

# 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

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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

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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