Week5: Deployment on Heroku

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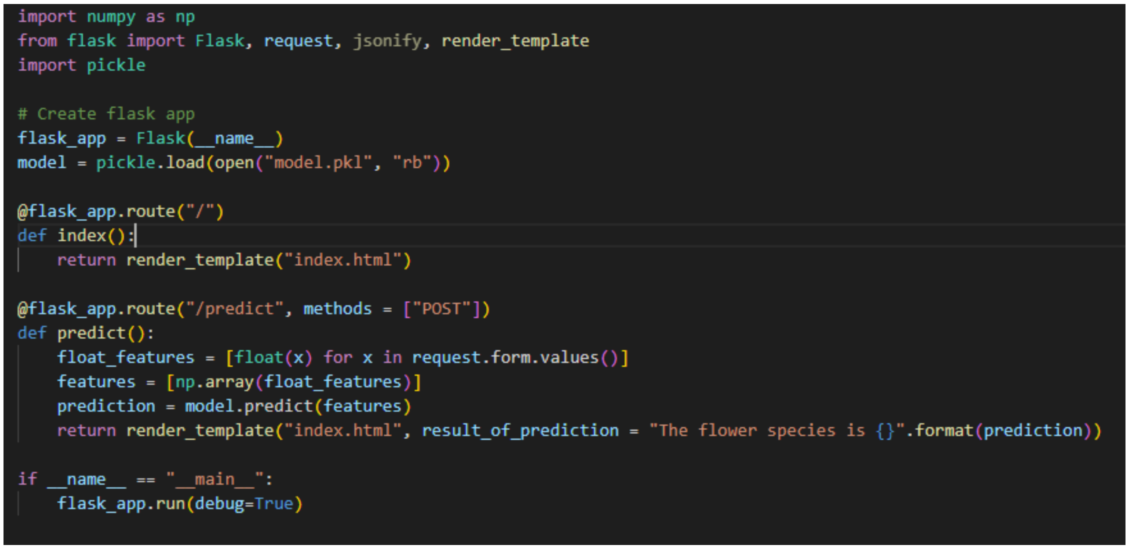
Report date: 28 May 2022
Internship Batch: *LISUM04*
Data storage location: https://github.com/sevdebayrak94/FlaskDeployment

1.Dataset Desription

In this project the well-known dataset, which is called iris dataset, was used. The iris dataset contains three different species of Iris (Iris setosa, Iris virginica, and Iris versicolor) with four different features (length and width of petals and sepals). There are 50 samples for each species. This dataset were used to create Flask app by using SVM classification algorithm. Here pictures of species.

Iris Versicolor Iris Setosa Iris Virginica

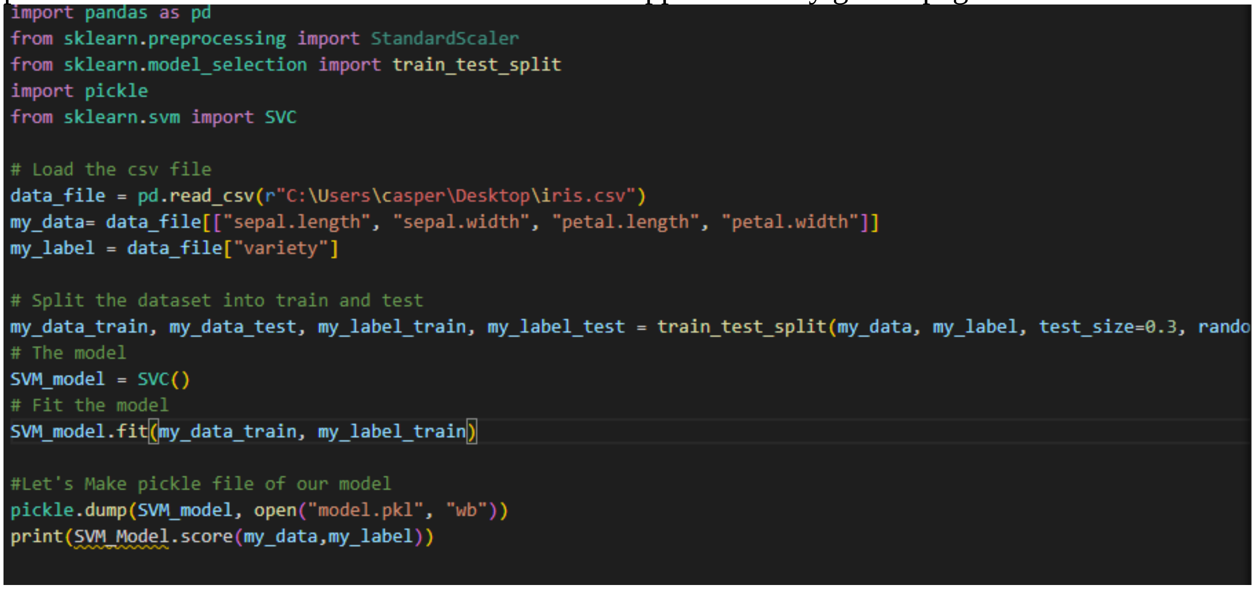
2.Create app.py and model.py



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

# Create flask app
flask_app = Flask(__name__)
model = pickle.load(open("model.pkl", "rb"))

@flask_app.route("/")
def index():
    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", result_of_prediction = "The flower species is {}".format(prediction))

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

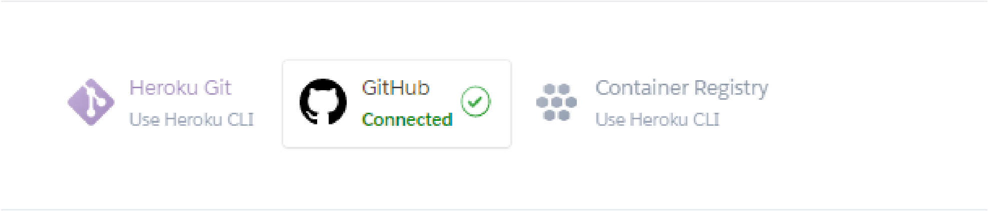
3. Create SVM Model

With additional required libraries do not forget to create a model.py to fit SVM model to make prediction. Additional files like index.html was supported in my github page.

