

Haoyu Sheng

PHD CANDIDATE · ECONOMICS

✉ haoyu_sheng@brown.edu | 🌐 www.haoyusheng.net | 📱 hs97

Education

Brown University

Ph.D Candidate in Economics

M.Sc Candidate in Computer Science

- Completed Coursework: Macro-Finance: Behavioral and Rational, Topics in Macro and Monetary Economics, Industrial Organization, Macroeconomic Slack, Advanced Topics in Applied Macroeconomics, Economic Growth and Comparative Development
- Current Coursework: Deep Learning, Learning with Limited Labelled Data

Providence, RI

2020 - Present

2022 - Present

Williams College

B.A. in Computer Science and Economics with Highest Honors

Williamstown, MA

2016 - 2020

Research Experience

2021-2022 Research Assistant for Professor Amy Handlan, Brown University

- Built audio deep learning models to classify gender, tone, and seniority for speakers in online economic seminars.
- Analyzed effects of different modes of Federal Reserve communications on asset prices using machine learning tools.

2021 Research Assistant for Professor Pascal Michailat, Brown University

- Built a policy tool that calculates optimal public expenditure under inefficient unemployment.

2019-2020 Research Assistant for Professor David Y. Yang, Harvard University

- Analyzed the evolution of newspaper images in China by applying computer vision methods to webscraped newspaper PDF files.

2019 Research Assistant for Professor Kenneth Kuttner, Williams College

- Measured the effectiveness of macroprudential policies for 57 economies by calculating the portion of policy actions counter-cyclical to property prices and housing credit.

Teaching Experience

Spring 2022 Machine Learning, Text Analysis, and Economics (Undergraduate), TA for Professor Handlan, Brown University

Spring 2020 Game Theory (Undergraduate), TA for Professor Rai, Williams College

Fall 2019 Global Macro Instability and Finance (Undergraduate), TA for Professor Phelan, Williams College

Fall 2017, Spring 2019 Intermediate Micro (Undergraduate), TA for Professors Rai and Sheppard, Williams College

Honors & Awards

2022 - 2024 Open Graduate Education Fellowship, Brown University

2020 Graduate Fellowship, Brown University

2019 Carl Van Duyne Prize in Economics, Williams College

2018 Class of 1960 Scholar in Computer Science, Williams College

2018 Class of 1960 Scholar in Economics, Williams College

Working Paper

“Gender and Tone in Recorded Economics Presentations: Audio Analysis with Machine Learning,” with Amy Handlan

Work In Progress

“The Certification Game” (Undergraduate Thesis)

Winner of the Carl Van Duyne Prize in Economics at Williams College

“Unemployment in a Production Network,” with Finn Schüle

Publications

“When Rooks Miss: Probability through Chess,” with Steven Miller and Daniel Turek

The College Mathematics Journal, 2021

“Assessing Post-hoc Explainability of the BKT Algorithm,” with Iris Howley and Tongyu Zhou

2020 AAAI/ACM Conference on AI, Ethics, and Society (AIES'20), 2020

“Knowledge Distillation for Recurrent Neural Network Language Modeling with Trust Regularization,” with Yangyang Shi, Mei-Yuh Hwang, and Xin Lei

ICASSP 2019 - 2019 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2019

Presentations and Workshops

2023 ASSA CSWEP (by coauthor)

2022 Brown Macro Breakfast, NBER Behavioral Macro Bootcamp, NBER Heterogeneous-Agent Macro Workshop

Other Experiences

2022-2023 Organizer of the Brown Macro Breakfast, Brown University

Fall 2018 Computer Science Research Assistant for Professor Iris Howley, Williams College

Summer 2018 Research Intern, Mobvoi AI Lab

Summer 2017 Summer Quant Analyst, Hutchin Hill Capital

Skills

Languages Chinese, Cantonese

Programming Languages R (tidyverse), Python (pandas, nltk, tensorflow, and librosa), Stata, Java, JavaScript, C++, C