import numpy as np

import matplotlib.pyplot as plt

np.random.seed(0)

x = np.random.rand(100)

y = 2 \* x + np.random.normal(0, 0.1, 100)

# Create a scatter plot

plt.figure(figsize=(10, 6))

plt.scatter(x, y, alpha=0.7)

plt.xlabel('X-axis')

plt.ylabel('Y-axis')

plt.title('Scatter Plot of X vs. Y')

plt.grid(True)

plt.show()