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# central tendency - mean, median and mode # variation or dispersion - range, inter-quartile
range, variance, std deviation # shape - skewness and kurtosis mylist =
[3,6,5,4,7,6,8,9,1,10,13,4,7,11,4,7,9] sum(mylist)/len(mylist) Out[68]: 6.705882352941177
np.mean(mylist) Out[69]: 6.705882352941177 # 10 have value as 7, 15 have value as 8, 23
have value as 9, 8 have value as 10 freq = np.array([10,15,23,8]) values = np.array([7,8,9,10])
freq*values/sum(freq) Out[73]: array([1.25 , 2.14285714, 3.69642857, 1.42857143])
sum(freq*values/sum(freq)) Out[74]: 8.517857142857142 len(mylist) Out[75]: 17 sorted(mylist)
[8] Out[76]: 7 np.median(mylist) sal = [6,7,6,7,8,7,6,7,8,7,6,7,8,8,7,6,7,6,7,7,6,8] np.mean(sal)
Out[80]: 6.909090909090909 np.median(sal) Out[81]: 7.0 new_sal =
[6,7,6,7,8,7,6,7,8,7,6,7,8,8,7,6,7,6,7,7,6,8,54,50,52] np.mean(new_sal) Out[83]: 12.32
np.median(new_sal) Out[84]: 7.0 # range, inter quartile range, variance, std deviation # range =
max -min max(mylist) - min(mylist) Out[91]: 12 x = [1,4,4,7,5,8,9,3,10] y = [1,4,4,4,4,4,4,10] #
IQR = third quartile - first quartile OR 75th percentile - 25th percentile np.percentile(mylist,75) -
np.percentile(mylist,25) Out[95]: 5.0 x Out[96]: [1, 4, 4, 7, 5, 8, 9, 3, 10] y Out[97]: [1, 4, 4, 4, 4,
4, 4, 4, 10] np.percentile(x,75) - np.percentile(x,25) Out[98]: 4.0 np.percentile(y,75) -
np.percentile(y,25) Out[99]: 0.0 x = [4,6,7,9,10,3,5,8,3,7] np.var(x, ddof=0) # pop variance
Out[101]: 5.36 np.var(x, ddof=1) # sample variance Out[102]: 5.955555555555556 np.var(x,
ddof=0)**0.5 # pop std dev Out[103]: 2.3151673805580453 np.std(x, ddof=0) # pop std dev
Out[104]: 2.3151673805580453 np.std(x, ddof=1) # sample std dev Out[105]:
2.440400695696417

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