Berkeley MaCSS
Master of Computational Social Science

MaCSS 201: Applied Statistics
Professor Max Auffhammer
Fall 2024
Final Project Instructions

Deliverables:

- Ten Minute Project Presentation & Q&A
- 3 Page Memo summarizing your project and findings.
- 5-10 Slide Deck

Project Teams:

- You are expected to work in groups of three.
- Given the math, there will be on group with four members.
- Your final memo will explicitly state team members' individual contributions to the project.

The Goal:

He goal is to use at least one of the tools we (re-) learned in this class to provide empirical evidence in support of lack of support a hypothesis of interest. The interests of the inaugural MaCSS class are varied. So I am not going to limit what the question is would like to answer. So here is what I would like you to do:

1. Identify a **question of interest** to your group. If you are an academic, you would think of this as the research question. In the private sector, this is often the "question your boss asked you to answer". In my world this would be something like "How does temperature affect residential electricity consumption and does this response vary across climate zones?
2. Write down a **testable hypothesis**. This can be done in words, or in notation. This what the research team does – translate the research question into something testable. In my example this could be "Is the temperature response function of single home residential electricity consumption in average daily temperature nonlinear? Is it the same across California's climate zones".
3. Write down an **empirical model**. This is a set of equations (or a single equation) that you will estimate. Clearly define what the unit of observation is, what each variable means in words and how it is measured. Clearly identify the coefficient(s) of interest that lets you test your hypothesis from step (2).
4. Describe your **data** and clearly state what the source of **identifying variation** is, that lets you test your hypothesis.
5. Conduct your **estimation/hypothesis test** and concisely **report** your findings in a table or figure that is going to impress the living daylights out of Professor Max.
6. **Interpret your findings**. Correctly. This is the hard part.
7. **Produce Slides** for the presentation.
8. **Write up a three page policy memo.**

I would like you to submit answers to 1 & 2 by October 10 in a one pager. I would like to get another one pager that answers 3 & 4 by Halloween! I will provide feedback. Also, If you would like to run ideas by me. Come visit office hours!