WANG RUIJIE

Homepage Wang Ruijie WANGaRuijie ruijie.wang@connect.polyu.hk

EDUCATION

The Hong Kong Polytechnic University *August 2022 - Present*
Major in Computer Science, Minor in Applied Mathematics, cGPA 3.61 *Kowloon, Hong Kong SAR*

Technical University of Denmark *June 2023 - August 2023*
Summer Exchange *Copenhagen, Denmark*

Yali High School *September 2019 - June 2022*
Science Track, Nationwide College Entrance Examination top 0.5% *Changsha, China*

RESEARCH INTERESTS

The interdisciplinary areas of Theoretical Computer Science, Machine Learning, Economics, and Finance, especially for Algorithmic Game Theory, Algorithmic Trading, and Learning Theory.

SKILLS

Programming Languages Python, Java, C, C++, R, SQL, Shell Programming, LaTeX
Software and Tools Unix/Linux, Git, HTML, Relational Databases, Beamer, TikZ

HONORS

HKSAR Government Scholarship Fund - Reaching Out Award 2022/23 *August 2023*
Issued by the Education Bureau, Hong Kong Special Administrative Region

EXPERIENCES AND PROJECTS

Undergraduate Researcher - Algorithmic Game Theory *April 2023 - Present*
Fortunately advised by Dr. Li Bo

- Organized and examined an influential body of literature in recent years on the fair allocation problem.
- Investigated the existence of different fairness and efficiency notions including envy-freeness, Pareto efficiency, maximum Nash welfare, proportionality, maxmin share and their relaxed versions or approximation in various contexts of indivisible and divisible good/chore allocation including multi-agent, multi-round, budget-constrained, and randomized allocation.
- Concentrated on the proof and design of algorithms for the budget-constrained fair allocation problem and its combination with linear programming and downward-closedness.

Conference Student Assistant - IJTCS-FAW 2024 *July 2024*

- Assisted the organization of the International Joint Conference on Theoretical Computer Science - Frontier of Algorithmic Wisdom (IJTCS-FAW 2024) hosted by PolyU.

Technology Beyond Borders: Service-Learning in Da Nang, Vietnam *January 2024*

- Participated in the service-learning program co-hosted by PolyU and the Da Nang Architecture University in the Lỳ Cũng Un Primary School to promote STEM education and cultural exchange.

Image Low-Light Super-Resolution Enhancement with GANs *July 2023*
DTU 34269 Computational Imaging and Spectroscopy (Master level) project *Repository Link*

- Developed a system with PyTorch to enhance poorly lit images into well lit images with high resolution using a GAN architecture with discovery on reliable generators, discriminators, and loss functions.

PolyU Computer Science Course Projects *December 2022 - Present*
A series of programming projects of PolyU COMP subjects *Repository Link*