

Data Intake Report

Name: Predict iris species

Report date: 30/Jun/2022

Internship Batch: LISUM10: 30

Version:<1.0>

Data intake by: Moath Bin Musallam

Data intake reviewer:

Data storage location: local storage

Tabular data details:

Total number of observations	150
Total number of files	1
Total number of features	5
Base format of the file	.csv
Size of the data	4,49 KB

Machine learning model:

Using knn because it is better model.

```
#split to test the model
# from sklearn.model_selection import train_test_split

#Wit stratification to balance the output y
# X_train,X_test, y_train, y_test= train_test_split (X,Y, test_size=0.3,random_state=1,stratify=Y)

###Train the model
from sklearn.neighbors import KNeighborsClassifier

model_knn = KNeighborsClassifier(n_neighbors=4,weights='uniform',algorithm='ball_tree', p=1)

# model.fit(X_train, y_train) #Training the model
# #Test the model
# predictions = model.predict(X_test)
# print( classification_report(y_test, predictions) )
# print( accuracy_score(y_test, predictions) )
💡
model_knn.fit(X,Y)

# Saving model to disk

pickle.dump(model_knn,open('model.pkl','wb'))

# Loading model to compare the results
model = pickle.load(open('model.pkl','rb'))
print(model.predict([[5.1,3.5,1.4,0.2]]))
```

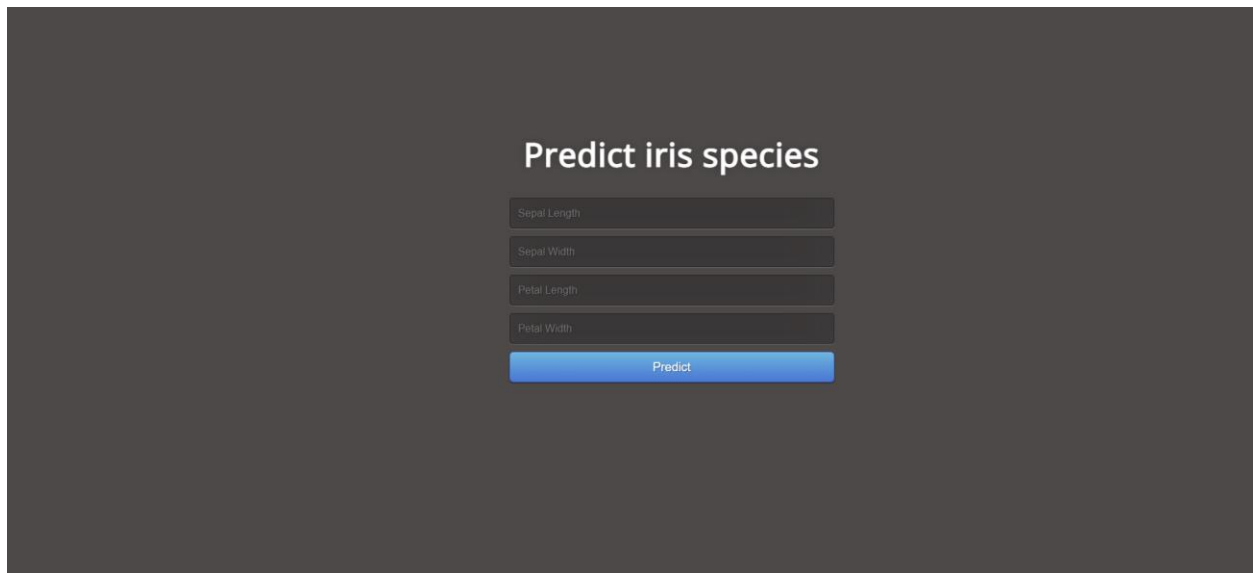
Flask app:

```
app.py > home
4
5  model = pickle.load(open('model.pkl', 'rb'))
6
7
8  app = Flask(__name__)
9  @app.route('/')
10 def home():
11     return render_template('index.html')
12
13 @app.route('/predict',methods=['POST'])
14 def predict():
15     '''
16     For rendering results on HTML GUI
17     '''
18     int_features = [float(x) for x in request.form.values()]
19
20     final_features = [np.array(int_features)]
21     prediction = model.predict(final_features)
22
23     output =prediction[0]
24     if output ==0:
25         output = 'Iris-setosa'
26     elif output ==1:
27         output = 'Iris-versicolor'
28     elif output ==2:
29         output = 'Iris-virginica'
30
31     return render_template('index.html', prediction_text='The Flower is {}'.format(output))
```

