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LISUM34

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Data Glacier

Step 1

- Selecting Toy Data and saving the model

```
1
2 import pandas as pd
3
4 # Example toy data
5 data = {
6     'Name': ['Alice', 'Bob', 'Charlie', 'David'],
7     'Age': [25, 30, 35, 40],
8     'Salary': [50000, 60000, 70000, 80000]
9 }
10
11 df = pd.DataFrame(data)
12 print(df)
13
14
15 from sklearn.linear_model import LinearRegression
16 import joblib
17
18 # Example model training
19 X = df[['Age']]
20 y = df['Salary']
21
22 model = LinearRegression()
23 model.fit(X, y)
24
25 # Save the model to a file
26 joblib.dump(model, 'linear_regression_model.joblib')
27
```

Step 2

- Deploying the Model on Flask

```

1  from flask import Flask, render_template, request, jsonify
2  import joblib
3  import pandas as pd
4
5  app = Flask(__name__)
6
7  # Load the model
8  model = joblib.load('linear_regression_model.joblib')
9
10 # Home route - render index.html
11 @app.route('/')
12 def index():
13     return render_template('index.html')
14
15 # Route for prediction form - render prediction_form.html
16 @app.route('/predict', methods=['GET', 'POST'])
17 def predict():
18     if request.method == 'POST':
19         # Get data from form
20         age = float(request.form['age'])
21
22         # Predict using the model
23         prediction = model.predict([[age]])
24
25         # Render prediction_result.html with the result
26         return render_template('prediction_result.html', prediction=prediction[0])
27
28     # If GET request, render prediction_form.html
29     return render_template('prediction_form.html')
30
31 if __name__ == '__main__':
32     app.run(debug=True, port=8000)
33

```

Step 3

- Displaying the model

Index .html file

```

1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4      <meta charset="UTF-8">
5      <title>Home Page</title>
6  </head>
7  <body>
8      <h1>Welcome to My Flask App!</h1>
9      <p>This is the home page.</p>
10     <a href="/predict">Go to Prediction Form</a>
11 </body>
12 </html>
13

```

Prediction_form.html file

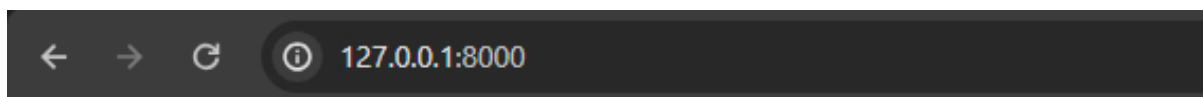
```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8">
5   <title>Prediction Form</title>
6   <link rel="stylesheet" href="{{ url_for('static', filename='style.css') }}">
7 </head>
8 <body>
9   <h1>Predict Salary</h1>
10  <form method="post" action="/predict">
11    <label for="age">Enter Age:</label>
12    <input type="number" id="age" name="age" required>
13    <button type="submit">Predict</button>
14  </form>
15 </body>
16 </html>
17
```

Prediction_result.html file

```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8">
5   <title>Prediction Result</title>
6   <link rel="stylesheet" href="{{ url_for('static', filename='style.css') }}">
7 </head>
8 <body>
9   <h1>Prediction Result</h1>
10  <p>The predicted salary is: {{ prediction }}</p>
11  <a href="/">Back to Prediction Form</a>
12 </body>
13 </html>
14
```

Step 4

- Local host on <http://127.0.0.1:8000/>



Welcome to My Flask App!

This is the home page.

[Go to Prediction Form](#)

