

# JINGYAN ZHANG

+852 94909973 ◇ Hong Kong  
[u3597410@connect.hku.hk](mailto:u3597410@connect.hku.hk) ◇ [zjy-felix.github](https://github.com/zjy-felix)

## EDUCATION

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### University of Hong Kong

*B.S. in Quantitative Finance and Mathematics*

*Sept 2022 - present*

*GPA: 4.01/4.3*

### University of North Carolina at Chapel Hill

*Exchange*

*Fall 2025*

## RESEARCH EXPERIENCES

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### Weekly EV Fast Charging Equilibrium Model

*Apr 2025 – Present*

- Developing a spatio-temporal stochastic choice framework that integrates station selection with stochastic queue/service/EV type dynamics and weekly usage cycles.
- Formulating users' decision process and designing algorithm based on the multilogit choice model to reach choice probabilities/waiting time equilibrium.
- Constructing a San Mateo regional case study for calibration and validation.
- Working paper; with Prof. Yong-Hong Kuo and Prof. Candace A. Yano.

### Time-Varying SIS Model

*May 2025 – Present*

- Formulating an infinite-horizon control problem for an SIS model with periodic transmission; deriving the HJB equation to obtain a general solution.
- Implementing numerical solvers to obtain cost-minimizing policy; analyzing structure (e.g., switching line) across parameter regimes to get its explicit form.
- Working paper; with Prof. Zhengli Wang.

### Optimal Multi-Armed Bandit with Dependent Arms

*Aug 2024 – May 2025*

- Extended a policy-tree construction to the general dependent-arms setting (binary and continuous belief states).
- Built a reproducible simulation framework to benchmark the optimal DEF policy against greedy, UCB, and the Gittins index.
- Under guidance of Prof. Zhengli Wang.

## TEACHING EXPERIENCE

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### University of Hong Kong, Teaching Assistant

- COMP1117 Computer Programming

*Spring 2025*

## AWARDS AND ACTIVITIES

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### Reaching Out Award

HKU Worldwide Undergraduate Student Exchange Scholarships

HKU Summer Research Program Scholarship

Martin Scholarship

Dean's Honours List 2022–2024

## SKILLS

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### Software

Python, Matlab, L<sup>A</sup>T<sub>E</sub>X, Mathematica, QGIS

### Languages

Mandarin (Native), English (Fluent), Cantonese (Intermediate)