

CSD 598 - Winter 2026

Descriptive statistics and data visualisation

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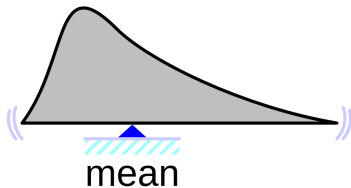
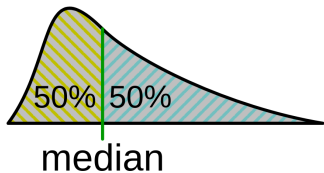
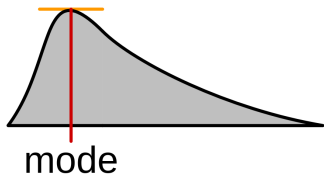
10 Feb 2026

Last time: Ethics

Any questions? Any thoughts?

Descriptive stats
Tell-show-do-apply

Central tendencies



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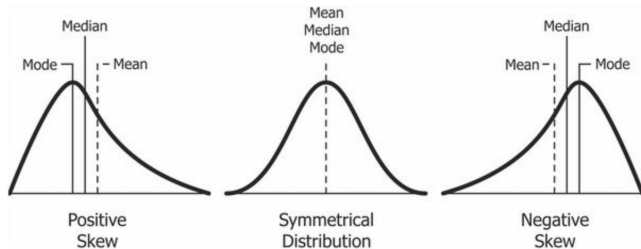
Dispersion and shape

Dispersion

- ▶ Range, quartiles: easy to calculate on samples
- ▶ Standard deviation (SD), variance: most used
- ▶ Average absolute deviation: more robust than SD

Shape measures

- ▶ Skewness: which way does the distribution lean?
- ▶ Kurtosis: tailedness, things get complex here



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Dependence between variables

- ▶ Covariance
- ▶ Pearson's ρ
- ▶ Spearman's ρ
- ▶ Distance correlation

Visualisation

References