**import numpy as np**

**from sklearn import datasets**

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

**from sklearn.tree import DecisionTreeClassifier**

**from sklearn.metrics import accuracy\_score**

**from sklearn import tree**

**import matplotlib.pyplot as plt**

**iris = datasets.load\_iris()**

**X = iris.data**

**y = iris.target**

**X\_train, X\_test, y\_train, y\_test = train\_test\_split(X, y, test\_size=0.3, random\_state=42)**

**clf = DecisionTreeClassifier()**

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

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

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

**print('Accuracy: ', accuracy)**

**plt.figure(figsize=(20,10))**

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

**plt.title('Decision Tree Visualization')**

**plt.show()**

**user\_defined\_values = np.array([[5.1, 3.5, 1.4, 0.2],**

**[6.2, 3.4, 5.4, 2.3]])**

**predictions = clf.predict(user\_defined\_values)**

**print('Predictions for user-defined values: ', predictions)**

**print(f'Predicted classes: ' , iris.target\_names[predictions])**