Summary of Kurtosis vs Skewness in a nutshell

Skewness measures the asymmetry of a distribution - whether data leans more to one side:

- **Positive skew**: Long tail on the right (most values cluster left). Think of income distribution - most people earn moderate amounts, but a few billionaires pull the tail right.
- **Negative skew**: Long tail on the left (most values cluster right). Like test scores when most students do well but a few struggles.
- **Zero skew**: Symmetric distribution, like a normal bell curve.

Kurtosis measures the "tailedness" of a distribution - how much extreme values (outliers) occur:

- **High kurtosis**: Heavy tails, more extreme values. Imagine daily stock returns - mostly small changes, but occasional huge swings.
- **Low kurtosis**: Light tails, fewer extremes. Like human heights - most people are near average, very few are extremely tall or short.
- A normal distribution has kurtosis of 3 (or 0 for "excess kurtosis").

Simple example:

- Dataset A: [1, 2, 3, 4, 5, 6, 7, 8, 9] - symmetric, moderate tails
- Dataset B: [1, 2, 3, 4, 5, 6, 7, 8, 50] - positively skewed (that 50 pulls right)
- Dataset C: [5, 5, 5, 5, 5, 5, 5, 5, 5] - zero skew, very low kurtosis (no variation)
- Dataset D: [5, 5, 5, 5, 5, 5, 5, 5, 100] - positively skewed AND high kurtosis (extreme outlier)

Key difference: Skewness tells you which direction the data leans; kurtosis tells you how often extreme values appear.