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From sklearn.datasets import load_iris

From sklearn.model_selection import train_test_split

From sklearn.neighbors import KNeighborsClassifier

From sklearn.metrics import accuracy_score


# Load Iris dataset

Iris = load_iris()

X = iris.data    # Features

Y = iris.target  # Labels


# Split data into training and testing sets (70% train, 30% test)

X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.3, random_state=42)


# Initialize KNN with k=3

Knn = KNeighborsClassifier(n_neighbors=3)


# Train the model

Knn.fit(X_train, y_train)


# Predict on test data

Y_pred = knn.predict(X_test)


# Calculate accuracy

Accuracy = accuracy_score(y_test, y_pred)
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Print("Predicted labels:", y_pred)
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Print("Actual labels: ", y_test)
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Print(f"Accuracy: {accuracy * 100:.2f}%")
```

Output :

```
Predicted labels: [1 0 2 1 1 0 0 2 1 2 2 1 0 2 0 0 2 2 0 1 1 2 2 1 1 0 1 0 0 2 2 0 0 0 1 0 2 1 1 0 0 2  
0 1 2 1]
```

```
Actual labels: [1 0 2 1 1 0 0 2 1 2 2 1 0 2 0 0 2 2 0 1 1 2 2 1 1 0 1 0 0 2 2 0 0 0 1 0 2 1 1 0 0 2 0  
1 2 1]
```

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Accuracy: 97.78%
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