

A top-down view of a workspace. In the top right, a white ceramic cup filled with dark coffee sits on a matching saucer. To its right are a few dark cherries. Below the cup, a portion of a light-colored keyboard is visible, featuring keys like 'option', 'command', 'C', 'G', 'V', 'B', and 'N'. A gold-colored pen lies diagonally across the bottom right of the frame.

# Summarizing and Visualizing Data

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# Types of Data

- Numerical
  - Center
    - Mean or Median or Mode
  - Shape
    - Bell-shaped or Skewed
  - Spread
    - Range or IQR or Variance
- Categorical
  - Proportion or Count or Mode



# Measures of Central Tendency

- Mean - an average of data
- Median - middle value of the ordered data
- Mode - value that occurs most often in the data

# Mean vs Median

Consider seven employees' salaries as follows:

- 28,000
- 34,000
- 33,000
- 37,000
- 33,000
- 40,000
- 40,000

**Question: When it is better to report the Median as compared to the Mean?**