



**DataCamp**

*Learning by doing*

# Example: Wine ratings

- Suppose that 100 wine experts rated the overall quality of different wines on a scale of 1 to 100
  - Higher scores indicate higher quality

# Example: Wine ratings

- Consider the red wines, which country had the highest average (mean) rating?

# Example: Wine ratings (Reds)

Country	Mean = M = ( $\Sigma X$ ) / N
Argentina	66.73
Australia	81.76
France	70.97
USA	76.38

# Example: Wine ratings

- Now consider the white wines, which country had the highest average (mean) rating?

# Example: Wine ratings (Whites)

Country	Mean = M = ( $\Sigma X$ ) / N
Argentina	71.20
Australia	86.81
France	85.90
USA	88.62

# Example: Wine ratings

- The mean is a measure of central tendency

# Measures of central tendency

- *Measure of central tendency:* A measure that describes the middle or center point of a distribution
  - A good measure of central tendency is representative of the distribution

# Measures of central tendency

- *Mean*: the average,  $M = (\Sigma X) / N$
- *Median*: the middle score (the score below which 50% of the distribution falls)
- *Mode*: the score that occurs most often

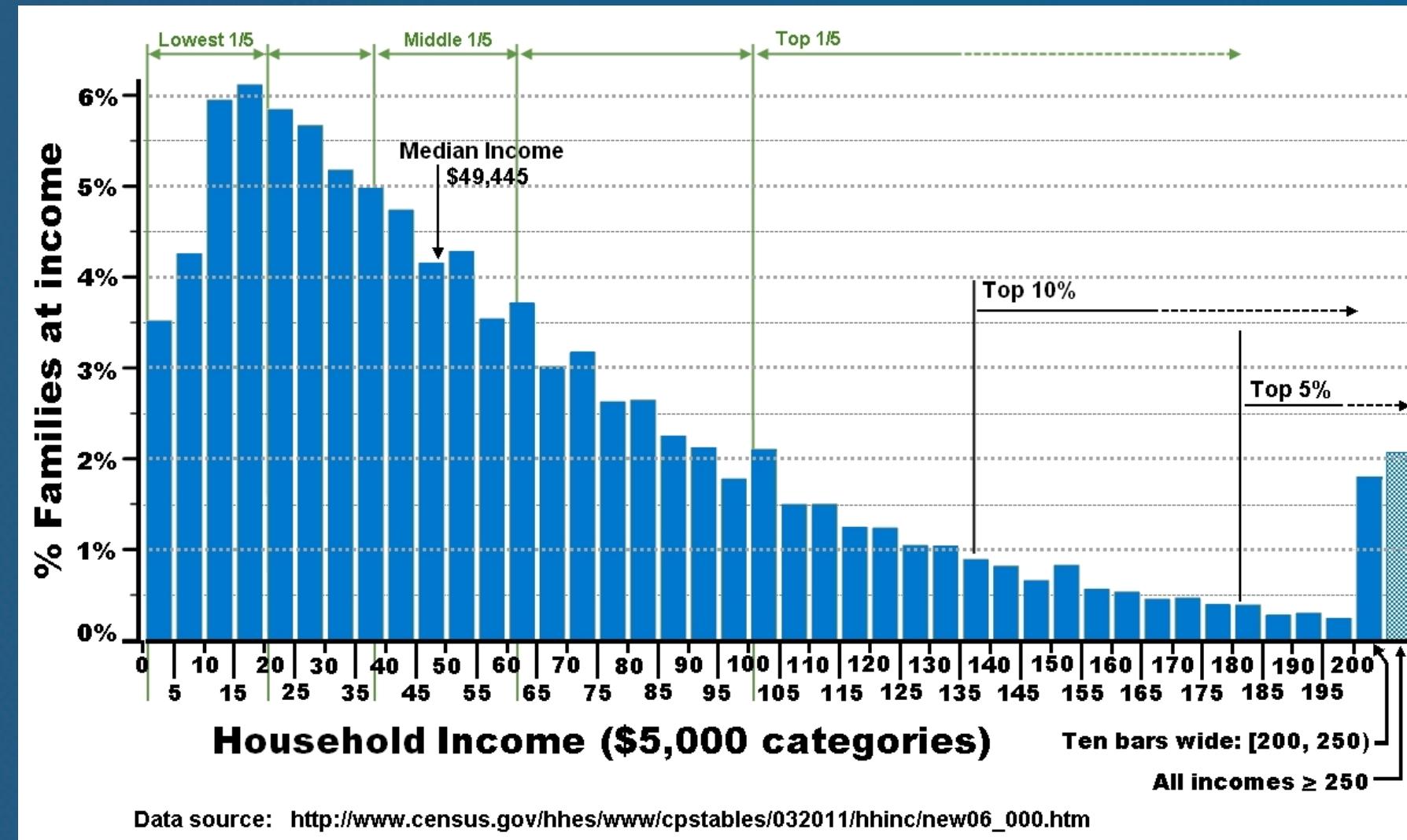
# Measures of central tendency

- Mean (average) is the best measure of central tendency when the distribution is normal
  - Red wine ratings
  - Another example: Grade Point Average (GPA)

# Measures of central tendency

- Median (middle score) is preferred when there are extreme scores in the distribution
  - White wine ratings?
  - Another example: Household income in USA

# Measures of central tendency



# Measures of central tendency

- Mode is the score that occurs most often
  - The peak of a histogram
  - The rating that occurred the most
    - For example, the Argentina white, Mode = 70 – 72

# Measures of central tendency

# Measures of central tendency

# Chapter summary

- Measures of central tendency
  - Mean
  - Median
  - Mode