CSE 593

Survey and Questionnaire Design (part 2)

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Logistics

- No extensions for lecture review exercises
- Extensions for required readings and assignment 0
- Assignment 0 (Group) was due yesterday
- No quiz this week! No lecture review exercises this lecture!
- Next required reading due next Tuesday before lecture

Learning Goals

Learn how to administer surveys

Learn to analyze survey data to explore current context of use.

Assignment 1 review

Survey Best Practices

- Include "Other: _____"

- Questionnaires that are no longer than 5 to 10 minutes

Steps in Survey Design

- Establish focus

- Define protocol

- Get Institutional Review Board (IRB) approval

Steps in Survey Design

- Establish focus

- Define protocol

- Get Institutional Review Board (IRB) approval

- Pilot

Pilot

- Catches problems with the questionnaire
  - Before you blast it to many users

- Pilot participants ∉ study participants

- Pilot in steps

Steps in Survey Design

- Establish focus

- Define protocol

- Get Institutional Review Board (IRB) approval

- Pilot

- Recruit participants

Methods for recruitment

- Snowball sampling

- Downside: homogenous groups

- Good for:
  - Hard to reach populations
  - Niche populations
  - Social networks

Methods for recruitment

- Snowball sampling
- Convenience sampling

- Downside: non-representative sample

- Good for: gathering preliminary data

Methods for recruitment

- Snowball sampling
- Convenience sampling
- Stratified sampling

- Good for: making sure certain subgroups are adequately represented

Methods for recruitment

- Snowball sampling
- Convenience sampling
- Stratified sampling
- Random sampling

Steps in Survey Design

- Establish focus

- Define protocol

- Get Institutional Review Board (IRB) approval

- Pilot

- Recruit participants

- Collect data

Steps in Survey Design

- Establish focus

- Define protocol

- Get Institutional Review Board (IRB) approval

- Pilot

- Recruit participants

- Collect data

- Analyze, interpret, and report data

Survey data analysis

- Exploratory Data Analysis (EDA)
  - Visualizing data to find patterns
 - Good for forming hypotheses

- Statistical Analysis
  - Showing evidence of existence of differences between groups and categories
  - Good for testing existing hypotheses

Survey data analysis

- ## Exploratory Data Analysis (EDA)
    - Visualizing data to find patterns
    - Good for forming hypotheses
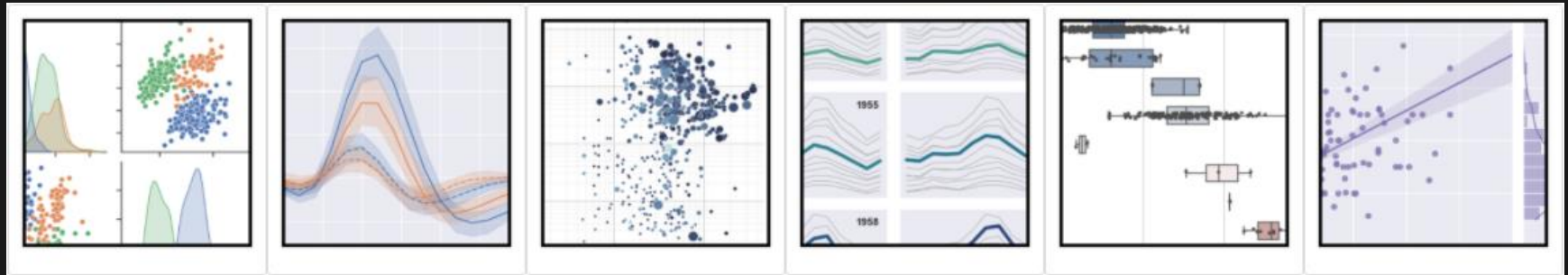
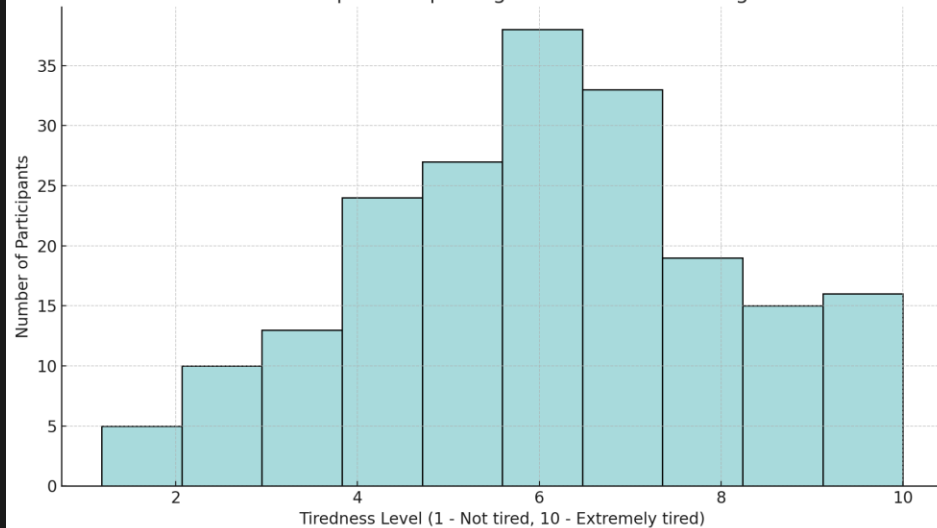# Survey data analysis

