Ethan Hartley

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EDUCATION

University of Hawaii at Manoa   Honolulu, HI
PhD, Economics   Expected May 2026

- Fields: Econometrics & Artificial Intelligence, International Economics, and Resource & Environmental Economics
- GPA: 3.94/4.00
- Received highest commendation on theory qualifying exams
- Seiji Naya Outstanding First-Year Student Award

MA, Economics   May 2023

Utah State University   Logan, UT
BSc, Economics   May 2021
BSc, Finance   May 2021

- Minor in Mandarin Chinese

RESEARCH EXPERIENCE

University of Hawaii at Manoa, Hawaii Data Science Institute   Honolulu, HI
Data Science Fellow   Aug 2022 - *Present*

- Investigate the impacts of implementing a dynamic electricity pricing scheme on low-income and Native Hawaiian households.
- Perform exploratory data analysis on big data (>4.5 billion observations) using unsupervised machine learning techniques.
- Attend and host weekly seminars focused on career development and data science skill acquisition.
- Present results at biannual research showcases.

Utah State University, Applied Economics Department   Logan, UT
Independent Researcher   Jan 2021 - July 2021

- Explored the associated costs and benefits of traffic reduction as a result of governmental restrictions along the Wasatch Front of Utah during March and April of 2020.
- Collected, cleaned, and performed inferential statistical analysis on environmental data.

Utah State University, Financial Analytics Laboratory   Logan, UT
Caliendo-Lewis Research Assistant   Sept 2020 - May 2021

- Worked within a team to evaluate long-term efficacy and accuracy of modern quantitative modeling techniques.
- Performed statistical analysis, primarily focused on the implementation of Bayesian inference, using Julia.
- Utilized Monte Carlo simulations to analyze the effectiveness of futures contracts as a hedging mechanism.

PUBLICATIONS

Hartley, Ethan, and Arthur J. Caplan. "Measuring the Social Net Benefits of COVID-19 Restrictions: The Case of Reduced Vehicle Use in a Pollution-Prone Region of Utah." *Journal of Environmental Protection* 12.11 (2021): 887-902. doi: 10.4236/jep.2021.1211052.

WORKING PAPERS

- Anticipatory Effects of Regional Trade Agreements: Modeling Complex Trade Relationships with Graph Convolutional Neural Networks.
- Gaussian Mixture Modeling for Data Interpolation: Household Income from Median Census Characteristics.
- Rethinking Economic Policy Uncertainty using Natural Language Processing.

PROFESSIONAL EXPERIENCE

University of Hawaii at Manoa, Economics Department — Honolulu, HI
Graduate Teaching Assistant — Aug 2021 - Jul 2022

- Assisted in teaching undergraduate courses ranging from 15-120 students. Topics included: introductory macroeconomics, introductory microeconomics, and financial markets and institutions.
- Prepared course material including exams, homework, and practice problems.
- Led weekly problem-solving and discussion sections for groups of 5-20 students.
- Graded exams and weekly homework.

Ames Construction — West Valley, UT
Cost Engineering Intern — May 2020 - Jul 2021

- Maintained and reconciled subcontractor accounts exceeding $300 million.
- Restructured reconciliation processes using Excel and Python to optimize efficiency, improve accuracy, and mitigate financial losses.
- Developed automated processes for subcontractor correspondence and account management.

Utah State University, Economics and Finance Department — Logan, UT
Corporate Finance Teaching Assistant — Aug 2020 - Jan 2021

- Assessed problem sets and held weekly office hours.
- Supervised students in final projects and case studies.

Utah State University, Mathematics and Statistics Department — Logan, UT
Mathematics and Statistics Teaching Fellow — Jan 2019 - Jan 2021

- Assisted instructor with assessment design.
- Collaborated with faculty to establish a standardized examination criterion for all introductory statistics courses.
- Collected and summarized student survey data to investigate prevailing attitudes towards statistics and current instructional methods at Utah State University.

TECHNICAL SKILLS

- **Programming/Software:** Julia, Python, TensorFlow, R, GitHub, LaTeX, Excel, Microsoft Office, Canva
- **Languages:** English (Native), Mandarin Chinese (Limited Working Proficiency)
- **Quantitative:** Econometric modeling, advanced mathematical reasoning, expertise in probability theory

LEADERSHIP AND TEAMWORK

Utah State University, Data Science Club — Logan, UT
Vice President — Jun 2020 - May 2021

- Organized biweekly meetings to encourage members in the exploration of data science principles.
- Improved club diversity and accessibility to non-technical audiences through realignment of club objectives and providing access to industry professionals.

Utah State University, Student Nutrition Access Center (SNAC) — Logan, UT
Volunteer Data Scientist — Sept 2019 - May 2020

- Quantified current and forecasted future value added by the SNAC pantry to the Utah State University community.
- Reported findings to both technical and non-technical audiences leading to university funding.