

05-11-2025

## Kurtosis

- Talk about the presence of outliers.
- Formula:

$$K = \frac{1}{N} \sum_{i=1}^N \left( \frac{x_i - \mu}{\sigma} \right)^4$$

where:

- $\mu$  - an average of the signal
  - $\sigma$  - standard deviation of the signal
  - $x$  - signal values
- It measures the “tailness” or “peakness” of the data distribution.

Diff types of kurtosis:

### 1.Meso Kurtosis( $K=3$ )

- Normal Distribution
- No outliers
- Moderate tail & peak

### 2.Lepo Kurtosis( $K>3$ )

- Heavy tails & sharp Peak
- More outliers

### 3.Platy kurtosis( $K<3$ )

- Light tails & flat peak
- Fewer outliers