Bar charts for counts of categorical data

Number of Groups Left in Middle Earth for Young and Adult Characters
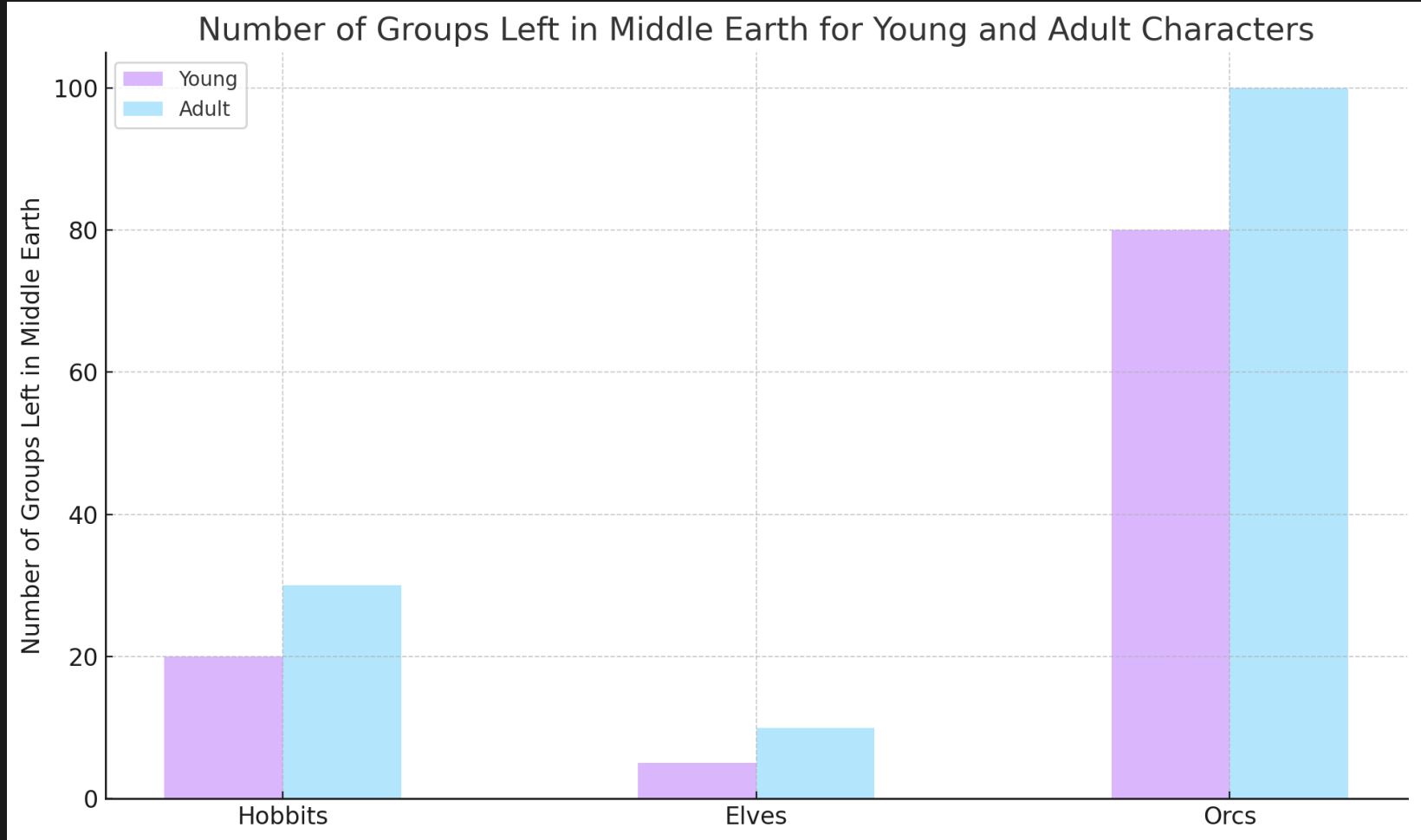
Survey data analysis

