5]

```
import numpy as np
import matplotlib.pyplot as plt
import pandas as pd
import seaborn as sns
from sklearn import tree
from sklearn import metrics
from sklearn.metrics import accuracy_score, classification_report
from sklearn.datasets import load_iris
from sklearn.tree import DecisionTreeClassifier
from sklearn.model_selection import train_test_split

iris = load_iris()
iris = sns.load_dataset('iris')
iris.head()
x = iris.iloc[:, :-1]
y = iris.iloc[:, -1]
x_train, x_test, y_train, y_test = train_test_split( x, y, test_size=0.33, random_state=42)
treemodel = DecisionTreeClassifier()
treemodel.fit(x_train, y_train)
y_pred = treemodel.predict(x_test)
plt.figure(figsize=(20, 30))
tree.plot_tree(treemodel, filled=True)
plt.show()
print(classification_report(y_test, y_pred))
from sklearn.metrics import confusion_matrix
cm = confusion_matrix(y_test, y_pred)
print("Confusion Matrix:")
print(cm)
from sklearn.metrics import accuracy_score
accuracy_score(y_test, y_pred)
```