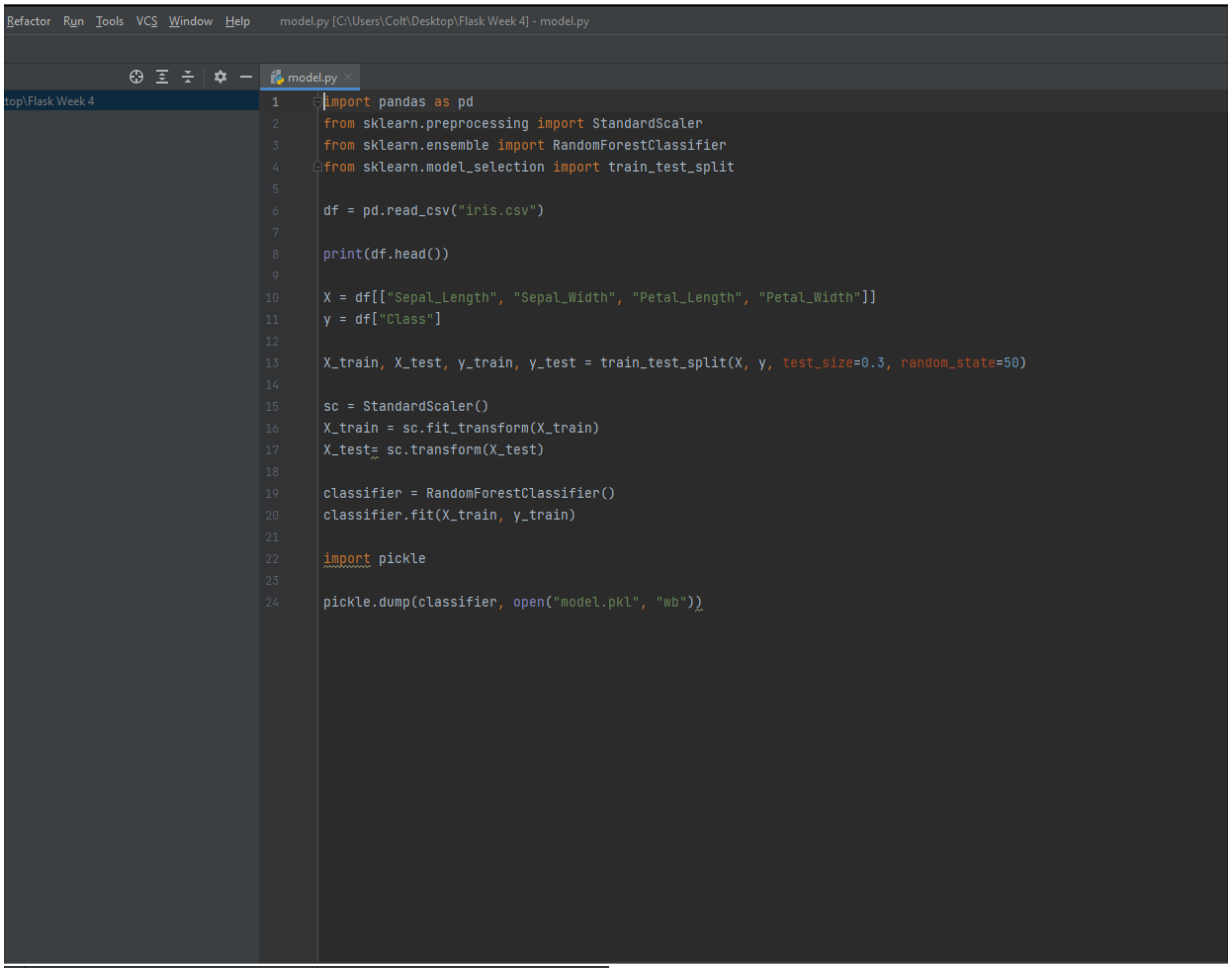
Name: Richard Coltenback

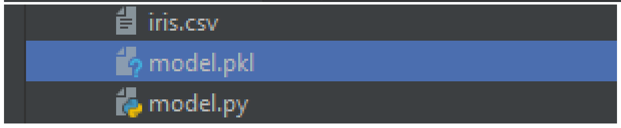
Batch Code: LISUM12

Report date: August 28th 2022

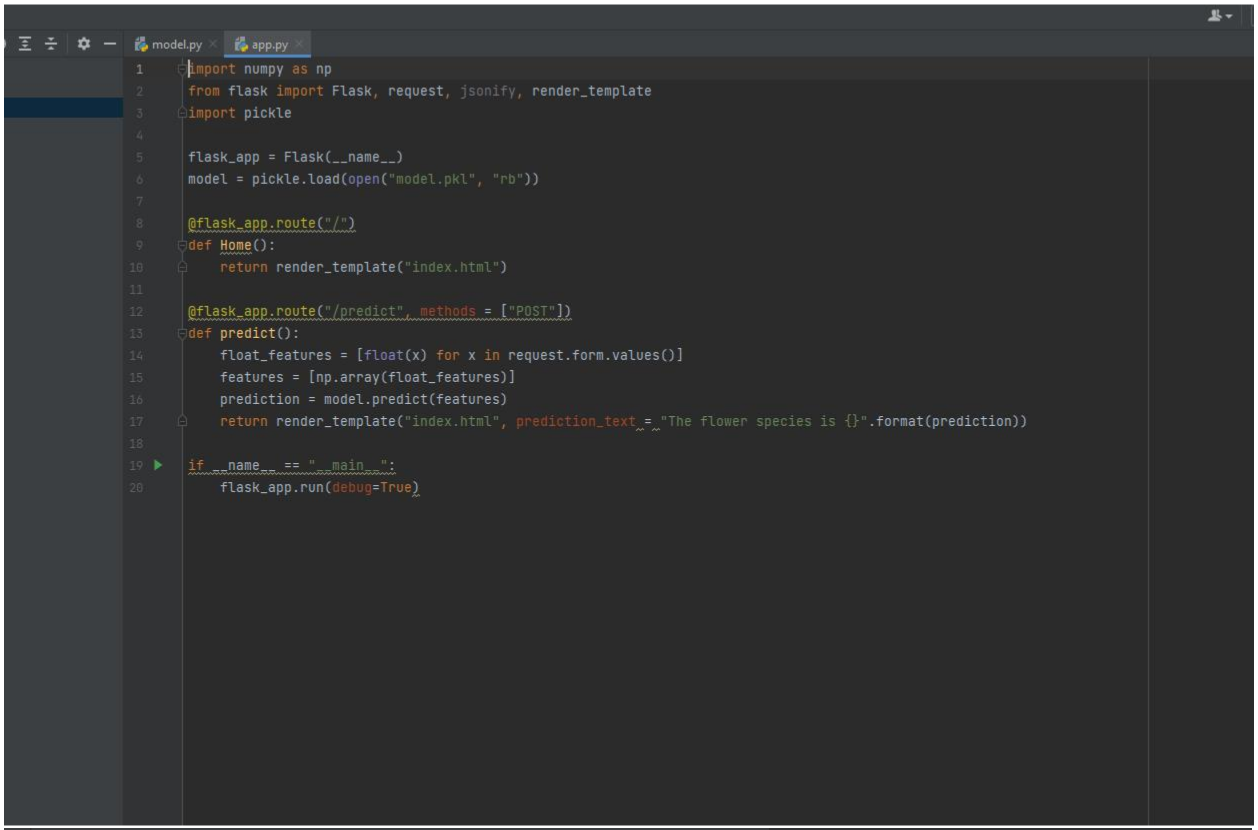
Data storage location: https://github.com/RColtenback/Flask-Deployment-Week-4


Refactor Run Tools VCS Window Help model.py [C:\Users\Colt\Desktop\Flask Week 4] - model.py
model.py
top\Flask Week 4

