

```

import pandas as pd
from sklearn.datasets import load_iris
from sklearn.model_selection import train_test_split
from sklearn.linear_model import Perceptron
from sklearn.metrics import accuracy_score, classification_report

iris = load_iris()

X = iris.data          # Features
y = iris.target         # Class labels

X_train, X_test, y_train, y_test = train_test_split(
    X, y, test_size=0.25, random_state=42
)

model = Perceptron(max_iter=1000, eta0=0.1, random_state=42)
model.fit(X_train, y_train)

Perceptron(eta0=0.1, random_state=42)

y_pred = model.predict(X_test)

print("Accuracy:", accuracy_score(y_test, y_pred))
print("\nClassification Report:",
      classification_report(y_test, y_pred, zero_division=0))

Accuracy: 0.8421052631578947

Classification Report:
             precision    recall  f1-score   support
0            0.88    1.00    0.94      15
1            1.00    0.45    0.62      11
2            0.75    1.00    0.86      12

accuracy           0.84      38
macro avg       0.88    0.82    0.81      38
weighted avg    0.87    0.84    0.82      38

# New flower sample: sepal length, sepal width, petal length, petal width
new_sample = [[5.9, 3.0, 5.1, 1.8]]

prediction = model.predict(new_sample)

print("Predicted Flower:", iris.target_names[prediction[0]])

Predicted Flower: virginica

```