

```
1 from flask import Flask, request, jsonify
2 import joblib
3 import numpy as np
4
5 app = Flask(__name__)
6
7
8 model = joblib.load("iris_model.pkl")
9
10 @app.route("/")
11 def home():
12     return "Iris Classifier API is up and running!"
13
14 @app.route("/predict", methods=["POST"])
15 def predict():
16     try:
17         data = request.get_json()
18         features = np.array(data["features"]).reshape(1, -1)
19         prediction = model.predict(features)[0]
20         return jsonify({
21             "prediction": int(prediction),
22             "class": ["setosa", "versicolor", "virginica"][prediction]
```

```
23         })
24     except Exception as e:
25         return jsonify({"error": str(e)})
26
27 if __name__ == "__main__":
28     app.run(debug=True)
29
```

```
{  
  "prediction": 0,  
  "class": "setosa"  
}
```

```
1  from sklearn.datasets import load_iris
2  from sklearn.ensemble import RandomForestClassifier
3  import joblib
4
5  # Load data
6  iris = load_iris()
7  X, y = iris.data, iris.target
8
9  # Train model
10 model = RandomForestClassifier()
11 model.fit(X, y)
12
13 # Save model
14 joblib.dump(model, 'iris_model.pkl')
15 print("Model saved as iris_model.pkl")
16
```

```
python train_model.py
```

```
1 from flask import Flask, request, render_template
2 import joblib
3 import numpy as np
4
5 app = Flask(__name__)
6 model = joblib.load('iris_model.pkl')
7 labels = ['setosa', 'versicolor', 'virginica']
8
9 @app.route('/')
10 def home():
11     return render_template('index.html')
12
13 @app.route('/predict', methods=['POST'])
14 def predict():
15     try:
16         features = [float(request.form['sl']), float(request.form['sw'])
17                     ,
18                     float(request.form['pl']), float(request.form['pw'])
19                     ]
20         prediction = model.predict([features])[0]
21         result = labels[prediction]
22         return render_template('index.html', prediction=result)
```

```
1  <!-- templates/index.html -->
2  <!DOCTYPE html>
3  <html>
4  <head>
5  |   <title>Iris Flower Predictor</title>
6  </head>
7  <body>
8  |   <h1>Enter Iris Flower Measurements</h1>
9  |   <form method="POST" action="/predict">
10 |       Sepal Length: <input type="text" name="sl"><br><br>
11 |       Sepal Width: <input type="text" name="sw"><br><br>
12 |       Petal Length: <input type="text" name="pl"><br><br>
13 |       Petal Width: <input type="text" name="pw"><br><br>
14 |       <input type="submit" value="Predict">
15 |   </form>
16 |   {% if prediction %}
17 |       <h2>Predicted Class: {{ prediction }}</h2>
18 |   {% endif %}
19 </body>
20 </html>
```

Enter Iris Flower Measurements

Sepal Length:

Sepal Width:

Petal Length:

Petal Width:

{% if prediction %}

Predicted Class: {{ prediction }}

{% endif %}