

Skewness and kurtosis

Skewness measures the **asymmetry** of a data distribution. It tells us whether the data is skewed to the left (negative skew) or right (positive skew).

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|--|---|--|
| Skewness > 0: Right-skewed Positive skewed also called Right skewed. Mean > Median > Mode | Skewness < 0: Left-skewed Negative skewed – Left skewed Mean < Median < Mode | Skewness ≈ 0: Symmetrical Perfectly symmetrical distribution . Mean = Median = Mode |
|--|---|--|

| | sl_no | ssc_p | hsc_p | degree_p | etest_p | mba_p | salary |
|-----------------|--------|-----------|-----------|-----------|-----------|-----------|---------------|
| Mean | 108.0 | 67.303395 | 66.334744 | 66.358558 | 72.100558 | 62.278186 | 277648.648649 |
| Median | 108.0 | 67.0 | 65.0 | 66.0 | 71.0 | 62.0 | 265000.0 |
| Mode | 1 | 62.0 | 63.0 | 65.0 | 60.0 | 56.7 | 300000.0 |
| Q1:25% | 54.5 | 60.6 | 60.9 | 61.0 | 60.0 | 57.945 | 240000.0 |
| Q2:50% | 108.0 | 67.0 | 65.0 | 66.0 | 71.0 | 62.0 | 265000.0 |
| Q3:75% | 161.5 | 75.7 | 73.0 | 72.0 | 83.5 | 66.255 | 300000.0 |
| 99% | 212.86 | 87.0 | 91.129 | 83.86 | 97.0 | 76.1142 | NaN |
| Q4:100% | 215.0 | 89.4 | 91.15 | 88.5 | 98.0 | 77.89 | 390000.0 |
| IQR | 107.0 | 15.1 | 12.1 | 11.0 | 23.5 | 8.31 | 60000.0 |
| 1.5rule | 160.5 | 22.65 | 18.15 | 16.5 | 35.25 | 12.465 | 90000.0 |
| Lesser | -106.0 | 37.95 | 42.75 | 44.5 | 24.75 | 45.48 | 150000.0 |
| Greater | 322.0 | 98.35 | 91.15 | 88.5 | 118.75 | 78.72 | 390000.0 |
| Min | 1 | 40.89 | 42.75 | 50.0 | 50.0 | 51.21 | 200000.0 |
| Max | 215 | 89.4 | 91.15 | 88.5 | 98.0 | 77.89 | 390000.0 |
| Skew | 0.0 | -0.132649 | 0.162611 | 0.204164 | 0.282308 | 0.313576 | 0.8067 |
| Kurtosis | -1.2 | -0.60751 | 0.086901 | -0.09749 | -1.08858 | -0.470723 | -0.239837 |

Skew :

| Column | Skewness | Interpretation |
|----------|----------|----------------|
| ssc_p | -0.13 | left-skewed |
| hsc_p | 0.16 | right-skewed |
| degree_p | 0.2 | right skewed |
| etest_p | 0.28 | right skewed |
| mba_p | 0.31 | right skewed |
| salary | 0.81 | right skewed |

Kurtosis

kurtosis is a statistical measure that describes the shape of a data distribution, specifically its tailedness or the presence of outliers.

| | | |
|---|--|--|
| Leptokurtic (kurtosis > 3): More outliers. | Platykurtic (kurtosis < 3): Fewer outliers. | Mesokurtic (kurtosis \approx 3): Normal distribution (moderate tails) |
|---|--|--|

| Column | Kurtosis | Interpretation |
|----------|----------|--------------------|
| ssc_p | -0.61 | Platykurtic |
| hsc_p | 0.09 | Platykurtic |
| degree_p | -0.1 | platykurtic |
| etest_p | -1.09 | Platykurtic |
| mba_p | -0.47 | Platykurtic |
| salary | -0.24 | platykurtic |

No high kurtosis

All column have playkurtic.