# Nathan Gardner Hattersley

Portfolio: nghattersley.net Github: github.com/nateybear

## **EDUCATION**

University of Texas at Austin

• M.A., Economics; Ph.D., Economics (expected)

Austin, Texas

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Aug 2020-Present

University of Arizona

M.S., Statistics; B.A., Mathematics and Computer Science

Tucson, Arizona

Aug 2013-May 2018

## RESEARCH INTERESTS

• Field Courses: Industrial Organization, Econometrics

• Current Research: Antitrust policy, spatial and dynamic competition, tacit collusion and algorithmic pricing

#### SKILLS SUMMARY

• Programming: R, Python, Julia, Rust, C, Java, Stata, LaTeX, Bash, HTML/CSS/JS, Typescript, MATLAB

• Tools/Frameworks: Postgres/PostGIS, git/GitHub, Docker, Pandas, SQL, Parallel Computing/HPC, Build Tools

• Languages: English (native); Spanish (proficient)

#### Work Experience

# Texas Office of the Attorney General

Austin, TX

Economics Fellow

July 2024-Present

• Assist in antitrust matters brought or joined by the state of Texas, particularly involving collusion via algorithmic pricing and online auction manipulation

# World Bank Group

Remote

Short-Term Consultant

Feb 2021-Aug 2021

• Assisted in creation of Systemic Country Diagnostic for Afghanistan, contributing analyses in target report areas using R and developing indices of political fear and participation

#### JPMorgan Chase & Co.

Houston, TX

• Analyst

June 2018-June 2020

- Wrote software in Python and Typescript supporting interest rate derivatives traders
- o Individually designed and executed complex requirements including order flow matching and trade modeling
- Researched and advised on transition to new tech stack
- Represented team of eight in stakeholder meetings regarding transition plans

### ACADEMIC EXPERIENCE

- Teaching Assistance: Master's level Econometrics ('21, '22, '23), Causal Inference ('21, '22), and Industrial Organization ('23, '24). Gave 90-minute weekly review lectures, curated lessons on statistical programming, and wrote and graded solutions for exams and problem sets. See GitHub (link) and personal website (link) 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 department members used this guide to speed up estimation routines by orders of magnitude. See GitHub (link).
- Research Assistance: (Fall 2020) Supported experiments on consistency of production function estimators with Prof. Daniel Ackerberg. 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 (link).
- 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.