import numpy as np

import pandas as pd

age = np.array([23,23,27,27,39,41,47,49,50,52,54,54,56,57,58,58,60,61])

p\_fat = np.array([9.5,26.5,7.8,17.8,31.4,25.9,27.4,27.2,31.2,34.6,42.5,28.8,33.4,30.2,34.1,32.9,41.2,35.7])

//cal varience

var\_age = np.var(age)

var\_p\_fat = np.var(p\_fat)

//calculte mean

age\_m = age.mean()

p\_fat\_m = p\_fat.mean()

//calculate numerator(**co-varience**)

numerator = np.sum((age - age\_m)\*(p\_fat - p\_fat\_m))

print(numerator)

//calculate denominator

denominator = np.sqrt(np.sum((age-age\_m)\*\*2)) \* np.sqrt(np.sum((p\_fat - p\_fat\_m)\*\*2))

print(denominator)

//calculate pearson coefficient

pearson = numerator / denominator

print(pearson)

print("Strong correlation strength as pearson > 0.71")