**Descriptive Statistics – Part 2**

1. Percentiles :- The p percentile of a sample is a value such that p percentage of the values are less than or equal to this value.
2. Sort the Data
3. Compute location of p-th percentile

**Lp  = p/100 (n + 1)**

1. (If in fraction) Find Integer and Fraction Part (Ip and Fp)

**Yp = element at Ip + Fp(element at Ip+1 – element at Ip)**

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1. Quartiles :- Split the data in 4 equal parts. Median is equal to Q2
2. Quintiles :- Splits the data in 5 equal parts
3. Deciles :- Spits the data in 10 equal parts
4. Percentile Rank :- Percentage of data values that are less than or equal to it.

**PRs = 100\*(cs + 0.5fs)/n**

**PRs =** percentile rank of score s

**cs =** number of values less than s

**fs =** number of values equal to s

**n =** total number of data

1. Effect of Transformation on percentiles :- Scaling and Shifting

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1. Measures of Spread :- To find Variability of data
2. Range of data (max data- min data) . Not Accurate in case of Outliers
3. IQR or Inter-Quartile Range (Q3 – Q1) . Not Sensitive to Outlier
4. Variance – measure of consistency

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1. Standard Deviation –

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1. Effect of transformation on Measures of spread
2. Range

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1. IQR

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1. Variance

A person standing in front of a screen with text on it

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1. Standard Deviation

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