BI Lab Jan 2024

Tutorial on Data Exploration

1. For the given data set

57 , 57, 57,58,63,66,66,67,67,68,69,70,70,70,72,73,75,75,76,76,78,79,81 find the

a) Mean

b) Median

c) Mode

d) Midrange

e) Range

f) All quartiles

g) IQR

h) Draw boxplot for the above dataset. Comment about outliers.

2. 52 , 57, 57,58,63,66,66,67,67,68,69,70,70,70,72,73,75,75,76,76,78,79,89 find the

a) Mean

b) Median

c) Mode

d) Midrange

e) Range

f) All quartiles

g) IQR

h) Draw boxplot for the above dataset.

Comment about outliers.

3. Use MS-Excel to

a. Extract summary of descriptive statistics

b. percentiles of 10, 20,25, 50,75, 80,90,100

c. Create frequency bin

d. Draw histogram of the following dataset

e. Draw boxplot of the following dataset

13,15,16,16,19,20,20,21,22,22,25,25,25,25,30,33,33,35,35,35,35,36,40,45,46,52,70

4. Find median of grouped data{\displaystyle Q3+1.5{\text{ IQR}}=75^{\circ }F+13.5^{\circ }F=88.5^{\circ }F.}

CI F

0-10 4

10-20 6

20-30 18

30-40 34

40-50 40

5. Partition data into 4 bins using equi depth binning method and perform smoothing according to following methods

1. Smoothing by bin median
2. Smoothing by bin mean
3. Smoothing by bin boundaries

Data 11,13,13,15,15,16,19,20,20,20,21,21,22,23,24,30,40,45,45,45,71,72,73,75