Histograms for distribution of continuous data
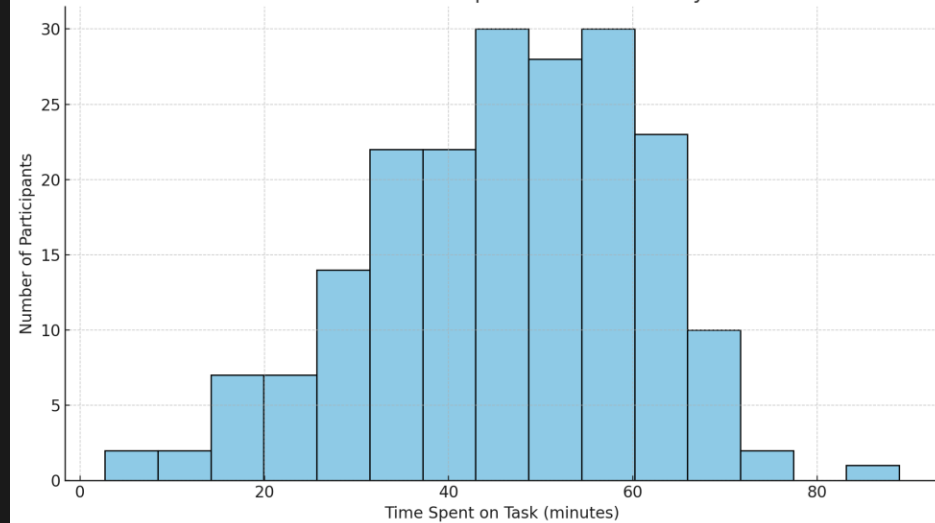
Survey data analysis

