

## Measures of Central Tendency & Percentile

### Dataset : Placement.csv

#### Topic 1 : Mean,Median,Mode:

	sl_no	ssc_p	hsc_p	degree_p	etest_p	mba_p	salary
Mean	108	67.3034	66.3332	66.3702	72.1006	62.2782	288655
Median	108	67	65	66	71	62	265000
Mode	1	62	63	65	60	56.7	300000

**Mean** : It is the average of all the values of a column. The result is affected by outlier.

**Median**: It is the exact middle value of all the values. Outlier does not affect the median.

**Mode**: It is the most frequently occurring value in the column.

#### Detailed Interpretation from the Table:

##### 1.ssc\_p: (Mean=67.30,Median=67,Mode=62)

- mean is approx = median. This says there are no/very very less outliers.
- Mode is 62, so there are some high scores making high average. Most obtained mark is between 62-67.
- Mean>Median>Mode – Slightly Right skewed, Few outliers are pushing the mean up.

##### 2.hsc\_p: (Mean=66.33,Median=65,Mode=63)

- Mean is a bit greater than median. This says there are less outliers.
- Frequently occurred score is 63, there are some high scores making high mean. Most obtained mark is between 63-66.
- Mean>Median>Mode-Right skewed, few outliers are pushing the mean up.

##### 3.degree\_p: (Mean=66.37,Median=66,Mode=65)

- mean is approx = median. This says there are no/very very less outliers.
- Mode is 62, so there are some high scores making high average.
- Mean>Median>Mode – Slightly Right skewed, Few outliers are pushing the mean up.

##### 4.etest\_p: (Mean=72.10,Median=71,Mode=60)

- Mean is higher than median. there are more outliers.

- Mode is 60, so there are more high performers
- Mean>median>mode, right skewed.

#### **5.mba\_p: (Mean=62.27,Median=62,Mode=56.7)**

- Mean is approx=median. So no/very less outliers.
- Most obtained mark is between 56-62
- Mean>Median>Mode – Right skewed. There are many high scores which are pushing the mean up.

#### **6.salary: (Mean=288655,Median=265000,Mode=300000)**

- Mean < Median. So there are quite some outliers in lower range.
- Most obtained salary is 300000, some outliers are pulling the mean down.
- Mode>Mean>Median – means some salaries were very low, pulling the mean down, despite high offers. There were many salaries below 265000. - Left skewed

### **Topic 2 : Percentile**

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	sl_no	ssc_p	hsc_p	degree_p	etest_p	mba_p	salary
<b>Mean</b>	108	67.3034	66.3332	66.3702	72.1006	62.2782	288655
<b>Median</b>	108	67	65	66	71	62	265000
<b>Mode</b>	1	62	63	65	60	56.7	300000
<b>Q1:25th</b>	54.5	60.6	60.9	61	60	57.945	240000
<b>Q2:50th</b>	108	67	65	66	71	62	265000
<b>Q3:75th</b>	161.5	75.7	73	72	83.5	66.255	300000
<b>Q:99th</b>	212.86	87	91.86	83.86	97	76.1142	671200
<b>Q4:100th</b>	215	89.4	97.7	91	98	77.89	940000

#### **Detailed Interpretation from the Table:**

#### **1.ssc\_p: (Q1:60.6,Q2:67,Q3:75.7,Q4:89.4)**

- 50% values lies below 67, which means most of the students scored above average.

- Highest score is 89.4%.

**2.hsc p: (Q1:60.9,Q2:65,Q3:73,Q4:97.7)**

- Middle value is 65, so most of the students scored above average.
- Highest score is 97.7 which is good.
- 25% of students scored more than 73, which is good score.

**3.degree p: (Q1:61,Q2:66,Q3:72,Q4:91)**

- Highest score is 91 which is less than ssc and hsc.
- Middle value is 66, so half of the students scored above 66 which is above average.
- 99<sup>th</sup> percentile is 83 so only one person has above 90. Less high performers.

**4.etest p: (Q1:60,Q2:71,Q3:83.5,Q4:98)**

- 99<sup>th</sup> percentile is 97, q3 is 83.5, so there were high performers.
- Middle value is 71, so all students have performed very well in entrance test.

**5.mba p: (Q1:57.9,Q2:62,Q3:66.2,Q4:77.8)**

- Highest score is 77.8 which is low. Students have scored average marks in mba.
- 50% of the students scored below 62.
- No high performers.

**6.salary: (Q1:240000,Q2:265000,Q3:300000,Q4:940000)**

- 99<sup>th</sup> percentile is 672,200 and Q4 is 940000 which is a drastic jump of the best performer.
- 75% of the students get salary below 300000. Remaining 25% get relatively high.