Luke B. Miller

CONTACT INFORMATION

Address
Department of Economics
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RESEARCH INTERESTS

Political Economy, Structural Econometrics, Voting Behavior, Applied Microeconomics

PROGRAMMING SKILLS

Python, R, Matlab, Julia, STATA, SQL, Latex

EDUCATION

Georgetown University, Washington, DC *2020 - 2025 (expected)*
PhD, Economics

Ohio University, Ohio *2019 - 2020*
Masters of Applied Economics

DePauw University, Indiana *2010 - 2014*
BA, Physics and Philosophy

WORKING PAPERS

Why People Vote: Comparing Models of Voter Turnout (with Maxime Cugnon de Sévricourt)
Structurally estimates leading theoretical models of voter turnout on U.S. House and U.S. state legislature special election data through gradient-based Maximum Likelihood Estimation. Estimated models include variations of the pivotal voter model, group based models, and follow-the-leader models. Tests how well each model matches voter behavior and compares across models using the Vuong and Clarke tests. Finds best performing model is a variation of the pivotal voter model, where individuals vote based on their perceived influence on the election outcome. (PDF)

Tempting FAIT: Flexible Average Inflation Targeting and the Post-COVID U.S. Inflation Surge (with Roberto Duncan and Enrique Martínez García)
Analyzes the causal effect of the Federal Reserve's implementation of Flexible Average Inflation Targeting (FAIT) in August 2020 using the synthetic control method. Estimates suggest FAIT implied a rise in observed CPI inflation around 1 percentage points and core CPI inflation around 0.3 to 0.4 percentage points. Results are robust across a range of specifications and placebo tests.

RESEARCH EXPERIENCE

Economics Department, Georgetown University *Spring 2022 - Present*
Research assistant to Laurent Bouton, Garance Genicot, Micael Castaneira, and Allison Stashko for "Pack-Crack-Pack: Gerrymandering with Differential Turnout".

Collected and organized data on proposed congressional and state legislative redistricting plans in the United States. Developed Python scripts using GeoPandas to combine geo-spatial data of different sizes. Created counterfactual exercises to test the extent of gerrymandering in proposed redistricting plans by swapping bordering precincts across districts and assessing their impact on election outcomes. Developed a key voter turnout measure for the paper using machine learning techniques.

Economics Department, Georgetown University *Summer 2022*
Research assistant for Laurent Bouton in creating a database on small campaign donors.

Wrote code in R and Python to match individuals from a national database of small donors to housing values from Zillow database. Applied fuzzy matching techniques across millions of observations to identify the same individual between the two databases.

Economics Department, Ohio University *Fall 2019 - Summer 2020*
Research assistant to Roberto Duncan for "Just Do IT? An Assessment of Inflation Targeting in a Global Comparative Case Study".

Wrote code in R to organize macroeconomic variables from various countries into a single data set. Conducted synthetic control analyses to assess the effects of inflation targeting on inflation.

TEACHING EXPERIENCE

Math Camp (PhD), Georgetown University *Summer 2023, 2024*
Lead Instructor.
Topics: Linear Algebra, Differential Calculus, Non-linear Programming, Dynamic Programming

Economic Statistics (Undergraduate), Georgetown University *Summer 2023*
Lead Instructor.
Topics: Probability Theory, Random Variables, Sampling Distributions, Hypothesis Testing

Analytical Tools for Political Econ. (Undergraduate), Georgetown University *2023 - 2024*
Teaching Assistant for Professor Laurent Bouton.

Economic Statistics (Undergraduate), Georgetown University *2022 - 2024*
Teaching Assistant for Professors David Burk and Benjamin Solow.

Intermediate Microeconomics (Undergraduate), Georgetown University *2021 - 2022*
Teaching Assistant for Professors Ian Gale and Alan Bester.