- Box plots and violin plots for distribution summaries

Comparison of Hobbits and Elves in Different Subjects

Survey data analysis

- Box plots and violin plots for distribution summaries

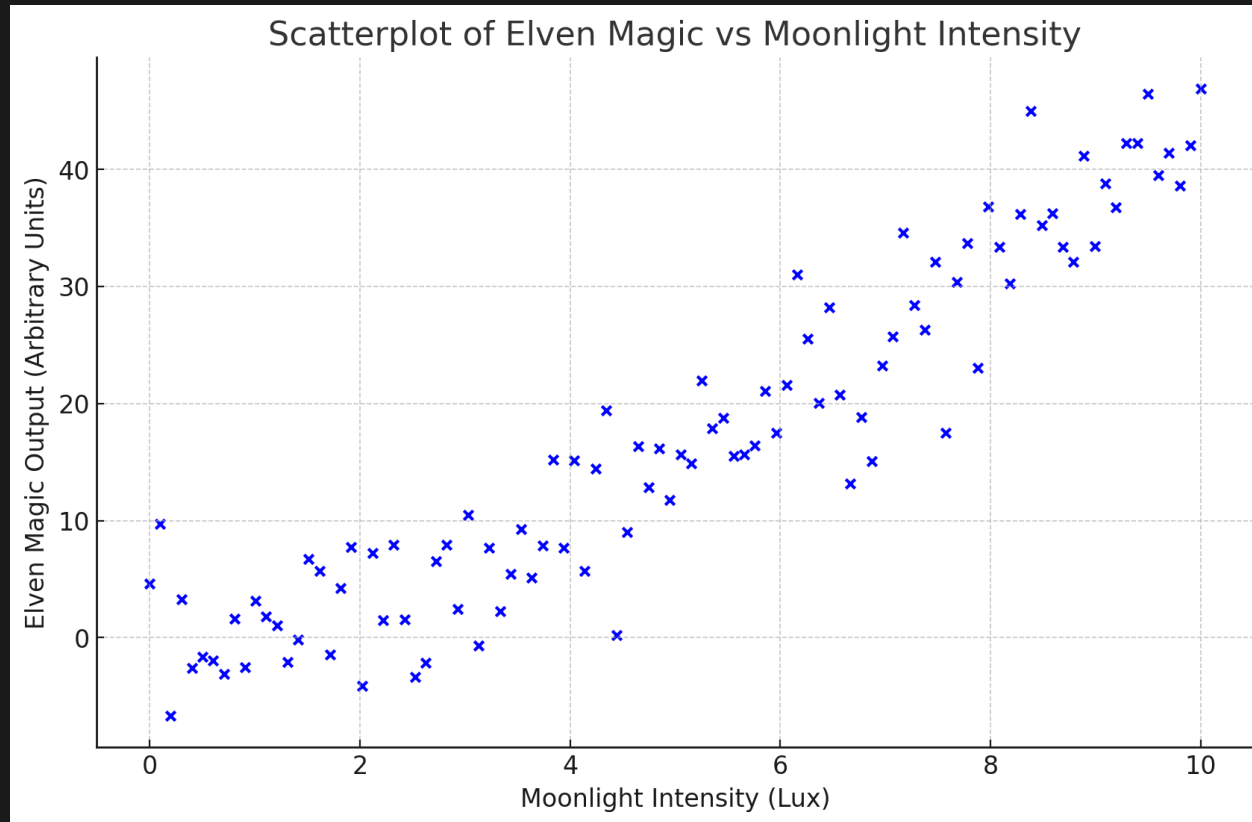Distribution of Exam Scores in Different Classes
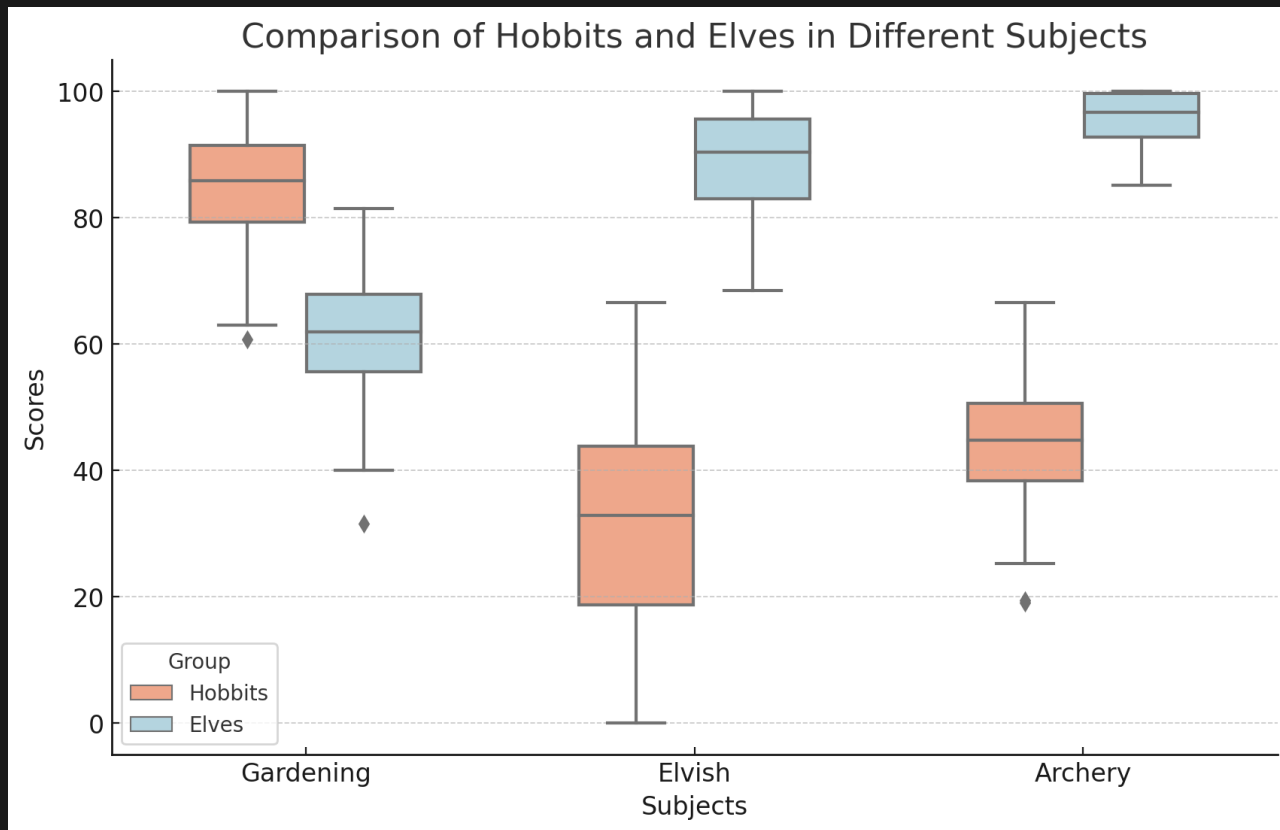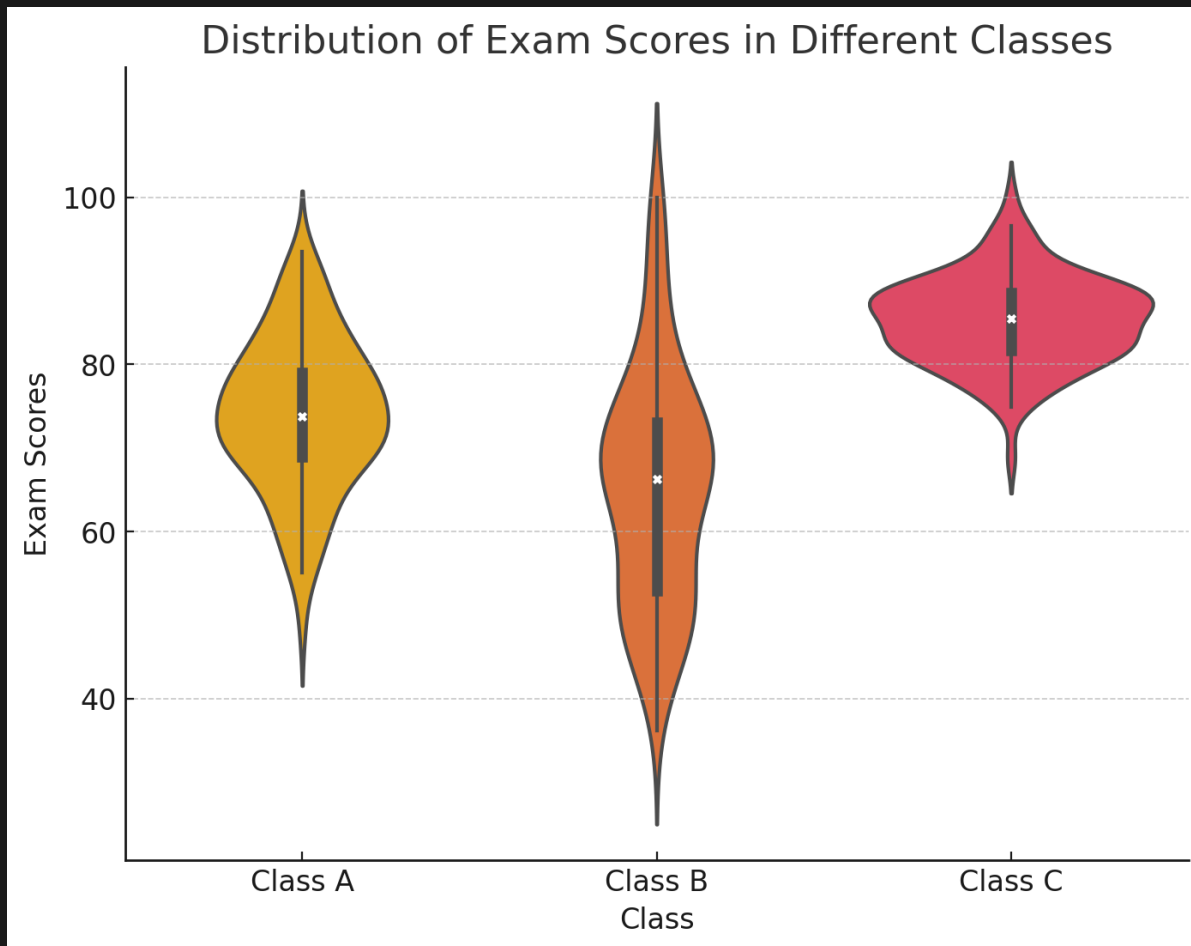
Survey data analysis

