Aden Chen

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Education

University of Chicago

Sept 2023 - May 2027

BA in Mathematics and Economics

- o GPA: 3.962/4.0
- o Dean's List: 2023–2024
- \circ Coursework: Honors Econometrics (ongoing), Honors Elements of Economic Analysis I–III (ongoing), Accelerated Analysis in \mathbb{R}^n I–III (ongoing), Statistical Theory and Methods Ia–IIa, Systems Programming II, Abstract Linear Algebra, Introduction to Mathematical Probability

Research

Research Assistant for Professors Shaoda Wang and Daniel Li Chen

Apr 2024 - present

Becker Friedman Institute

- Built a pipeline for crawling legal documents from court cases involving expert witnesses, collecting over 3M documents and metadata from 1.5M cases.
- Developed an extraction pipeline to identify key case variables, including outcomes, nature of suits, and expert witness affiliations.

Research Assistant for the MiiE Lab

June 2024 - Sept 2024

Becker Friedman Institute; Harris School of Public Policy

- Supported Professor Anjali Adukia in her work to analyze images and texts in textbooks, children's books, and vearbooks using computational methods.
- Crawled public yearbook images and ran computer vision pipelines to estimate demographic compositions.
- Assisted in the development of a version of the Implicit Association Test using OpenSesame.
- Analyzed news articles using various natural language processing techniques, including sentiment analysis, power and agency analysis, and topic modeling.

Student Researcher

Jan 2025 – present

UChicago Mathematics Directed Reading Program

Studied measure theory, probability, and stochastic processes. Presenting on the Kolmogorov's zero-one law.

Apprentice Researcher

June 2024 - Sept 2024

 $UChicago\ Mathematics\ Research\ Experience\ for\ Undergraduates\ (REU)$

Studied operator theory and authored an expository paper on spectral theory and the min-max theorem, which
gives a variational characterization of the discrete eigenvalues of a self-adjoint operator below the essential spectrum.

Activities

${\bf Oeconomica~(Recognized~Student~Organization)}$

Sept 2023 – present

- Leader for the Asset Pricing Cohort (2024-2025); Member of the Econometrics Cohort (2023-2024).
- Designed and delivered a quarter-long lecture series on Python for economics research, covering fundamentals, data manipulation, visualization, regression analysis, causal inference, natural language processing, and web scraping. Created Jupyter notebook worksheets for hands-on Python practice. Presented lectures on mathematical prerequisites and a behavioral economics perspective on the equity premium puzzle.

Grader for MATH15200 - Calculus 2

Sept 2024 - Dec 2024

ESL Learning Website

github repo

- Developed a Django-based website for interactive ESL learning.
- Recognized as a finalist in the Rise Global Challenge by Schmidt Futures and the Rhodes Trust.

Skills

Languages: Python, C++/C, R, JavaScript, HTML/CSS

Technologies: Git, Jupyter, Midway, LATEX, Pandas, NumPy, Beautiful Soup, Selenium, SciPy, NLTK, Django