print(\_\_doc\_\_)

# Import the necessary modules and libraries

import numpy as np

from sklearn.tree import DecisionTreeRegressor

import matplotlib.pyplot as plt

# Fit regression model

regr\_1 = DecisionTreeRegressor(max\_depth=2)

regr\_2 = DecisionTreeRegressor(max\_depth=5)

regr\_1.fit(X, y)

regr\_2.fit(X, y)

# Predict

X\_test = np.arange(0.0, 5.0, 0.01)[:, np.newaxis]

y\_1 = regr\_1.predict(X\_test)

y\_2 = regr\_2.predict(X\_test)

# Plot the results

plt.figure()

plt.scatter(X, y, s=20, edgecolor="black",

c="darkorange", label="data")

plt.plot(X\_test, y\_1, color="cornflowerblue",

label="max\_depth=2", linewidth=2)

plt.plot(X\_test, y\_2, color="yellowgreen", label="max\_depth=5", linewidth=2)

plt.xlabel("data")

plt.ylabel("target")

plt.title("Decision Tree Regression")

plt.legend()