- Scatter plots for timeseries data
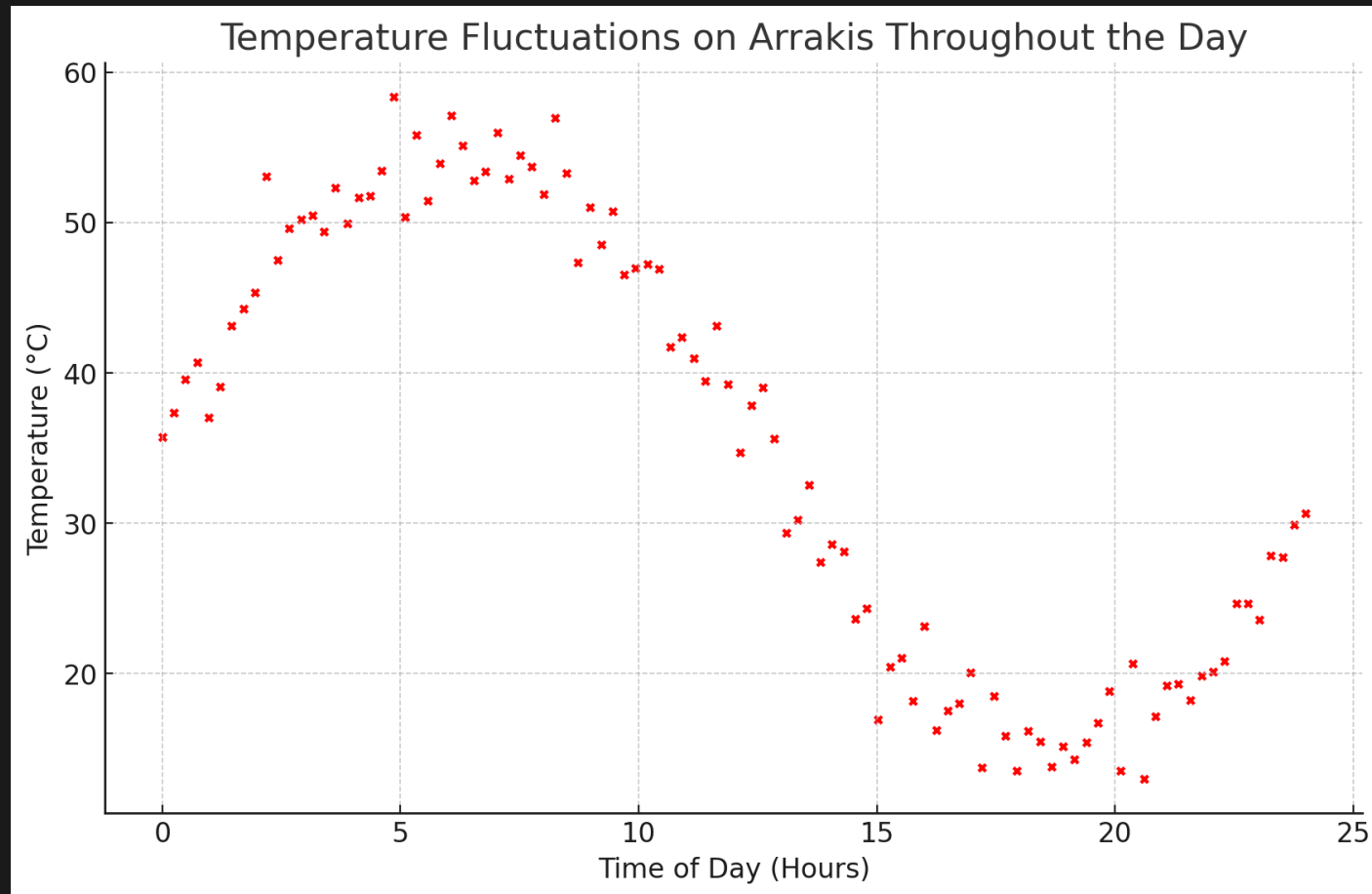
Survey data analysis

