Linear regression

import numpy as np

s=[1,2,3,4]

p=[2,5,6,7]

for var in range(len(s)):

s[var]=int(s[var])

p[var]=int(p[var])

s\_mean=float(np.mean(s))

p\_mean=float(np.mean(p))

n=len(s)

s1=int(0); s2=int(0);

for var in range(len(s)):

s1=s1+(s[var]\*p[var])

s2=s2+(s[var]\*p[var])

slope=float((s1-(n\*s\_mean\*p\_mean))/(s2-(n\*s\_mean\*p\_mean)))

intercept=p\_mean-s\_mean\*slope

p\_vals=float((slope\*s\_mean)+intercept)

import matplotlib.pyplot as plt

plt.plot(s,p,'ro')

axes = plt.gca()

s\_vals = np.array(axes.get\_xlim())

p\_vals = intercept + slope \* s\_vals

c1 = plt.plot(s\_vals, p\_vals, '--')

c2 = c1.add\_subplot()

c2.show()