

```
# Import necessary libraries
from sklearn import datasets
from sklearn.model_selection import train_test_split
from sklearn.tree import DecisionTreeClassifier, plot_tree
import matplotlib.pyplot as plt

# Load dataset (Iris dataset)
iris = datasets.load_iris()

# Split data into features and labels
X = iris.data
y = iris.target

# Split data into training and testing sets
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.3, random_state=42)

# Create Decision Tree Classifier
clf = DecisionTreeClassifier(criterion="entropy", random_state=0)

# Train the model
clf.fit(X_train, y_train)

# Make predictions
y_pred = clf.predict(X_test)

# Calculate accuracy
accuracy = clf.score(X_test, y_test)

# Print results
print("Predicted labels:", y_pred)
print("Actual labels:   ", y_test)
print("Accuracy:", accuracy)

# Visualize the Decision Tree
plt.figure(figsize=(10,6))
plot_tree(clf, filled=True, feature_names=iris.feature_names, class_names=iris.target_names)
plt.show()
```

```
Predicted labels: [1 0 2 1 1 0 1 2 1 1 1 0 0 0 0 1 2 1 1 2 0 2 0 2 2 2 2 0 0 0 0 1 0 0 2 1
0 0 0 2 1 1 0 0]
Actual labels:    [1 0 2 1 1 0 1 2 1 1 1 2 0 0 0 0 1 2 1 1 2 0 2 0 2 2 2 2 0 0 0 0 1 0 0 2 1
0 0 0 2 1 1 0 0]
Accuracy: 0.9777777777777777
```

