```python
# Iris Flower Classification - ML Project 1

import numpy as np
import pandas as pd
import matplotlib.pyplot as plt

from sklearn.datasets import load_iris
from sklearn.model_selection import train_test_split
from sklearn.linear_model import LogisticRegression
from sklearn.metrics import accuracy_score, confusion_matrix

# Load dataset
iris = load_iris()
X = iris.data
y = iris.target

# Create DataFrame
df = pd.DataFrame(X, columns=iris.feature_names)
df['target'] = y

print("Dataset Preview:")
print(df.head())

# Split data
X_train, X_test, y_train, y_test = train_test_split(
    X, y, test_size=0.2, random_state=42
)

# Train model
model = LogisticRegression(max_iter=200)
model.fit(X_train, y_train)

# Predict
y_pred = model.predict(X_test)

# Accuracy
accuracy = accuracy_score(y_test, y_pred)
print("\nAccuracy:", accuracy)

# Confusion Matrix
print("\nConfusion Matrix:")
print(confusion_matrix(y_test, y_pred))

# Plot
plt.scatter(X[:, 0], X[:, 1], c=y)
plt.xlabel("Sepal Length")
plt.ylabel("Sepal Width")
plt.title("Iris Dataset")
plt.show()
```

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Dataset Preview:
   sepal length (cm)  sepal width (cm)  petal length (cm)  petal width (cm)  \
0                5.1               3.5                1.4               0.2
1                4.9               3.0                1.4               0.2
2                4.7               3.2                1.3               0.2
3                4.6               3.1                1.5               0.2
4                5.0               3.6                1.4               0.2

   target
0       0
1       0
2       0
3       0
4       0

Accuracy: 1.0

Confusion Matrix:
[[10  0  0]
 [ 0  9  0]
 [ 0  0 11]]
```

Iris Dataset