

JIAYI WU

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Google Scholar ◇ Github ◇ LinkedIn

EDUCATION

Brown University

Sept 2024 - May 2028 (expected)

B.Sc. Mathematics-Computer Science, Urban Studies

GPA: 4.0/4.0

Related courses: *Critical Data and Machine Learning Studies, Linear Algebra with Theory, Program Design with Data Structures and Algorithms, Honors Statistical Inference I, Abstract Algebra, International Political Economy, Urban Life in the Global South*

Shanghai Qibao Dwight High School

Sept 2021 - June 2024

International Baccalaureate Diploma Programme (IBDP)

GPA: 4.0/4.0

Related courses: *Mathematics Analysis and Approaches HL, Computer Science HL, History HL, Theory of Knowledge, Global Politics-History Extended Essay*

RESEARCH INTERESTS

1. Complex systems and sociotechnical infrastructure/governance (for urban landscapes and workplace algorithmic management in particular)
2. AI alignment and technical governance, featuring fairness, interpretability, and (participatory) auditing
3. Symbolic systems, multi-agent systems for language agents

ACADEMIC EXPERIENCE

Longitudinal LLM Auditing on Election Responses

April 2025 - Present

Supervisors: Prof. Sarah Cen and Prof. Chara Podimata

Massachusetts Institute of Technology

Affiliation: MIT Madry Lab, Stanford RegLab

Agent City Hall: Cognitive Motifs for Synthetic Urban Agents [1] [2]

Mar 2025 - Present

Supervisors: Prof. Kent Larson, Prof. Deb Roy, Jiajie Li

Massachusetts Institute of Technology

Affiliation: MIT Media Lab, City Science Group

Atypical Combination in Computational Sciences

Feb 2025 - Present

Supervisors: Prof. Huilian Sophie Qiu

Northwestern University

Affiliation: Northwestern Institute on Complex Systems (NICO), Uzzi Lab

Collective Data Stewardship and Governance

Feb 2025 - Present

Supervisors: Prof. Vera Khovanskaya

University of Toronto

Affiliation: Faculty of Information, Labour Process and Technology Lab

AI Fairness Research, Socially Responsible Computing Handbook

Dec 2024 - Present

Supervisors: Prof. Suresh Venkatasubramanian and Prof. Julia Netter

Brown University

Affiliation: Brown CS, Center for Technological Responsibility (CNTR)

Critical Auditing of Food-Delivery Algorithmic Management [3]

Supervisors: Prof. Harini Suresh

Affiliation: Brown CS, the Data in Society Collective (DISCO Lab)

Nov 2024 - Present

Brown University

PROFESSIONAL EXPERIENCE

Data Engineer Internship

Supervisors: Delaney Dill, Nelson Ngouenet

Affiliation: P1.UVWP The Water Purifier

Jan 2025 - Present

GLBL Foundation

Data Science Internship

Supervisors: Angelos Chronis

July 2024 - Sept 2024

Infrared City

PROJECT EXPERIENCE

ConnectRI Broadband Navigator Accessibility Audit

Affiliation: Digital Equity Initiative

Feb 2025 - Present

Brown Initiative for Policy

AsyLex Refugee Claim Entity Extraction & Judgement Prediction

Affiliation: Ignite Fellowship

Sept 2024 - Mar 2025

AI4ALL

Urban-Political Data Visualizers [4]

Affiliation: Data Board

Sept 2024 - Present

Brown Political Review

Open-Sourced Android Mobile App for Education Resource Sharing

Affiliation: Founder, Technology Board

Nov 2021 - Present

Converter Education Initiative

Adversarial Connect4 AI Solver with Minimax and Pruning

Affiliation: CSCI 0170

Nov 2024 - Dec 2024

Brown University

Modeling Honeybee Population Dynamics

Affiliation: Team 12736

Feb 2022 - Feb 2023

High School Mathematical Contest in Modeling (HiMCM)

PUBLICATIONS

- [1] C. J. Li, K. I. Zhao, **Jiayi Wu**, A. Qu, Z. Mo, and Y. Tang, "Cognitive motifs: Modular reasoning agents for human thought replication," working paper, submitting to Conference on Neural Information Processing Systems (NeurIPS) 2025.
- [2] C. J. Li, K. I. Zhao, **Jiayi Wu**, A. Qu, Z. Mo, and Y. Tang, "Agent city hall: Capturing and replicating human thought processes, opinions, and sentiments in response to rezoning," working paper, submitting to Nature Machine Intelligence.
- [3] **Jiayi Wu** and H. Suresh, "Toward deliverer-centric food delivery algorithmic management: Cross-platforms case studies, computational approaches, and regulatory alternatives," submitting to ACM Conference on Fairness, Accountability, and Transparency (FAccT) 2026.
- [4] **Jiayi Wu**, "Urban pivots, political margins: The scramble for urban village in the early 2000s' southern china," *Brown Political Review*, 2025.

ACHIEVEMENTS

Chairman Scholarship (5%), Shanghai Qibao Dwight High School

Spring 2024

Academic Excellence Scholarship First Place (1%), Shanghai Qibao Dwight High School

Spring 2023

Meritourious Award (15%), COMAP's High School Mathematical Contest in Modeling

Spring 2023

Global First Place Award (5%), China Thinks Big Competition(CTB)

Fall 2022

SKILLS/MISCELLANEOUS

Programming Languages

Java, Python, JavaScript, HTML/CSS, SQL/MySQL, MATLAB, XML, ReasonML, Racket, C/C++, Processing

Programming Tools

PyTorch, Tensorflow, Sklearn, Pandas, Numpy, Vite, Vue.js, D3.js, Plotly, Android Studio, Microsoft Excel, Git/GitHub, Linux

Miscellaneous

Zine/Collage-Making, Reading (Historical/Science Fiction)