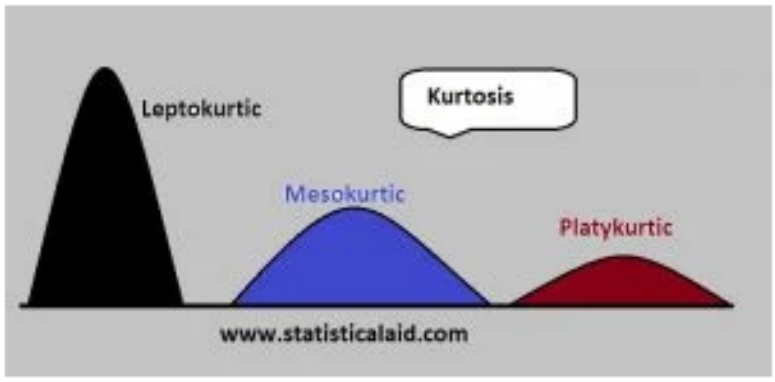
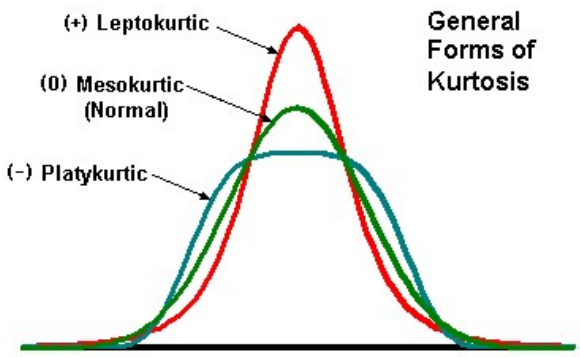
Kurtosis

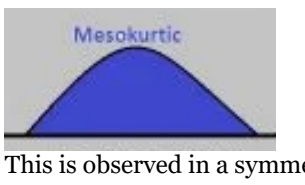
Sunday, 02 October 2022 8:22

Summary	• Kurtosis

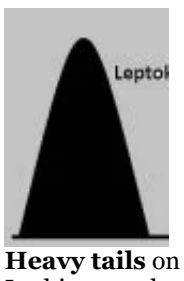
Kurtosis is a statistical measure that defines how heavily the tails of a distribution differ from the tails of a normal distribution. In other words, kurtosis identifies whether the tails of a given distribution contain extreme values.





- The **expected value of kurtosis is 3** (Mesokurtic).
  - 

  - This is observed in a symmetric distribution.

- If $kurtosis > 3$: **Positive Kurtosis** (Leptokurtic).
  - 

  - **Heavy tails** on either side, indicating large outliers.
  - In this case, the value of kurtosis will range from 1 to infinity.

- If $kurtosis < 3$: **Negative kurtosis** (Platykurtic).
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  - **Flat/light tails**, indicating small outliers.
  - The range of values for a negative kurtosis is from -2 to infinity. The greater the value of kurtosis, the higher the peak.

Excess Kurtosis = Kurtosis - 3