Data Glacier Week 4 Flask Assignment

Step 1: Gather Data

https://www.kaggle.com/code/victorcabral/toyota-car-prices-linear-regression-r-93/data?select=toyota.csv

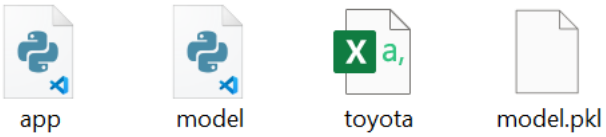
Model	Year	Mileage	Price	Transmiss	Fuel Type	Tax	MPG	Engine Size
GT86	2016	24089	16000	Manual	Petrol	265	36.2	2
GT86	2017	18615	15995	Manual	Petrol	145	36.2	2
GT86	2015	27469	13998	Manual	Petrol	265	36.2	2
GT86	2017	14736	18998	Manual	Petrol	150	36.2	2
GT86	2017	36284	17498	Manual	Petrol	145	36.2	2
GT86	2017	26919	15998	Manual	Petrol	260	36.2	2
GT86	2017	10456	18522	Manual	Petrol	145	36.2	2
GT86	2017	12340	18995	Manual	Petrol	145	36.2	2
GT86	2020	516	27998	Manual	Petrol	150	33.2	2
GT86	2016	37999	13990	Manual	Petrol	265	36.2	2
GT86	2013	72000	10495	Manual	Petrol	265	36.2	2
GT86	2017	12597	17990	Manual	Petrol	145	36.2	2
GT86	2017	36100	16995	Manual	Petrol	145	36.2	2
GT86	2019	995	23995	Manual	Petrol	145	33.2	2
GT86	2018	35228	18498	Manual	Petrol	145	36.2	2
GT86	2019	1751	23980	Manual	Petrol	145	33.2	2
GT86	2017	16444	17995	Manual	Petrol	265	36.2	2
GT86	2014	25499	12998	Manual	Petrol	260	36.2	2

Step 2: Save and Deploy Model

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

app = Flask(__name__)
model = pickle.load(open('model.pkl','rb'))
@app.route('/')
def home():
    return render_template('ex.html')

@app.route('/predict',methods=['POST'])
def predict():
    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('ex.html', prediction_text ='Price should be roughly ${}'.format(output))

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

```
import numpy as np
import pandas as pd
import pickle

toyota = pd.read_csv('toyota.csv')
x = toyota.iloc[:, 1:3]

y = toyota.iloc[:, 3]

from sklearn.linear_model import LinearRegression
regressor = LinearRegression()
regressor.fit(x,y)

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

```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=Roboto' 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>Predict Toyota GT86 Price</h1>

     <!-- Main Input For Receiving Query to our ML -->
    <form action="{{ url_for('predict')}}"method="post">
        <input type="text" name="Year" placeholder="Year (2012-2020)" required="required" />
        <input type="text" name="Mileage" placeholder="Mileage" required="required" />

        <button type="submit" class="btn btn-primary btn-block btn-large">Predict</button>
    </form>

   <br>
   <br>
   {{ prediction_text }}

 </div>


</body>
```



ex 12/29/2022 4:53 PM Microsoft Edge HTM...

Predict Toyota GT86 Price

Year (2012-2020) Mileage Predict

Price should be roughly $1947055.6