import matplotlib.pyplot as plt

from scipy.interpolate import UnivariateSpline

from numpy import \*

x = [0.8, 1.2, 1.4, 1.7, 2.2]

y = [3.18, 2.15, 4.18, 3.81, 5.07]

plt.scatter(x, y, label = "Задані точки", color = "g")

plt.grid(True)

plt.xlabel("X")

plt.ylabel("Y")

plt.title("Інтерполяція сплайнами")

spl = UnivariateSpline(x, y)

xs = linspace(-1, 4.5, 1000)

plt.plot(x, y, "go", xs, spl(xs), "m")

plt.legend(fontsize = 12, edgecolor = "black", facecolor = "red", loc = "lower left")

plt.show()