Summer School in Social Science Analytics, 2021

Faculty Member: Professor Pradeep Chintagunta                      Course TA: Juan Mejalenko

COURSE DESCRIPTION

This 8-week course is designed to prepare you for pre-doctoral positions in economics and business-related fields. The goal of the course is to provide our students with 1) an understanding of different types of research and data used in the social science; 2) methodologies motivated by a specific research question; 3) STATA training; and 4) posing a hypothesis that can be answered using the IRI academic database.

A key learning element of the course will be completion of an empirical project. The empirical project will include significant coding, reading, and writing elements that will put students in the shoes of social scientists doing research. Each student will present on their Empirical Project. We will teach and support the statistical software program Stata 17.

COURSE MECHANICS

1. Meeting sessions are held on Zoom 8:00 – 9:00 EDT
2. Twice weekly synchronous lectures and discussions on Zoom led by Prof. Chintagunta
3. Weekly synchronous professional development workshops on Zoom
4. Weekly synchronous recitation sections led by Juan Mejalenko on Zoom designed to give you hands-on experience in doing research yourself by working through empirical problems in small groups with peers and your T.A..
5. Students will complete and present on an empirical project, submit weekly section assignments, and attend the live lectures, discussions, and section. The class requires 6 hours of class time per week and approximately 6 hours of work outside of class per week.
CLASS OUTLINE

Week 1: Different Types of Research and Data
1. Monday, July 12: Introductions and Class Overview (Chintagunta)
2. Tuesday, July 13: Professional Development Workshop: Working with a Faculty Supervisor
   (Coly Elhi, Princeton; Stephen Lamb, Chicago Booth; Sebastian Puerta, Harvard; James Ross, Chicago Booth)
3. Wednesday, July 14: Research Design, Data, and Conclusions (Chintagunta)
4. Thursday, July 15: Introduction to STATA and IRI Academic Data (Mejalenko)

Week 2: Descriptive Statistics and File Management
5. Monday, July 19: Data Patterns & Descriptive Statistics (Chintagunta)
6. Tuesday, July 20: File Management (Mejalenko)
7. Wednesday, July 21: Data Patterns & Descriptive Statistics (Chintagunta)
8. Tuesday, July 20: Professional Development Workshop: Communicating with Data
   (Prof. Miro Kazakoff, MIT Sloan)

Week 3: Going Through a Complete Research Paper
9. Monday, July 26: Steps in a Research Project: A Quasi-Experimental Study (Chintagunta)
10. Tuesday, July 27: Steps in a Research Project: A Quasi-Experimental Study (Chintagunta)
11. Wednesday, July 28: Linear Regression Coefficients Interpretation and Replicating “What Happens When a Retailer Drops a Product Category? Investigating the Consequences of Ending Tobacco Sales” results. (Mejalenko)
   Homework 1 Due
12. Thursday, July 29: Professional Development Workshop: Getting Started with GitHub
    (Prof. Raghu Betina, Chicago Booth)

Week 4: Experimental Research: Online Field Experiments and Data
14. Tuesday, August 3: RCTs in Practice (Chintagunta and Prof. Ali Goli, Washington, Foster)
15. Tuesday, August 3: Special Session 1: Web Scraping
    (Prof. Jörn Boehnke, UC Davis) Available for asynchronous viewing if necessary
    Homework 2 Due
17. Thursday, August 5: Special Session 2: Web Scraping
    (Prof. Jörn Boehnke, UC Davis) Available for asynchronous viewing if necessary

Week 5: Experimental Research: Offline Field Experiments and Data
18. Monday, August 9: Randomized Field Experiments in Social Science Chintagunta and Prof. Shreya Kankanhalli, Penn State
19. Tuesday, August 10: Randomized Field Experiments in Social Science Chintagunta and Prof. Shreya Kankanhalli, Penn State
20. Wednesday, August 11: (Mejalenko)
    Homework 3 Due
21. Thursday, August 12: Professional Development Workshop: Paths to Graduate School
    (Malaina Brown, Director of Ph.D. Program, Chicago Booth and Prof. Matthew Notowidigdo (Chicago Booth))

Week 6: Structured Online (but Potentially Unruly) Data & Research: Online Search Data
22. Monday, August 16: Online Search Data (Raluca Ursu, NYU Stern)
23. Tuesday, August 17: Online Data Search (Raluca Ursu, NYU Stern)
24. Wednesday, August 18: Review of (Majalenko)
   Homework 4 Due

Week 7: Unstructured Online Data & Research: Twitter/Social Media Data
26. Monday, August 23: Social Media and Text Analysis (Prof. Lachlan Deer, Tilburg University)
27. Tuesday, August 24: Social Media and Text Analysis (Prof. Lachlan Deer, Tilburg University)
28. Wednesday, August 25: Student presentations
   Homework 5 Due
29. Thursday, August 26: Student presentations

Week 8: Final Project Presentations
30. Monday, August 8: Student presentations
31. Tuesday August 9: Student presentations
32. Wednesday, August 10: Student presentations
33. Thursday, August 11: Student presentations
REPRESENTATIVE COURSE READINGS

Students are responsible for reading a small number of required papers. Please focus on understanding the main ideas, rather than technical details. We recommend starting with non-technical summaries and introductions for this purpose. These papers will be discussed in lecture, in labs, or in the empirical projects, and may be useful references in those contexts.

**Week 1: Different Types of Research and Data**

**Week 2: Descriptive Statistics and File Management**

**Week 3: Going Through a Complete Research Paper**

**Week 4: Randomized Control Trial (RCT) Field Experiments**