Week 4: Deployment on Flask

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For this project we are using Big Mart Sales Prediction and using the flask framework. The Dataset and model building file is present in the Github.

The **app.py** file contains python code to run a flask web application. **home.html** contains the web design which is used in the app file.

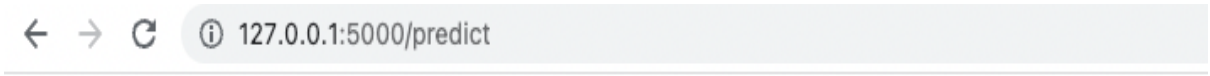
app.py home.html

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

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

@app.route('/predict',methods=['POST','GET'])
def result():

    Weight= float(request.form['item_weight'])
    Fat_Content=float(request.form['item_fat_content'])
    Item_Visibility= float(request.form['item_visibility'])
    Item_Type= float(request.form['item_type'])
    MRP = float(request.form['item_mrp'])
    Year= float(request.form['outlet_establishment_year'])
    Outlet_Size= float(request.form['outlet_size'])
    Location= float(request.form['outlet_location_type'])
    Outlet_Type= float(request.form['outlet_type'])

    X= np.array([[Weight,Fat_Content,Item_Visibility,Item_Type,MRP, Year,Outlet_Size,Location,Outlet_Type]])

    model_path=r'/Users/rajatmaloo/Documents/Internship/Week 4/models/xg.sav'

    model= joblib.load(model_path)

    Y_pred=model.predict(X)


    return jsonify({'Prediction of Sales': float(Y_pred)})

if __name__ == "__main__":
    app.run(debug=True, port=5000)
```

Run: app

```
/Users/rajatmaloo/venv/bin/Python /Users/rajatmaloo/Documents/Internship/Week 4/app.py
 * Serving Flask app 'app'
 * Debug mode: on
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
 * Running on http://127.0.0.1:5000
Press CTRL+C to quit
 * Restarting with stat
 * Debugger is active!
 * Debugger PIN: 280-879-743
127.0.0.1 - - [28/Apr/2023 16:37:05] "GET / HTTP/1.1" 200 -
127.0.0.1 - - [28/Apr/2023 16:37:05] "GET /static/css/Style.css HTTP/1.1" 404 -
127.0.0.1 - - [28/Apr/2023 16:39:35] "GET /favicon.ico HTTP/1.1" 404 -
127.0.0.1 - - [28/Apr/2023 16:45:05] "POST /predict HTTP/1.1" 200 -
```

After running the flak application we will get a link to access the website.
The below screenshot shows the webpage where users enter the values to predict the sales of an item.




```
{
  "Prediction of Sales": 4089.793701171875
}
```