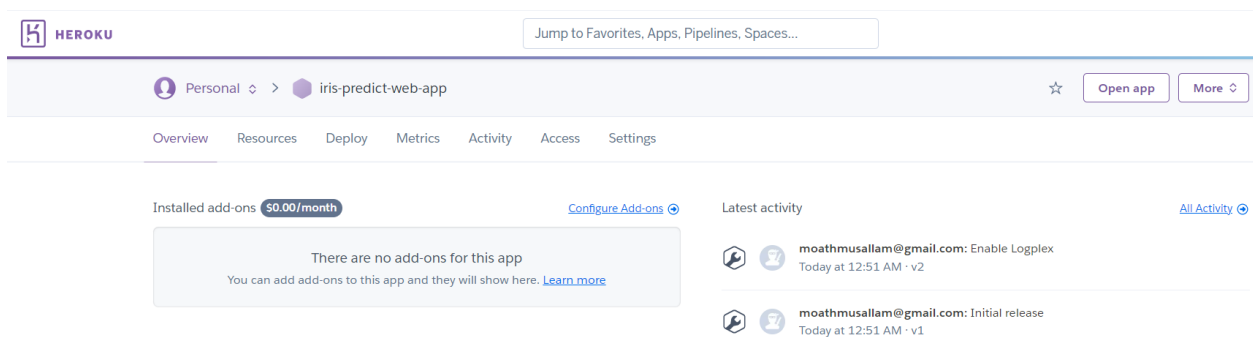
HTML:

```
app.py requirements.txt index.html X Procfile # style.css model.py test.py
templates > index.html > html > body
1 <!DOCTYPE html>
2 <html >
3 <head>
4
5 <meta charset="UTF-8">
6 <title>ML APP</title>
7 <link href='https://fonts.googleapis.com/css?family=Pacifico' rel='stylesheet' type='text/css'>
8 <link href='https://fonts.googleapis.com/css?family=Arimo' rel='stylesheet' type='text/css'>
9 <link href='https://fonts.googleapis.com/css?family=Hind:300' rel='stylesheet' type='text/css'>
10 <link href='https://fonts.googleapis.com/css?family=Open+Sans+Condensed:300' rel='stylesheet' type='text/css'>
11 <link rel="stylesheet" href="{{ url_for('static', filename='css/style.css') }}">
12
13 </head>
14 <body>
15 <div class="login">
16 <h1>Predict iris species</h1>
17 <!-- Main Input For Receiving Query to our ML -->
18 <form action="{{ url_for('predict')}}" method="post">
19 <input type="text" name="SepalLength" placeholder="Sepal Length" required="required" />
20 <input type="text" name="SepalWidth" placeholder="Sepal Width" required="required" />
21 <input type="text" name="PetalLength" placeholder="Petal Length" required="required" />
22 <input type="text" name="PetalWidth" placeholder="Petal Width" required="required" />
23 <button type="submit" class="btn btn-primary btn-block btn-large">Predict</button>
24 </form>
25 <br>
26 </div>
```

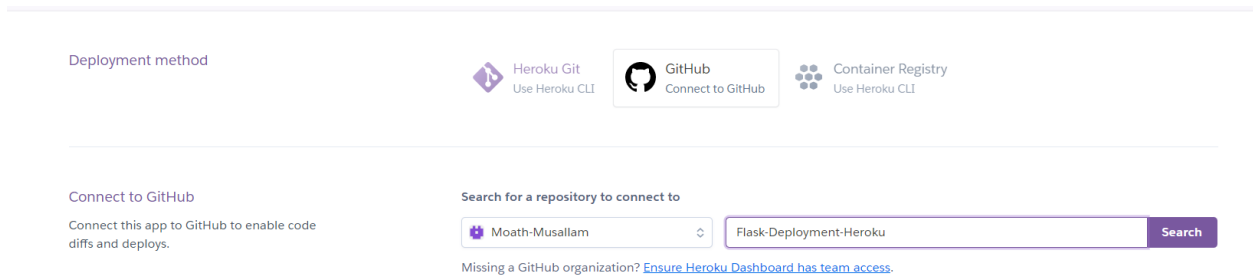
final product:
after deploy the project to Heroku

