

A Brief Treatise on Punch-Ducking

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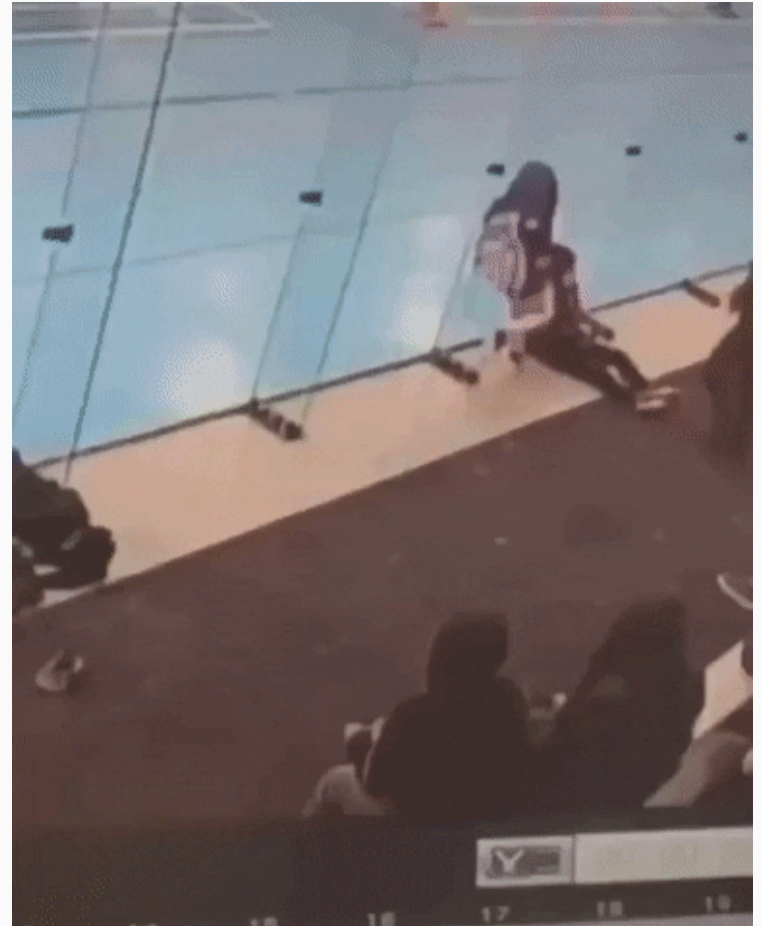
Who am I?

- I teach undergraduate methods in political science and our senior capstone.
- I have taught both courses in R since Fall 2017.
- By most (possibly all) objective measures, it has not gone well.

