XINGCHEN SHA

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EDUCATION

B.A. in Computer Science — Graduating May 2025 (expected)
Columbia University, New York, United States — GPA: 4.05/4.0

B.S. in Computer Science — Graduating May 2025 (expected)
City University of Hong Kong, Kowloon Tong, Hong Kong — GPA: 4.01/4.0

EXPERIENCE

Columbia University: Research Assistant Intern — Sep 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
- Supervisor: Chengzhi Mao, Junfeng Yang

University of Southern California: Visiting Student — Sep 2024 – Oct 2024

- Researched proportional fairness in hierarchical clustering
- Researched LLMs alignment from human feedback
- Host: Evi Micha

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

University of New South Wales: Collaborator — Oct 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 — June 2022 – April 2023

- Researched facility location games with capacity constraints
- Researched multi-stage facilty 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 Intern — 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 — Sep 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: Founder & Organizer May 2022 – September 2022
Hong Kong Secondary School Coding Challenge 2022 (HKSC2022)

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 AWARDS

The College of Engineering Dean's Scholarship April 2023
HKSAR Government Scholarship February 2023
CityU Scholarship February 2022

WORKING PAPERS (* ALPHABETICAL ORDER)

Proportional Fainress in Hierarchical Clustering
Xingchen Sha, Evi Micha

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 AAMAS 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 AAMAS 2025

Facility Location Games with Optional Preferences: A Revisit
Xingchen Sha, Shuyu BAO, Hau Chan, Vincent Chau, Ken Fong, Minming Li, Wai Lun LO, Submitted to AAAI 2025

PUBLICATIONS (* ALPHABETICAL ORDER)

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, ADT 2024 (Abstract)

SKILLS

Programming Languages:
C/C++, Python, Java, SQL, Bash, HTML

Professional Applications:
Latex, Matlab, PyTorch, TensorFlow, Git

Languages:
Mandarin(Native), English(Fluent), Cantonese(Working Proficiency)