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In [1]: import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
from sklearn.model_selection import train_test_split
from sklearn.preprocessing import StandardScaler
from sklearn.linear_model import LogisticRegression
from sklearn.metrics import accuracy_score, confusion_matrix, classification_report
from sklearn import datasets
```

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In [2]: iris = datasets.load_iris()
X = iris.data
y = iris.target
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In [3]: X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state=42)
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In [4]: scaler = StandardScaler()
X_train = scaler.fit_transform(X_train)
X_test = scaler.transform(X_test)
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In [5]: model = LogisticRegression(multi_class='ovr', solver='lbfgs', max_iter=200)
model.fit(X_train, y_train)
```

Out[5]:

LogisticRegression

LogisticRegression(max_iter=200, multi_class='ovr')

```
In [6]: LogisticRegression(max_iter=200, multi_class='ovr')
```

Out[6]:

LogisticRegression

LogisticRegression(max_iter=200, multi_class='ovr')

```
In [7]: y_pred = model.predict(X_test)
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In [8]: accuracy = accuracy_score(y_test, y_pred)
print("Accuracy of the Logistic Regression model:", accuracy)
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Accuracy of the Logistic Regression model: 0.9666666666666667

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In [9]: conf_matrix = confusion_matrix(y_test, y_pred)
print("Confusion Matrix:\n", conf_matrix)
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Confusion Matrix:
[[10 0 0]
[0 8 1]
[0 0 11]]

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In [10]: class_report = classification_report(y_test, y_pred)
print("Classification Report:\n", class_report)
```

Classification Report:

	precision	recall	f1-score	support
0	1.00	1.00	1.00	10
1	1.00	0.89	0.94	9
2	0.92	1.00	0.96	11
accuracy			0.97	30
macro avg	0.97	0.96	0.97	30
weighted avg	0.97	0.97	0.97	30

```
In [ ]:
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