Nathan Gardner Hattersley

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Education

- **University of Texas at Austin** — Austin, Texas
  M.A., Economics; Ph.D., Economics (expected) — *Aug 2020–Present*
- **University of Arizona** — Tucson, Arizona
  B.A., Mathematics and Computer Science; M.S., Statistics — *Aug 2013–May 2018*

Research Interests

- **Field Courses**: Industrial Organization, Econometrics, Development
- **Current Research**: Antitrust policy, conduct testing, spatial and dynamic competition, vertical interactions and bargaining, relational contracting, agricultural and supermarket logistics in developing countries

Skills Summary

- **Programming**: R, Python, Julia, Rust, C, Java, Stata, LaTeX, HTML/CSS/JS, Typescript, MATLAB
- **Tools/Frameworks**: Postgres/PostGIS, git/GitHub, Docker, SQL, Parallel Computing/HPC, Makefiles
- **Languages**: English (native); Spanish (proficient)

Work Experience

- **World Bank Group** — Remote
  Short-Term Consultant — *Feb 2021–Aug 2021*
  - Assisted Poverty and Equity Global Practice with Systemic Country Diagnostic for Afghanistan
  - Contributed analyses in target report areas in R and developed indices of political fear and participation
- **JPMorgan Chase & Co.** — Houston, TX
  Analyst — *June 2018–June 2020*
  - Developed software in Python and Typescript to support interest rate derivatives trading desk
  - Individually designed and executed complex requirements including order flow matching and trade modeling
  - Researched and advised management on plans for transition to new tech stack
  - Represented team of eight in conversations with stakeholders regarding transition plans

Academic Experience

- **Teaching Assistance**: Master's level Econometrics ('21, '22, '23), Causal Inference ('21, '22), and Industrial Organization ('23). Gave 90-minute weekly review lectures, curated lessons on statistical programming, and wrote and graded solutions for exams and problem sets. See GitHub and personal website for examples.
- **DevOps for Researchers**: (Fall 2023) Implemented example code in Julia for multiple problems using multiple parallelization methods, in order to assess optimal ways of using department computing resources. Conducted performance tests and collaborated with colleagues working in Python and MATLAB in order to create standardized computing recommendations as well as language-specific guidelines. Other deparment members have used this guide to speed up estimation routines by orders of magnitude. See GitHub.
- **Research Assistance**: (Fall 2020) Production function estimation with Prof. Daniel Ackerberg. Supported experiments on consistency of estimator given assumptions about capital accumulation process. Reimplemented original Gauss code in both Julia and MATLAB. Wrote additional Monte Carlo simulations in Julia to demonstrate theoretical results about necessary exogenous variation in the investment DGP that can identify returns to capital, and the instability of recent estimators without any noise in the investment process. See GitHub.
- **Statistical Consulting**: (Fall 2017) Consulted for Ph.D. candidates and postdocs from various fields with data analysis problems in R. Used statistical education to provide input on experimental design and appropriate analysis for problems like repeated sampling, hierarchical models, and model selection.