Flask Deployment

Name: Flask Deployment for Model Based on Hotel Data

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Internship Batch: LISUM11

Version: 1.0

Deployment by: Siddarth Vinnakota

Step 1: Data Procurement and Cleaning

Price in Millions	Profit	Square Meter	City
21.88	119000	3938	Berlin
27.95	250000	3986	Munich
16.09	250000	2574	Cologne
27.58	145000	4155	Munich
23.76	110000	3795	Berlin
22.88	246000	2773	Munich
13.25	54000	634	Munich
8.94	2000	82	Munich
24.87	114000	3706	Munich
14.11	47000	1692	Berlin
11.65	54000	1989	Cologne
17.26	124000	2616	Berlin
18.45	125000	3358	Cologne
17.08	62000	1941	Munich
19.32	250000	1831	Munich
8.48	24000	800	Berlin
14.16	102000	2700	Cologne
13.84	26000	1257	Munich

…

Step 2: Creation of a Regression Model

model.py

```python
import numpy as np
import pandas as pd
import pickle
from sklearn.linear_model import LinearRegression

dataset = pd.read_csv('hotels.csv')

X = dataset.iloc[:, 1:3]

y = dataset.iloc[:,0]

regressor = LinearRegression()

regressor.fit(X,y)

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

#model = pickle.load(open('model.pkl','rb'))
```

Step 3: App Creation

app.py

```python
def home():
    return render_template('index.html')

@app.route('/predict',methods=['POST'])
def predict():
    '''
    For rendering results on HTML GUI
    '''
    int_features = [int(x) for x in request.form.values()]
    final_features = [np.array(int_features)]
    prediction = model.predict(final_features)

    output = round(prediction[0], 2)

    return render_template('index.html', prediction_text='Hotel price (in Millions)

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

Step 4: HTML Deployment

Predict Hotel Price for Purchase

Hotel Profit | Hotel Size in Square Meters | Predict

Hotel price (in Millions) should be $ 15.4