Scatter plots for timeseries data or
generally relationships between two variables

Scatterplot of Elven Magic vs Moonlight Intensity
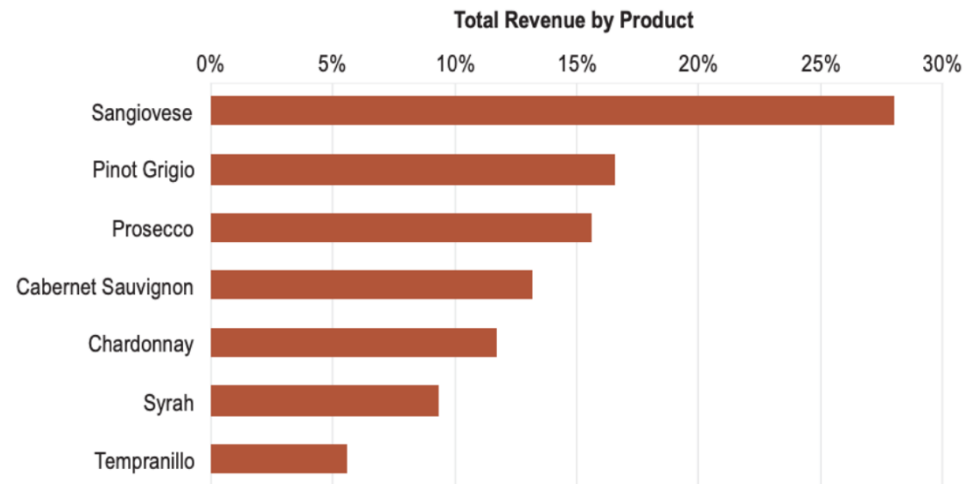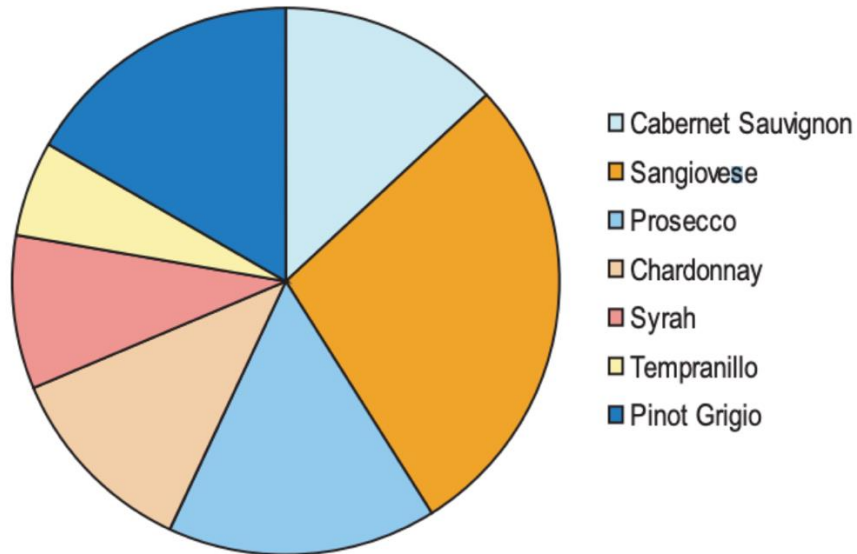
Survey data analysis