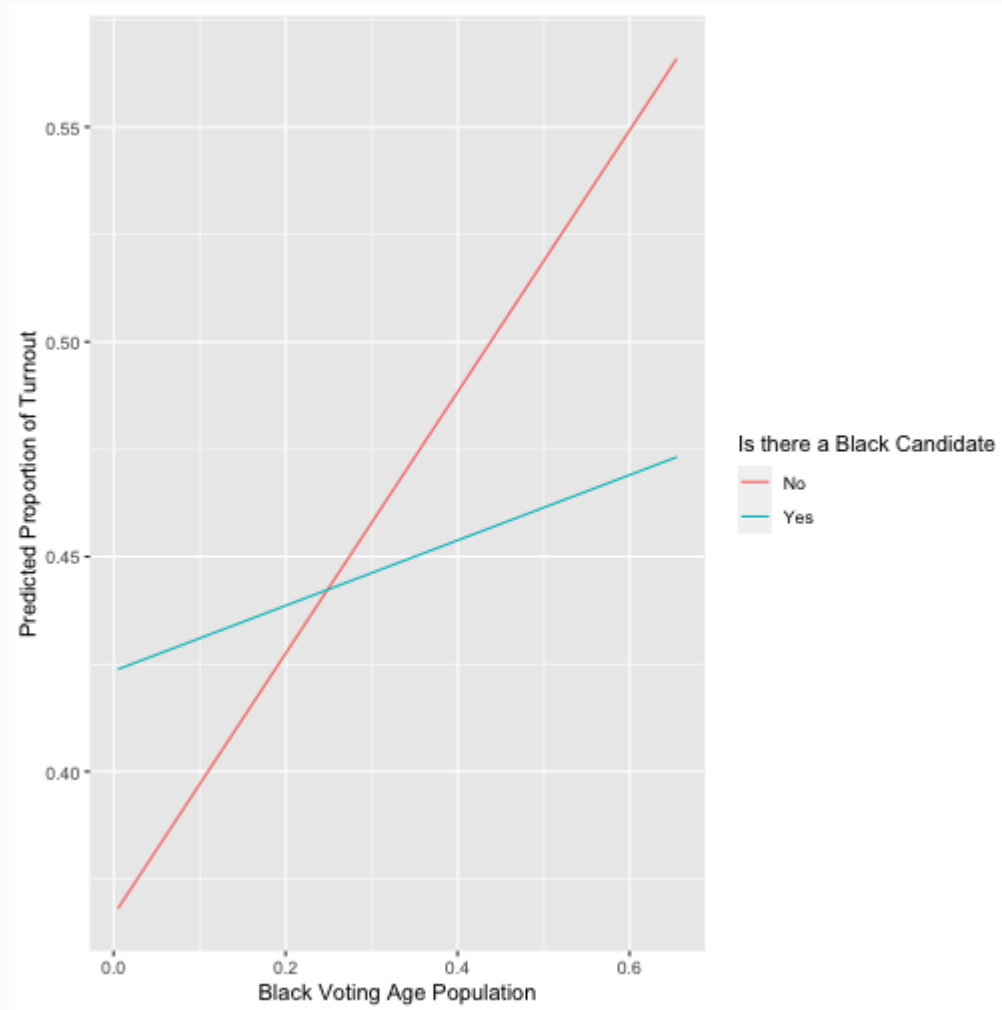


What Were the Problems?

1. Students had great difficulty loading data.
2. I was asking students to do too much. Probably.
3. Grading the problem sets was a huge hassle.
4. Students questioned the relevance of the course.



Start with Black Politics



- Generate counter-intuitive results.

Start with Black Politics

1. Measuring the causal effect of race to illustrate discrimination.
2. Is it worthwhile to have black faces in high places?
3. Why do all black people vote for Democrats?
4. What's the relationship between Trump support and racial attitudes?
5. Do white constituents allow black representatives to engage in black politics?



Provide Clearer Organization

- I create distinct R-project folders for each lab.
- Each project folder contains the data and scripts that are required to complete the assignment.

Hard Won Wisdom

Focus on What is Being Assessed

- Aside from the first assignment, I was never assessing their ability to load data (see the `processing.Rmd`).
- Allows me to provide examples where they might actually look for them (use the sample code in `analysis.Rmd` to complete the code in `Lab Report 4.Rmd`).
- I am asking students to do a smaller number of more focused activities.

Easier Grading is Better

- Students zip and submit their entire project folders.
- I can replicate with two or three clicks.

Map Assignments onto a Research Workflow

1. Chapter 1: Introduction to R and Rstudio -- organize a project folder according to TIER principles.
2. Chapter 3: Transforming Variables -- create the processing script.
3. Chapter 2: Descriptive Statistics -- create the data appendix
4. Chapter 4: Making Comparisons -- evaluate hypotheses in the lab report document.

The Result: A Better CURE

In Fall 2020, I began requiring students to complete their entire thesis inside Rstudio.

- Encourages/forces students to organize their own thesis materials.
- Fully integrates their collection of sources, prose, and data analysis.

What does it look like?

- Documents folder -- Annotated Bibliography, Literature Review, bib file, and Final Thesis
- Data folder -- has the TIER folders for original data, metadata, and analysis data
- Scripts -- has separate subfolders for processing the data, the data appendix, and the data analysis

The semester is organized around populating these folders, step-by-step.

It's Been a Super Smooth Process



- There's a lot of work on the front end for assignments.
- There are a lot of instructions.
- Timing is still a problem.
- There's no program-level integration.