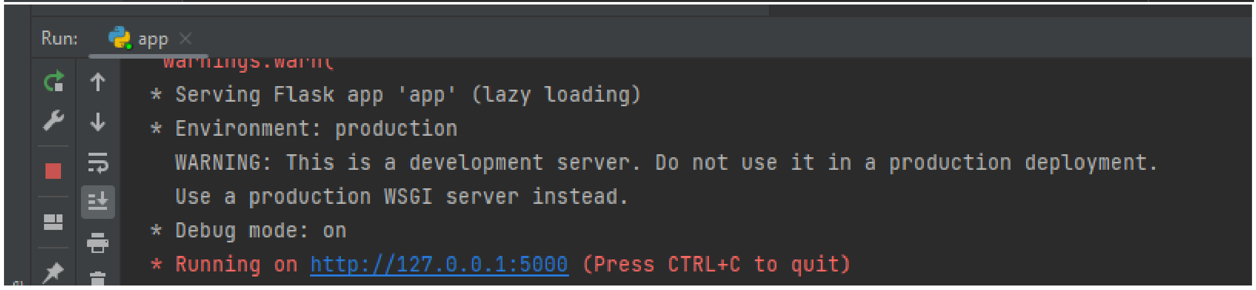
```python
import pandas as pd
from sklearn.preprocessing import StandardScaler
from sklearn.ensemble import RandomForestClassifier
from sklearn.model_selection import train_test_split

df = pd.read_csv("iris.csv")

print(df.head())

X = df[["Sepal_Length", "Sepal_Width", "Petal_Length", "Petal_Width"]]
y = df["Class"]

X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.3, random_state=50)

sc = StandardScaler()
X_train = sc.fit_transform(X_train)
X_test= sc.transform(X_test)

classifier = RandomForestClassifier()
classifier.fit(X_train, y_train)

import pickle

pickle.dump(classifier, open("model.pkl", "wb"))
```



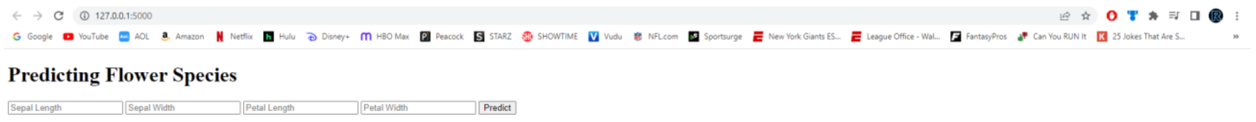
```
iris.csv
model.pkl
model.py
```



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

flask_app = Flask(__name__)
model = pickle.load(open("model.pkl", "rb"))

@flask_app.route("/")
def Home():
    return render_template("index.html")

@flask_app.route("/predict", methods = ["POST"])
def predict():
    float_features = [float(x) for x in request.form.values()]
    features = [np.array(float_features)]
    prediction = model.predict(features)
    return render_template("index.html", prediction_text = "The flower species is {}".format(prediction))

if __name__ == "__main__":
    flask_app.run(debug=True)
```

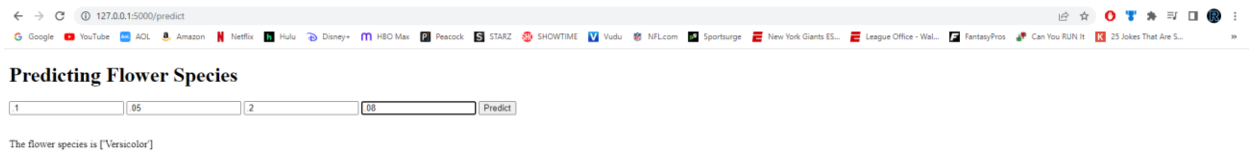


```
 warnings.warn(
* Serving Flask app 'app' (lazy loading)
* Environment: production
  WARNING: This is a development server. Do not use it in a production deployment.
  Use a production WSGI server instead.
* Debug mode: on
* Running on http://127.0.0.1:5000 (Press CTRL+C to quit)
```



Predicting Flower Species

Sepal Length | Sepal Width | Petal Length | Petal Width | Predict



Predicting Flower Species

.1 | .05 | .2 | .08 | Predict

The flower species is ['Versicolor']