Use position, size, color, and shape to encode different dimensions in your data
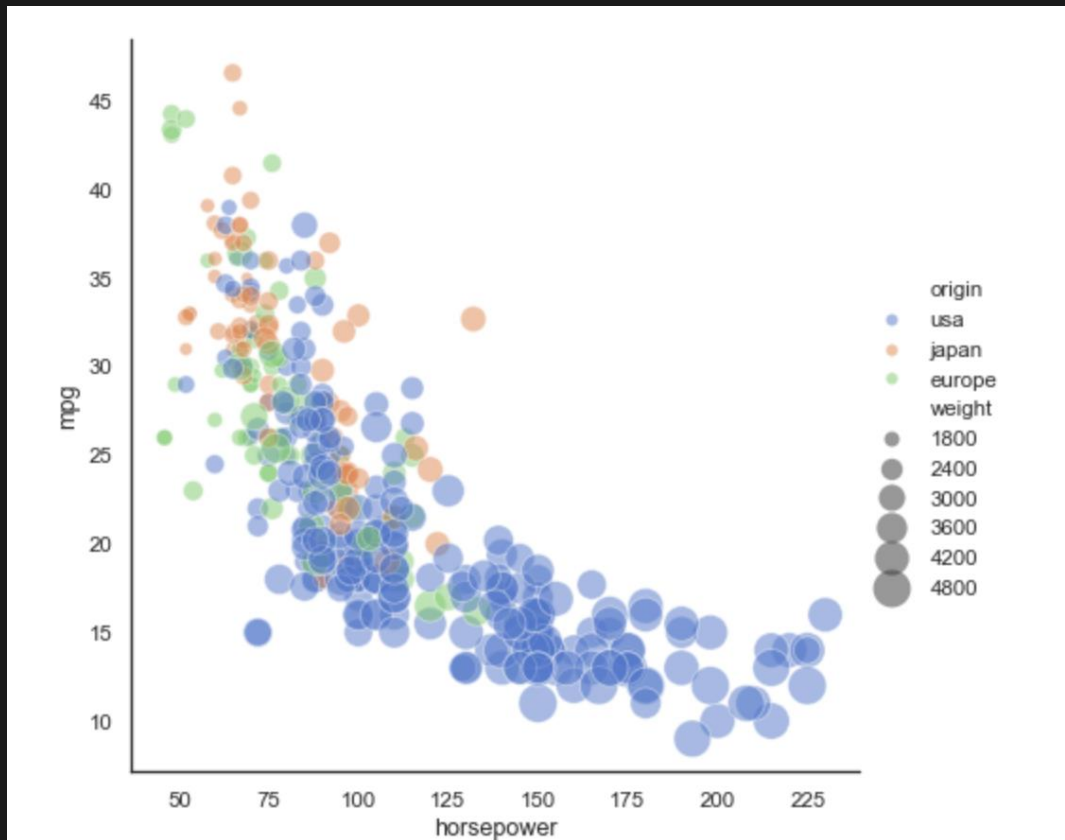
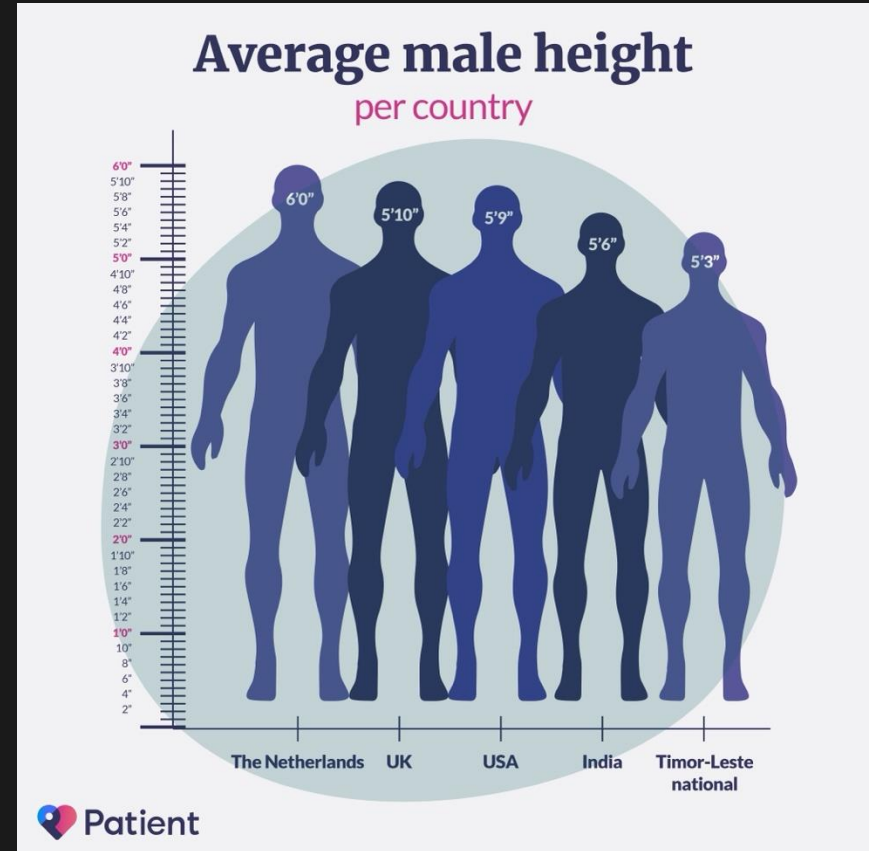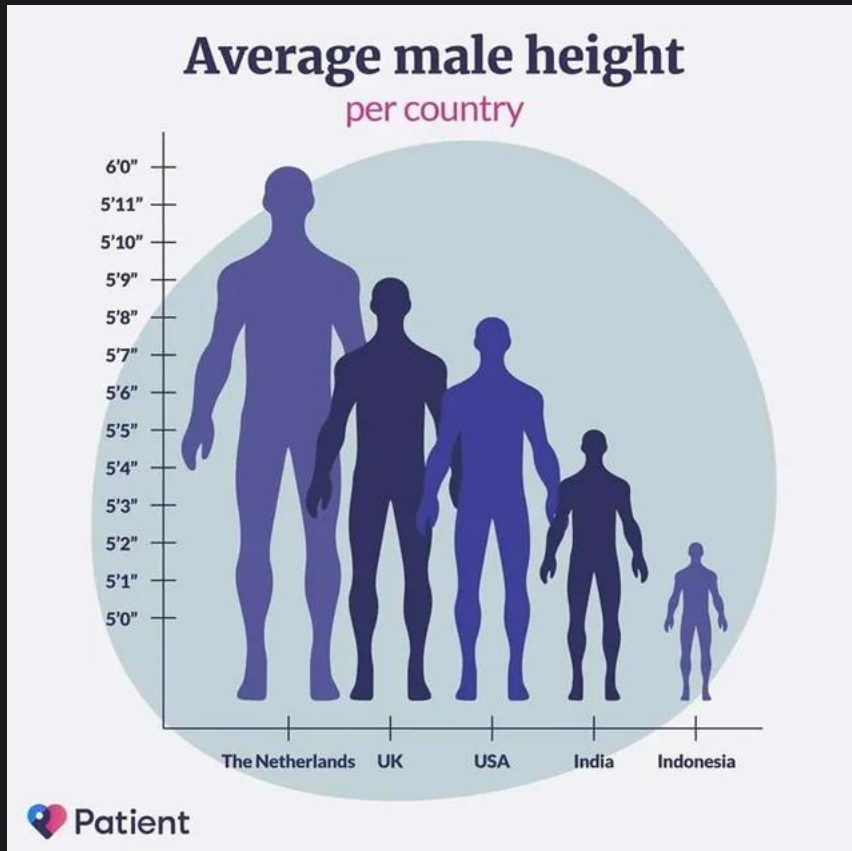# Survey data analysis

Visualization Pitfalls

- Using pie charts

Survey data analysis

Visualization Pitfalls

- Missing origin

Assignment 0 Post-Mortem

Most of you have a group.

Students who do not have a group of 5 (or a group at all) will be assigned to a group.

Students who joined from the waitlist will not be penalized for not having a group.

Groups of less than 5 students may find more students added to their group.

Assignment 1 Review

Time to switch to Canvas.

Questions, comments, and/or concerns?

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