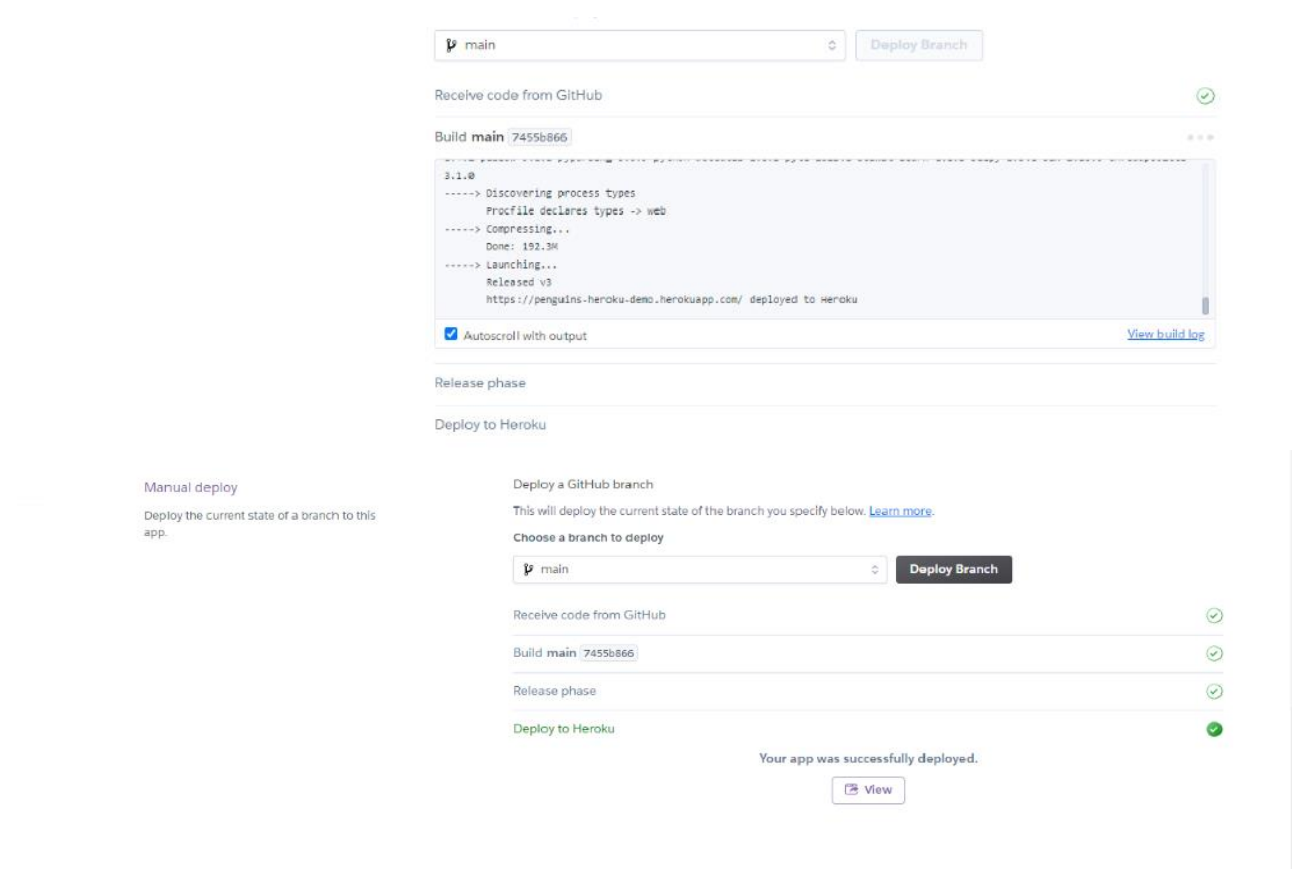


Create new project in Heroku called iris-predict-web-app:



Deploy from github:





project file:

الاسم	تاريخ التعديل	النوع	الحجم
static	١١:٣٦ م ٤٣/١٢/١٣	مجلد ملفات	
templates	١١:٣٦ م ٤٣/١٢/١٣	مجلد ملفات	
app	١٢:٤٠ ص ٤٣/١٢/١٤	ملف PY	٢ كيلوبايت
Heroku	٠٦:١٦ ص ٤٣/٠٩/٢٢	Microsoft ... مستند	٤٣٠ كيلوبايت
Heroku	٠٦:١٦ ص ٤٣/٠٩/٢٢	Microsoft Edge PD...	١٨٥ كيلوبايت
iris	٠٧:٠١ م ٤٢/٠٧/٠٣	...ملف القيم المفصو	٥ كيلوبايت
model.pkl	١٠:١٨ م ٤٣/١٢/١٣	ملف PKL	١٣ كيلوبايت
model	١٢:٥٠ ص ٤٣/١٢/١٤	ملف PY	٢ كيلوبايت
Procfile	٠٥:٢٧ ص ٤٣/٠٩/٢٢	ملف	١ كيلوبايت
README	١٢:٣٣ ص ٤٣/١٢/١٤	ملف MD	١ كيلوبايت
requirements	١٢:٤٦ ص ٤٣/١٢/١٤	مستند نصي	٥ كيلوبايت
test	٠٢:٤١ ص ٤٣/٠٩/٢١	ملف PY	١ كيلوبايت