ML Deployment

Data Analysis Internship

2024

Task Done By:
Shahad Ali Aldawsari

Batch code:
LISUM33

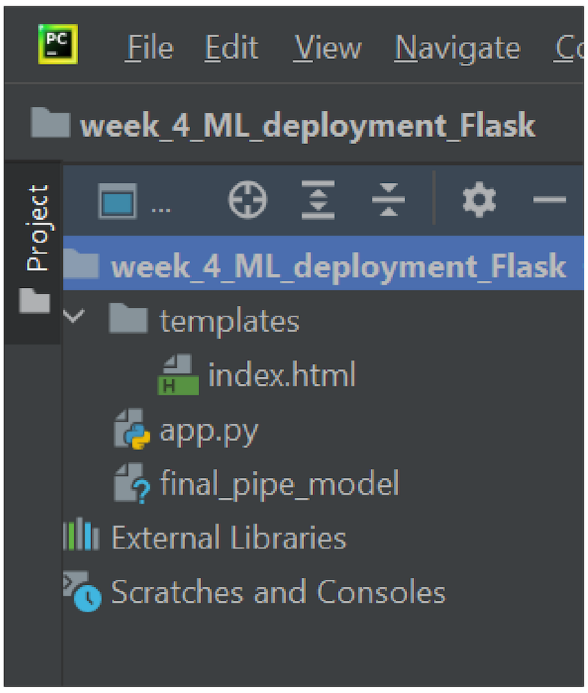
Submission date:
2024 May 28

Content:

Over View:

To deploy a ML model on Flask you need to create a folder on Pycharm contains three files:

- HTML file
- Python file
- Pickled model file



The folder that I created

HTML file:

```html
<!DOCTYPE html>
<html >
<!--From https://codepen.io/frytyler/pen/EGdtg-->
<head>
  <meta charset="UTF-8">
  <title>ML API</title>
  <link href='https://fonts.googleapis.com/css?family=Pacifico' rel='stylesheet' type='text/css'>
<link href='https://fonts.googleapis.com/css?family=Arimo' rel='stylesheet' type='text/css'>
<link href='https://fonts.googleapis.com/css?family=Hind:300' rel='stylesheet' type='text/css'>
<link href='https://fonts.googleapis.com/css?family=Open+Sans+Condensed:300' rel='stylesheet' type='text/css'>
</head>
<body>
 <div class="login">
    <h1>Flower Class Prediction</h1>
     <!-- Main Input For Receiving Query to our ML -->
    <form action="{{ url_for('predict')}}"method="post">
        <input type="text" name="Sepal_Length" placeholder="Sepal_Length" required="required" />
        <input type="text" name="Sepal_Width" placeholder="Sepal_Width" required="required" />
        <input type="text" name="Petal_Length" placeholder="Petal_Length" required="required" />
        <input type="text" name="Petal_Width" placeholder="Petal_Width" required="required" />
        <button type="submit" class="btn btn-primary btn-block btn-large">Predict</button>
    </form>
   <br>
   <br>
   {{ prediction_text }}
 </div>
</body>
```

The HTML code

The HTML code output

Python file:

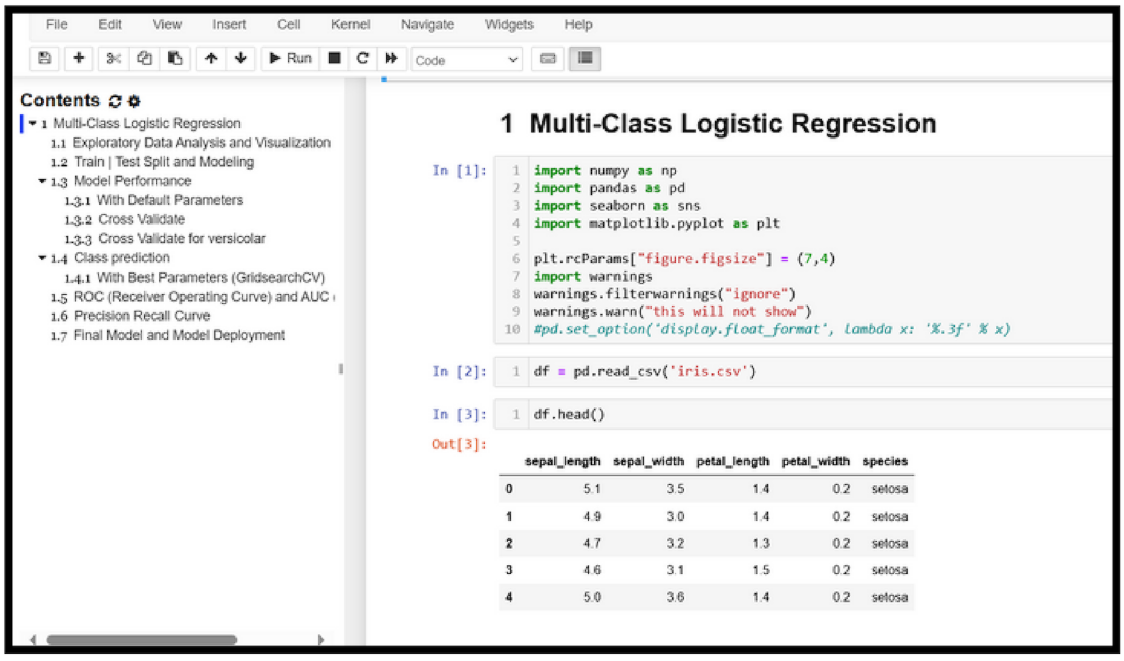
```python
import numpy as np
import pickle
from flask import Flask, request, jsonify, render_template

app = Flask(__name__)
model = pickle.load(open("final_pipe_model", 'rb'))
@app.route("/")
def Home():
    return render_template("index.html")
@app.route("/predict", methods = ["POST"])
def predict():
    species_mapping = ['Setosa', 'Versicolor', 'Virginica']
    float_features = [float(x) for x in request.form.values()]
    features = [np.array(float_features)]
    prediction = species_mapping[int(model.predict(features))]
    return render_template("index.html", prediction_text = "The flower type is {}".format(prediction))
if __name__ == "__main__":
    app.run(debug=True)

