PSY 503: Foundations of Statistical Methods in Psychological Science

Final Project overview

Suyog Chandramouli

311 PSH (Princeton University)

Final Project Overview

Course Project

- Due at end of semester

- Submit on Canvas, a link to the project on Github/OSF

- Goal:
  - Apply statistical knowledge from the class
  - Get started with analyzing your data (if applicable)
  - Develop ability to conduct a reproducible analysis

Course Project

- Due at end of semester (Dec 19th) *

- Submit on Canvas, a link to the project on Github/OSF

- Goal:
  - Apply statistical knowledge from the class
  - Get started with analyzing your data (if applicable)
  - Develop ability to conduct a reproducible analysis

* My deadline to submit grades to the university is even later, so there is some flexibility if you really need additional time. Let me know.

Course Project: 3 components

- Reproducible Report
- APA-style Paper using papaja *
- Simulation-based Power Analysis

* - or apaquarto

Part 1 - Reproducible Report

- Options:
  - Analyze your own data
  - Use existing public dataset
  - Reproduce analysis from published paper with open data

- Use regression methods from class or any other relevant analyses

- Report should be fully reproducible (e.g. R Markdown)

Part 2 – APA paper

- Use papaja package in R Markdown

- Include R code chunks for analysis

- Compile to PDF in APA format

- Benefits
  - Have your text and code in the same place

Part 3 - Power Analysis

- Add simulation-based power analysis to the APA paper
- Include:
  - R code for power analysis
  - Power curve graph
  - Discussion of results and implications for design

Key Requirements

- Entire paper must be reproducible

- Have a classmate test reproducibility

- Focus on demonstrating skills, not full-length paper

- Cite sources appropriately

Assignment (due Nov 1st)

- Think about what project you'd like to work on

- Send a plan to Suyog on Canvas

- If you are considering multiple options, outline them in this draft / contact me before that to discuss and narrow it down