapi.git
   7648eb0..719732f  master -> master

(base) C:\Users\burak\FlaskWorkspace>
```

Personal ⌄ > ● cloudflaskapi   ☆   Open app   More ⌄

Overview   Resources   Deploy   Metrics   Activity   Access   Settings

Installed add-ons $0.00/month   Configure Add-ons ⊕   Latest activity   All Activity ⊕

                                                                 burak_kasta_37@hotmail.com.tr: Deployed 719732fc
        There are no add-ons for this app   Today at 5:57 PM · v9
 You can add add-ons to this app and they will show here. Learn more
                                                                 burak_kasta_37@hotmail.com.tr: Build succeeded
                                                                 Today at 5:55 PM · View build log

 <   >   C   ⊞ | VPN 🔒   cloudflaskapi.herokuapp.com

Predict The Flower (Iris)

| SepalLength | SepalWidth | PetalLength | PetalWidth | Predict |