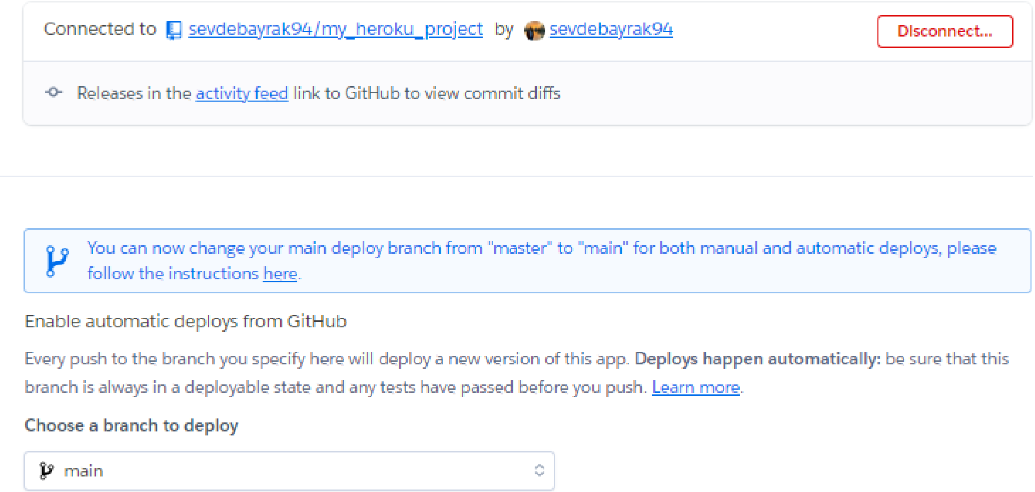


```
import pandas as pd
from sklearn.preprocessing import StandardScaler
from sklearn.model_selection import train_test_split
import pickle
from sklearn.svm import SVC

# Load the csv file
data_file = pd.read_csv(r"C:\Users\casper\Desktop\iris.csv")
my_data= data_file[["sepal.length", "sepal.width", "petal.length", "petal.width"]]
my_label = data_file["variety"]

# Split the dataset into train and test
my_data_train, my_data_test, my_label_train, my_label_test = train_test_split(my_data, my_label, test_size=0.3, rando
# The model
SVM_model = SVC()
# Fit the model
SVM_model.fit(my_data_train, my_label_train)

#Let's Make pickle file of our model
pickle.dump(SVM_model, open("model.pkl", "wb"))
print(SVM_Model.score(my_data,my_label))
```

4. Crate Heroku profile and connect github profile and Heroku



5.Select github repo and branch where application will be written and deployed



Connected to sevdebayrak94/my_heroku_project by sevdebayrak94

Releases in the activity feed link to GitHub to view commit diffs

You can now change your main deploy branch from "master" to "main" for both manual and automatic deploys, please follow the instructions here.

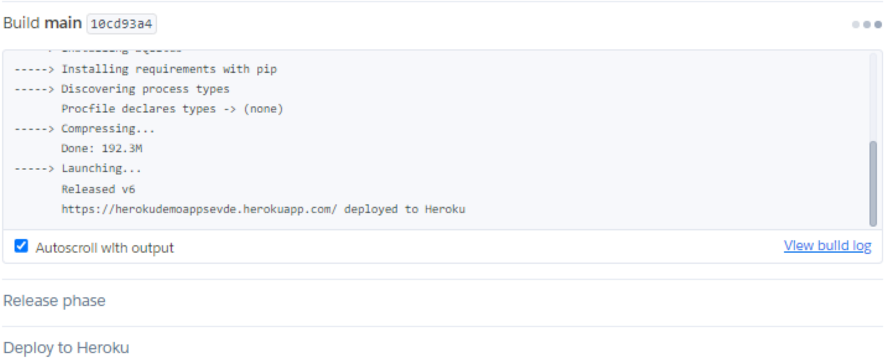
Enable automatic deploys from GitHub

Every push to the branch you specify here will deploy a new version of this app. **Deploys happen automatically:** be sure that this branch is always in a deployable state and any tests have passed before you push. Learn more.

Choose a branch to deploy

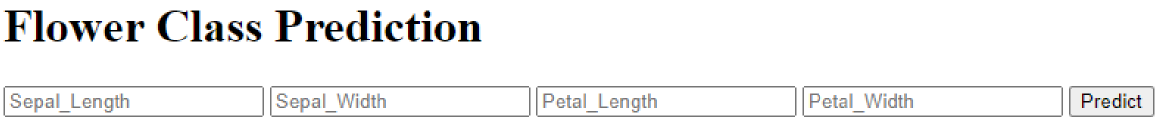
main

6.Herouku creates a deployed app and can be accessed



```
-----> Installing requirements with pip
-----> Discovering process types
       Procfile declares types -> (none)
-----> Compressing...
       Done: 192.3M
-----> Launching...
       Released v6
       https://herokudemoappsevde.herokuapp.com/ deployed to Heroku
```

7. TheApp


Flower Class Prediction
Sepal_Length
Sepal_Width
Petal_Length
Petal_Width
Predict