

Austin Herrick

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EXPERIENCE

Penn Wharton Budget Model

Philadelphia, PA

Senior Analyst

January 2019 - Present

Research Associate

July 2017 – December 2018

- Construct framework for data pipelines and dependency management (in Python) for the Demographic Microsimulation, a projection of the US population built with more than 30 interconnected economic models
- Used Python to collect, clean, impute, and analyze microdata surveys including ACS, CPS, SIPP, and NCHS data
- Lead project management for smooth integration of models and code across analytics teams
- Build or improve demographic models projecting household formation, marriage markets, fertility, immigration, internal migration, and other economic and demographic phenomenon.
- Manage Research Associate projects, including creating timelines, assigning responsibilities, and reviewing code
- Serve on hiring committee for RA candidates, and lead training for new hires, including with a self-written Python course
- Maintain stable codebases for data retrieval, data processing, and the Demographic Microsimulation

University of Chicago

Chicago, IL

Research Assistant, Center for Robust Decisionmaking on Climate and Energy Policy

June 2016 – September 2016

- Researched and evaluated capital malleability and committed emissions assumptions from more than 100 published papers in a variety of economic literature, and wrote a report synthesizing the state of the field
- Examined literature and documentation for 21 complete general equilibrium models linking environmental and economic impacts, in order to determine their degree of sensitivity to capital transition concerns

Sustainability Intern, Facilities Services: Campus Planning + Sustainability

June 2015 – June 2016

- Built a calculator tool to preform cost-benefit analysis and compare savings across buildings for energy efficiency upgrades to campus properties, identifying savings of up to \$2,000,000 over a 5 year period
- Analyzed data for the university's Greenhouse Gas Inventory, and provided trend reports for key pollution metrics as well as reports documenting potential strategies for improving data collection and reducing emissions

Boy Scouts of America

Morris, IL

Ecology Conservation Director, Rainbow Scout Reservation

January-August 2013, 2014

Ecology Conservation Instructor, Rainbow Scout Reservation

June-August 2010, 2011, 2012

- Directed planning and implementation of all scheduling, operations, and curriculum (including classes, conservation, and experiments) for the summer camp program at the Ecology Center, serving approximately 550 scouts over a 6 week period
- Prepared closing reports and written curriculum for the use for national inspections, council oversight, and future staff

EDUCATION

The University of Pennsylvania

Philadelphia, PA

Masters of Computer and Information Technology

August 2021 – Present

- GPA: 4.0

Additional Coursework: Computer Science through Program Design (OCaml and Java)

Jan – May 2021

The University of Chicago

Chicago, IL

Bachelor of Arts in Economics

June 2017

- GPA: 3.64
- Relevant Coursework: Econometrics, Statistical Analysis, Computer Science, Micro and Macroeconomic Analysis (Honors), Accounting, Monetary Policy, Industrial Organization

PROGRAMMING

- *Python* – 5 years of professional experience in managing codebases, cleaning and analyzing microdata, constructing demographic models, visualizing and validating data, and building infrastructure for a large-scale microsimulation
- *Java* – Primary language used during graduate coursework
- *SQL, OCaml, R, Stata, Matlab* – Moderate use for coursework in computer science and economics

LEADERSHIP

Phoenix Sustainability Initiative

Chicago, IL

President

May 2016 – May 2017

Vice President

May 2015 – May 2016

- Managed, trained, and directed 7 Project Leaders overseeing teams of 5-6 members, responsible for a range of projects such as hosting discussion panels, promoting sustainable food, organizing career treks, and networking with the community

WRITING / PUBLICATIONS

- *Berkovich, Costa, Herrick*, (2022) “Immigration and the Macroeconomy”. PWBM Working Paper Series. Available at <https://budgetmodel.wharton.upenn.edu/issues/2022/1/5/w2022-1>
- Briefs for PWBM *Economic Matters* blog. E.g, *Estimates of TCJA Repatriation of Foreign Earnings on Investment and GDP*: (<https://budgetmodel.wharton.upenn.edu/issues/2018/8/29/estimates-of-tcja-repatriation-of-foreign-earnings-on-investment-and-gdp>)
- *Churchill, Biderman, Herrick*, (2020) “Magic: The Gathering is Turing Complete”. The Proceedings of the 10th International Conference on Fun with Algorithms. Available at <https://arxiv.org/abs/1904.09828v2>