

DEPLOYMENT ON FLASK

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```
1  import pickle
2
3  import pandas as pd
4  from sklearn.preprocessing import StandardScaler
5  from sklearn.ensemble import RandomForestClassifier
6  from sklearn.model_selection import train_test_split
7  import pickle
8
9  #import csv data
10
11  df = pd.read_csv("iris_flower.csv")
12
13  #view data
14
15  df.head()
16
17  #select the independent and dependent variables
18  X = df[["Sepal_Length", "Sepal_Width", "Petal_Length", "Petal_Width"]]
19  y = df["Class"]
20
21  #Split data into train and test
22
23  X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.3, random_state=50)
24
25  #Feature scaling
26  sc = StandardScaler()
27  X_train = sc.fit_transform(X_train)
28  X_test = sc.transform(X_test)
29
```

Continuation of creating a model

```
#Instantiate model  
classifier = RandomForestClassifier()  
  
#fit model  
classifier.fit(X_train, y_train)  
  
#create pickle file of model  
pickle.dump(classifier, open("model.pkl", "wb"))
```

Create Flask App

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

# create flask app

app = Flask(__name__)

# Load pickle model

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

# Define method

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

@app.route("/predict", methods=["POST"])
def predict():
    float_features = [float(x) for x in request.form.values()]
    final_features = [np.array(float_features)]
    prediction = model.predict(final_features)

    return render_template("index.html", prediction_text="This iris specie is called {}".format(prediction))

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

Model Deployment on Flask

Flower Class Prediction

This iris specie is called ['Virginica']