from sklearn.datasets import load\_iris

from sklearn.tree import DecisionTreeClassifier, plot\_tree

from sklearn.model\_selection import train\_test\_split

from sklearn.metrics import accuracy\_score

import matplotlib.pyplot as plt

iris = load\_iris()

X, y = iris.data, iris.target

X\_train, X\_test, y\_train, y\_test = train\_test\_split(X, y, test\_size=0.2, random\_state=42)

clf = DecisionTreeClassifier(criterion='gini', max\_depth=3, random\_state=42)

clf.fit(X\_train, y\_train)

y\_pred = clf.predict(X\_test)

accuracy = accuracy\_score(y\_test, y\_pred)

print(f"Classification Accuracy: {accuracy \* 100:.2f}%")

plt.figure(figsize=(12, 8))

plot\_tree(clf, feature\_names=iris.feature\_names, class\_names=iris.target\_names, filled=True)

plt.show()