Thomas H. Li

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EDUCATION

University of Pennsylvania | Philadelphia, PA   *Expected May 2025*
Candidate for Bachelor of Arts, Mathematical Economics
Candidate for Master of Science in Engineering, Data Science

- *Undergraduate GPA*: 3.99/4.00; *Masters GPA*: 4.00/4.00
- *Coursework*: Statistics & Modeling [Econometrics, Machine Learning, Bayesian, VARs, Marketing, Observational Studies]; Economic Theory [Micro, Macro, Labor, Contract]; Computer Science [Data Structures & Algorithms, Big Data]; Mathematics [Real Analysis, Probability, Linear Algebra]
- *Honors & Appointments*: Simon Kuznets Fellowship Award; Economics Department Undergraduate Advisory Board; Penn Federal Reserve Challenge (Captain); Marks Family Writing Center Fellow

RELEVANT EXPERIENCE

Computational Social Science Lab at Penn | Philadelphia, PA   *October 2023 – Present*
Research Assistant

- Contribute to epidemic modeling research under Drs. Jorge Barreras and Duncan Watts by creating an open-source GitHub repository for large-scale analyses of GPS mobility data. Code production-level PySpark/Python implementations of spatial data processing, clustering algorithms, and human trajectory simulation. Accepted for an oral presentation at IC2S2 2024.

Federal Reserve Board of Governors | Washington, D.C.   *May 2023 – August 2023*
Economic Research Intern   *May 2024 – Present*

- Author production-level script pipeline using R, Stata, Matlab, and Bash to scrape 1 GB of economic data and program a monthly econometric-based indicator for macroeconomic uncertainty. Automated a 3-day manual task to <5 minutes of work.
- Program SVARs, produce publication-quality charts, and complete requests for data, analyses, and literature reviews for presentation to central bank governors. Working on a FEDS Note on global transmission channels for inflation uncertainty.

University of Pennsylvania School of Engineering and Applied Science | Philadelphia, PA   *January 2023 – December 2023*
Teaching Assistant, CIS 1600: Discrete Mathematics for Computer Science

- Taught weekly recitations of 15+ undergraduates in a class of 280 students, held office hours (helped ~20 students/week), wrote homework rubrics, and graded homework and exams. TA staff consistently rated by students as "very good."
- Content covered proof techniques, set theory, combinatorics, probability, and graph theory (introductory CS course at Penn).

University of Pennsylvania Marks Family Writing Center | Philadelphia, PA   *January 2023 – May 2023*
Writing Fellow

- Nominated and selected by writing faculty (among 12 out of 1250 first-year students) for superb writing and interpersonal skills. Worked with students one-on-one to develop academic writing abilities and understanding of logic, genre, and rhetoric.

Behavior Change for Good Initiative & Wharton OID Department | Philadelphia, PA   *June 2022 – May 2023*
Research Assistant

- Collaborated with researchers and Ph.D. students under Professors Katy Milkman and Angela Duckworth on projects designed to identify interventions promoting positive behavior change in education, health, finance, and diversity.
- Programmed R and Python scripts using Twitter API to extract, process, and interact with user data for a large field study.
- Conducted data analysis and visualization using R and Tableau for datasets with 5k to 280k+ observation.

SKILLS & INTERESTS

Coding Languages: Python; Java; R; Stata; Matlab; SQL; OCaml; Bash
Technical Software: Git; AWS EC2; Spark; LaTeX; Excel; Tableau; Qualtrics
Languages: Near-native proficiency in Mandarin Chinese
Interests: Drums; Guitar; Running