Hamidreza Habibi

hhabibi1@ucsc.edu | https://hamidhabibi.com/ | linkedin.com/in/hamid-habibi | https://scholar.google.com/citations?user=-KhQEL0AAAAJ&hl=en

SUMMARY

- Ph.D. candidate specialized in Causal Inference and Health Economics, seeking full-time research positions in industry
- Six years of hands-on experience applying econometrics and ML algorithms to large datasets to answer real-world questions
- Strong communication and teamwork skills developed through a combination of teaching, faculty seminars, presentations, peer collaborating, and co-authored academic research

TECHNICAL STRENGTHS

- **Causal Inference:** Experimentation (RCT, Hypothesis Testing, A/B Testing), Synthetic control, Difference-in-Differences, Matching, Instrumental Variables, Regression Discontinuity, Causal Forest
- **Programming:** R, SQL, Python, STATA, Microsoft Office, LaTeX

EDUCATION

University of California, Santa Cruz — **Santa Cruz, CA**
Ph.D. Economics — *June 2025 (expected)*
- **Relevant Coursework:** Advanced Econometrics I-III, Machine Learning, Advanced Microeconomic Theory I-III

Illinois State University — **Normal, IL**
M.S. Mathematics and Economics — *June 2019*

University of Tehran — **Tehran, Iran**
B.S. Economics — *June 2016*

RESEARCH PROJECTS & PUBLICATIONS

Job Market Paper: Curbing Pharma Influence: The Effect of Marketing Restrictions on Physicians' Prescribing Behavior
- Constructed several datasets linking 55 million industry payments to doctors' prescriptions record in Medicare Part D
- Using various causal inference strategies, I document the significant reductions in the volume of marketing activities, prescription volume, and drug expenditure to NJ physicians compared to the peers in neighboring states of NY and PA.
- Employed Causal Forest approach to explore heterogeneous treatment effects

New Jersey's Policy on Pharma Promotions: Shifting to Generics and Curbing Prescription Drug Spending
Revise and Resubmit, JAMA Internal Medicine
- Utilized difference-in-differences with optimal full matching and data from the Open Payment and Medicare Part D databases
- The results show that restricting industry-physician relationships reduced the dollar value of industry payments, brand prescriptions and expenditure rates. The findings suggest a shift towards cost-effective generic alternatives.

Quantifying Specific and Systemic Factors in the Black-White Wealth Gap in the United States
with Rongchen Liu, Anirban Sanyal and Nirvikar Singh
Revise and Resubmit, Journal of Race, Economics and Policy. https://dx.doi.org/10.2139/ssrn.3800592
- Using the 2016 Survey of Consumer Finances and various decomposition approaches, the study finds that individual characteristics only partially explain the Black-White wealth gap, with quantile regressions indicating that race significantly influences wealth disparities beyond measurable factors.

An equity-minded multi-dimensional framework for exploring the dynamics of sense of belonging in an introductory CS course *with Narges Norouzi, Anna Sher, and Carmen Robinson*
Published in "Proceedings of ITiCSE 2023, V1,2023." https://doi.org/10.1145/3587102.3588780
- Applied multivariate logistic regression models to 3 waves of institutional surveys with 440+ variables
- The results suggested that social perceptions persistently affect students' sense of belonging to CS and engineering courses

Determinants and Prediction of Patients' Waiting Time in Emergency Departments
- Implemented the Post-lasso algorithm to analyze a nationally representative survey of doctors and patients over 9 years
- Found that black people with public insurance wait 6 minutes more than white individuals with private insurance in ED

Return and Volatility Spillovers across Western and MENA Countries *with Hassan Mohammadi*
Published in "The North American Journal of Economics and Finance, 2022." https://doi.org/10.1016/j.najef.2022.101642
- Analyzed weekly data on returns and volatility over 12 years and variance decomposition methodology of Diebold and Yilmaz
- Found that 42.5% and 46.9% of variations in return and spillover indices across the fifteen markets are due to spillovers

F-Derangements and Decomposing Bipartite Graphs into Paths *with Mike Plantholt and Benjamin Mussell*
Published in the "Art of Applied and Discrete Mathematics,2024." https://doi.org/10.26493/2590-9770.1576.a47
- Proved that under a fixed maximum number of pre-images for any item under f, the fraction of permutations that are f-derangements tend to 1/e for large n, regardless of the choice of f

Classification and Prediction of Breast Cancer Diagnosis in Wisconsin Using Machine Learning
- Trained an SVM and classified breast cancer diagnosis. The final accuracy score was 0.9586

Predicting Bank of America's Stock Price Movements Using Machine Learning
- Found that XGBoost outperforms other methods in predicting BA's stock price movements. Obtained AUC of 0.8644

RELEVANT EMPLOYMENT

UCSC Institution for Research, Assessment, and Policy Studies **Santa Cruz, CA**

Graduate Student Researcher *January 2022 - July 2022*

- Extracted and analyzed institutional survey data with ~450 variables, conduct regression analysis and statistical modeling
- Wrote 15+ reports to influence the university's decision-making in coordination with different groups in the business

University of California, Santa Cruz **Santa Cruz, CA**

Instructor and Teaching Assistant in Causal Inference *March 2020 - present*

- Enhance academic success for 80+ students by holding sections and teaching a core upper-division course in causal inference
- Earned Best Teaching Assistant Award for exceptional skills and passion for students' success