HAOYANG LI 李昊阳

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EDUCATION

Hong Kong Baptist University

Hong Kong SAR, China

B.S.S.C. (Hons.) in Sociology, Minor in Computer Science 2022–2026 (Anticipated)

- Research Interest: Computational Social Science, Large Language Model Agent, Social Simulation, Social Stratification, Social Networks
- GPA: cGPA: 3.60/4.0, Major GPA: 3.69/4.0, Minor GPA: 3.72/4.0

(First Class Hons.: cGPA 3.4 or above)

• Relevant Coursework: Intro to Python and its Applications (A-) | Problem Solving Using Object Oriented Approach (A) | Calc., Prob., and Stat. for CS (A-) | Fundamental of Data Analysis and Management (A-) | Intro to AI and ML (A-) | Social Stat. (A) | Sociological Classical Theory (A) | Sociological Theory II Contemporary Approaches (A-) | Social Networks (A-)

PUBLICATION

- 1. Zeng, Q., Zhao, R., Mao, J., Li, H., Xu, F., Li, Y. (2025). CrimeMind: Simulating urban crime with multi-modal LLM agents. *arXiv preprint arXiv:2506.05981*.
 - We proposed **CrimeMind**, a novel LLM-driven Agent-based modeling (ABM) framework for simulating urban crime within a multi-modal urban context
 - By applying theories from sociology and criminology into the agentic workflow of CrimeMind, the crime hotspot prediction and spatial distribution accuracy achieving up to a 24% improvement over the strongest baseline of both traditional ABMs and deep learning baselines

Research Experiences

Research Intern | Future Intelligence Lab, Tsinghua University 2025.03 – Present

- Supervised by **Prof. Fengli Xu**, Assistant Professor, Department of Electronic Engineering, Tsinghua University
- *Interdisciplinary Research*: Co-designed LLM Agents incorporating sociological theories to simulate and analyze human mobility, social segregation, and crime patterns, exploring underlying social behavior mechanisms. Contributed to experimental work and co-authorship of a resulting research paper

Research Assistant | Department of Sociology, Hong Kong Baptist University

2024.03 - 2024.12

- Supervised by **Prof. Yinni Peng**, Associate Professor, Department of Sociology, Hong Kong Baptist University
- Project: Study of Return Migration of Overseas Chinese Students (HKBU 12600620)
- Qualitative Research: Conducted qualitative data collection through fieldwork observations and literature review, organizing and analyzing findings to support sociological research
- Computational Social Science Research: Developed custom Python scripts utilizing web scraping and NLP sentiment analysis techniques to acquire and process data for sociological research problems

Research Assistant | Department of Sociology, Hong Kong Baptist University

2024.03 - 2024.06

- Supervised by **Prof. Jin Jiang**, Assistant Professor, Department of Sociology, Hong Kong Baptist University
- *Project*: Staying in the Nest? A Study of Young Adults' Co-residence with Parents in the United Kingdom, Mainland China and Hong Kong
- Quantitative Research: Conducted quantitative analysis of survey on youth living arrangements, identifying key variables through literature synthesis and data organization
- Investigated socioeconomic drivers (economic resources, cultural values, life-course factors, etc.) shaping residential decision-making in young adults

Selected Project

Term Paper on How Unequal in Social Capital Fuels Higher Education Opportunity Inequality in China

Course: SOCI 4035, Instructor: Prof. Jin Jiang, Term: 25 Spring

2025.3

- Quantitatively investigated stratifying effects of cultural capital (paternal education, leadership capital) on higher education access inequality, leveraging nationally representative CFPS 2020 data through ordinal logistic regression modeling
- Proposed evidence-based policy interventions targeting institutional barriers perpetuating educational disparities

Awards and Honors • President's Honor Roll, Hong Kong Baptist University

Semester 1, 2022–2023; Semester 1&2, 2023–2024; Semester 1, 2024–2025

• Dean's List, Hong Kong Baptist University

Semester 2, 2022–2023

• HKSAR Talent Development Scholarship 2022, HK\$10,000

2023.06

Skills And Interests

- Languages: Chinese Mandarin (Native), Chinese Cantonese (Listening), English (Working Language), Language)
- Programming & Software: Python, Java, C, SQLite, MATLAB, Stata, SPSS, Microsoft Office
- Interests:
 - Chinese Writing: won the First Prize of the 24th National New Concept Writing Contest
 - Hiking: I am deeply impressed by the MacLehose Trail of Hong Kong