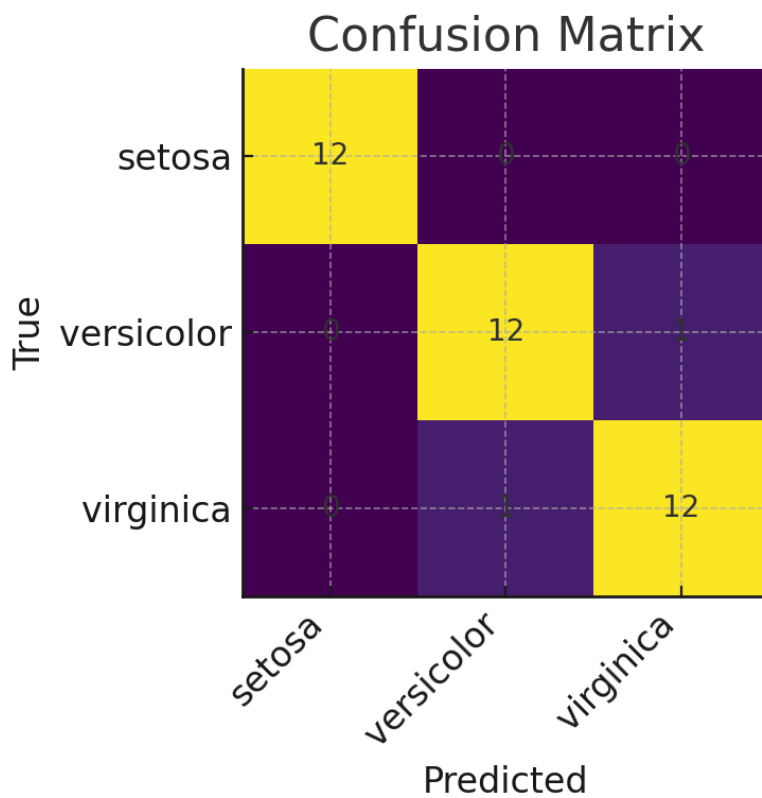


For this model, the Iris Dataset was used from Kaggle.
This is a preview of the dataset:

Iris dataset preview (first 5 rows)

sepal length	sepal width	petal length	petal width	target
5.1	3.5	1.4	0.2	0.0
4.9	3.0	1.4	0.2	0.0
4.7	3.2	1.3	0.2	0.0
4.6	3.1	1.5	0.2	0.0
5.0	3.6	1.4	0.2	0.0

Confusion matrix that was used:



Below is the classification report for the dataset

Classification Report

	precision	recall	f1-score	support
setosa	1.00	1.00	1.00	12
versicolor	0.92	0.92	0.92	13
virginica	0.92	0.92	0.92	13
accuracy			0.95	38
macro avg	0.95	0.95	0.95	38
weighted avg	0.95	0.95	0.95	38

This model was then trained and created:

```
train.py 6 x
C: > Users > Tahsin > Downloads > irisflaskproject > train.py > ...
1 import joblib
2 from sklearn.datasets import load_iris
3 from sklearn.model_selection import train_test_split
4 from sklearn.linear_model import LogisticRegression
5 from sklearn.metrics import classification_report
6 import numpy as np
7
8 if __name__ == "__main__":
9     iris = load_iris()
10    X, y = iris.data, iris.target
11    X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.25, random_state=42, stratify=y)
12
13    clf = LogisticRegression(max_iter=1000, multi_class="auto")
14    clf.fit(X_train, y_train)
15    y_pred = clf.predict(X_test)
16
17    print(classification_report(y_test, y_pred, target_names=iris.target_names))
18
19    joblib.dump({"model": clf, "feature_names": iris.feature_names, "target_names": iris.target_names}, "model.pkl")
20    print("Saved")
21
```

Then the required documents for flask were made, with the app and pickl model

This is how the inside of the folder should look:

app	10/16/2025 2:19 PM	Python Source File	2 KB
model	10/16/2025 2:19 PM	PKL File	2 KB
README	10/16/2025 2:19 PM	Markdown Source File	1 KB
requirements	10/16/2025 2:24 PM	Text Document	1 KB
train	10/16/2025 2:19 PM	Python Source File	1 KB
.env	10/16/2025 2:25 PM	File folder	
snapshots	10/16/2025 2:19 PM	File folder	
static	10/16/2025 2:19 PM	File folder	
templates	10/16/2025 2:19 PM	File folder	

Requirements:

```
flask==2.2.5  
joblib==1.3.2  
numpy==1.21.6  
scikit-learn==1.0.2  
matplotlib==3.5.3  
reportlab==4.2.2
```

These are the needed commands:

```
python -m venv .venv  
.venv\Scripts\activate  
pip install -r requirements.txt  
python train.py  
python app.py  
Open http://127.0.0.1:5000
```

Once ran, this is what it looks like:

Iris Classifier (Logistic Regression)

Sepal length:

Sepal width:

Petal length:

Petal width:

Predict

Prediction: **setosa**

Or POST JSON to /predict with keys: sepal_length, sepal_width, petal_length, petal_width.

Iris Classifier (Logistic Regression)

Sepal length:

Sepal width:

Petal length:

Petal width:

Predict

Prediction: **setosa**

Or POST JSON to /predict with keys: sepal_length, sepal_width, petal_length, petal_width.