

XINGCHEN SHA

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EDUCATION

B.A. in Computer Science Graduating May 2025 (expected)
Columbia University, New York, United States GPA: 4.05

B.S. in Computer Science Graduating May 2025 (expected)
City University of Hong Kong, Kowloon Tong, Hong Kong GPA: 4.01

EXPERIENCE

Columbia University: Research Assistant September 2024 – Present

- Researched jailbreakings and hallucinations in LLMs
- Researched fine-tuning frameworks for LLMs incorporating game theory principles
- Researched RL architectures to counteract biases in AI-driven decisions
- Advisor: [Chengzhi Mao](#), [Junfeng Yang](#)

University of Nebraska–Lincoln: Visiting Student June 2024 – July 2024

- Researched strategic behaviors in schelling games
- Researched no-regret learning dynamics for games
- Host: [Hau Chan](#)

UNSW Sydney: Research Assistant October 2023 – Present

- Collaborator in the NSF CSIRO-funded project [Fair Sequential Collective Decision Making](#)
- Researched group-fairness in multi-period facility location problems
- Researched temporal fairness in participatory budgeting
- Researched multi-winner voting with predictions
- Advisor: [Haris Aziz](#), [Hau Chan](#), [Toby Walsh](#), [Lirong Xia](#)

Hong Kong Chu Hai College: Research Assistant (full-time) June 2022 – April 2023

- Researched facility location games with capacity constraints
- Researched multi-stage facility location games in dynamic settings
- Researched truthful mechanism design with private optional preferences
- Implemented visualization for misbehaviors in strategic games
- Advisor: [Hau Chan](#), [Minming Li](#), [Pinyan Lu](#)

City University of Hong Kong: Research Assistant September 2021 – May 2022

- Researched differentiable metrics for image captioning training
- Built Soft CIDEr model with sampling from Gumbel distribution
- Advisor: [Antoni B. Chan](#)

ACTIVITY

Columbia University: Presenter & Teaching Assistant September 2024 – Present
Decentralized Finance and Game Theory Seminar

City University of Hong Kong: Spotlight Presenter June 2023
STEM Carnival cum Student Project Exhibition 2023

City University of Hong Kong: Organizer May 2023 – September 2023
Hong Kong Secondary School Coding Challenge 2023 (HKSC2023)

City University of Hong Kong: Presenter & Organizer September 2022 – September 2023
CityU Theory Seminar

SERVICES

City University of Hong Kong: College of Engineering Student Chapter Panel	November 2022 - Present
City University of Hong Kong: Freshman Mentor	September 2022 - December 2022

SELECTED HONORS & AWARDS

Upsilon Pi Epsilon	September 2024
Dean's List at Columbia University	September 2023 – May 2024
VTech Group of Companies Scholarship	June 2023
Dean's List at City University of Hong Kong	September 2020 – May 2023
The College of Engineering Dean's Scholarship	April 2023
HKSAR Government Scholarship	February 2023
CityU Scholarship	February 2022

WORKING PAPERS (* ALPHABETICAL ORDER)

Strategyproof Mechanism Design in Schelling Games *

Hau Chan, Jiaqian Li, **Xingchen Sha**

Mitigating Hallucination in Large Language Models through Debating

Xingchen Sha, Chengzhi Mao, Junfeng Yang

UNDER REVIEW (* ALPHABETICAL ORDER)

Strategyproof Mechanism for Two Heterogeneous Facilities with Constant Approximation Ratio *

Minming Li, Pinyan Lu, **Xingchen Sha**, Yuhao Yao, Jialin Zhang, Submitted to Games and Economic Behavior

Group Fairness in Multi-period Mobile Facility Location Problems *

Haris Aziz, Hau Chan, **Xingchen Sha**, Toby Walsh, Lirong Xia, Submitted to IJCAI 2025

Mechanism Design for Facility Location Problems with Capacity Constraints in Bounded Location Space

Xingchen Sha, Hau Chan, Vincent Chau, Ken Fong, Minming Li, Wai Lun Lo, Submitted to UAI 2025

PUBLICATIONS (* ALPHABETICAL ORDER)

Facility Location Games with Optional Preferences: A Revisit

Xingchen Sha, Shuyu Bao, Hau Chan, Vincent Chau, Ken Fong, Minming Li, AAAI 2025

Randomized Strategyproof Mechanisms for Multi-stage Facility Location Problem with Capacity Constraints

Ken Fong, **Xingchen Sha**, Hau Chan, Vincent Chau, Wai Lun Lo, IJTCS-FAW 2024

Group Fairness in Multi-period Mobile Facility Location Problems *

Haris Aziz, Hau Chan, **Xingchen Sha**, Toby Walsh, Lirong Xia, AAMAS 2025 (Extended Abstract), ADT 2024 (Abstract)

SKILLS

Programming Languages:

C/C++, Python, Java, SQL, Bash, HTML

Professional Applications:

Latex, Matlab, PyTorch, TensorFlow, Git