```

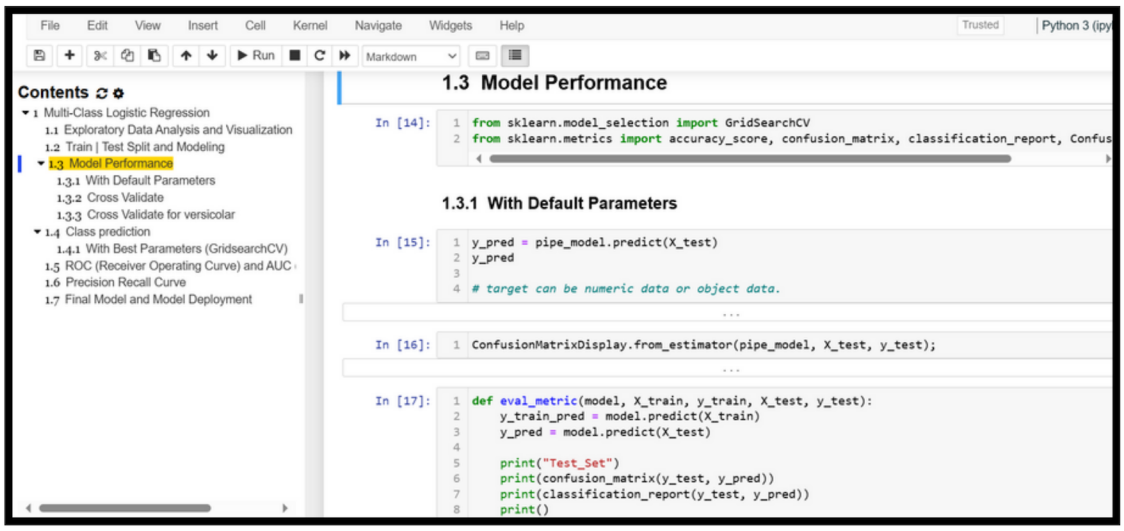
Pickled model file:

The summary of the mien steps to pickle a model:

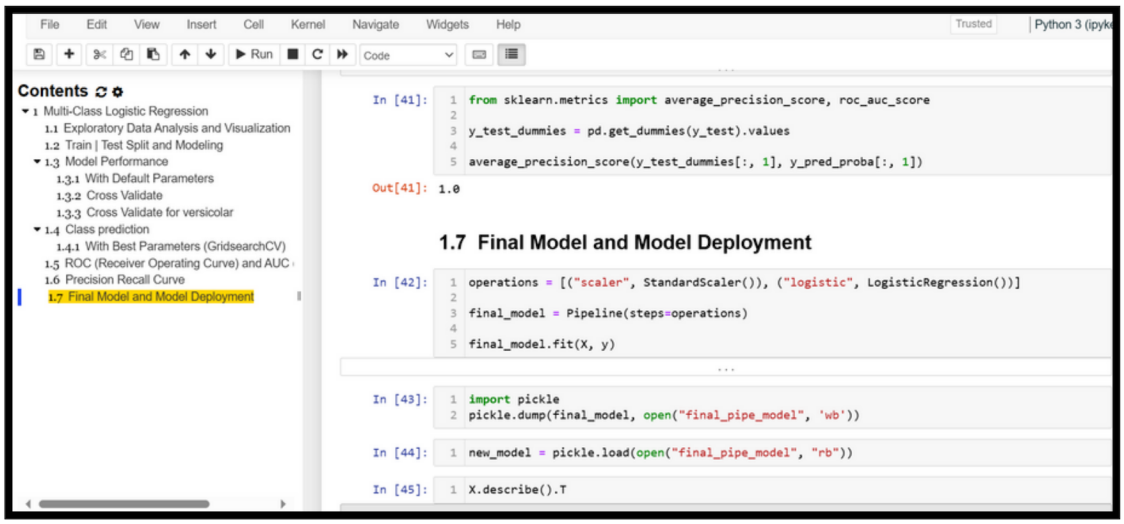


The dataset I used “iris”

Pickled model file:



The model building



The model pickling

Output:

1. Run the code
2. You will get a locale link, click on it
3. A web page will appear
4. Enter your input values
5. Click on “Predict” button
6. Finally, you will see the prediction result
   EX: “The flower type is Setosa”

The input

The output

Task Done By:
Shahad Ali Aldawsari

Batch code:
LISUM33

Submission date:
2024 May 28