Yilie Huang

500 W. 120th St., Room 321, New York, NY 10027
(+1) 646-775-1656
yh2971@columbia.edu

POSITIONS

Columbia University Jan 2025 - Present
Fu Foundation School of Engineering and Applied Science USA
Postdoctoral Research Scientist in Industrial Engineering and Operations Research
Supervisor: Xunyu Zhou

EDUCATION

Columbia University Sept 2019 - Dec 2024
Fu Foundation School of Engineering and Applied Science USA
Doctor of Philosophy in Industrial Engineering and Operations Research
Advisor: Xunyu Zhou

Columbia University Sept 2017 - Dec 2018
Fu Foundation School of Engineering and Applied Science USA
Master of Science in Operations Research
Advisor: Xunyu Zhou

Zhejiang University Sept 2013-Jul 2017
Chu KoChen Honors College China
Bachelor of Science in Mathematics and Applied Mathematics (Honors Program)

The University of Hong Kong Sept 2015-May 2016
Faculty of Science Hong Kong
Exchange student

CFA Institute Since Feb 2022
CFA® (Chartered Financial Analyst) charterholder

RESEARCH NTERESTS

- Reinforcement Learning
- Diffusion Models
- Financial Engineering
- Stochastic Control

RESEARCH PAPERS

Publications

Huang, Y., Jia, Y., & Zhou, X. (2025). Sublinear Regret for a Class of Continuous-Time Linear–Quadratic Reinforcement Learning Problems. SIAM Journal on Control and Optimization, forthcoming.

Huang, Y., Jia, Y., & Zhou, X. (2022). Achieving Mean–Variance Efficiency by Continuous-Time Reinforcement Learning. In Proceedings of the Third ACM International Conference on AI in Finance, 377-385.

Preprints

Huang, Y., Jia, Y., & Zhou, X. (2024). Mean–Variance Portfolio Selection by Continuous-Time Reinforcement Learning: Algorithms, Regret Analysis, and Empirical Study. Submitted.

In Progress

Huang, Y. & Zhou, X. (n.d.). Data-Driven Exploration in Continuous-Time Reinforcement Learning for a Class of Linear-Quadratic Control. In progress.

PRESENTATIONS

Conference Presentations

World Online Seminar on ML in Finance	Feb 2025
Columbia IEOR Colloquium	Nov 2024
2024 INFORMS Annual Meeting	Oct 2024
2024 INFORMS Conference on Financial Engineering and FinTech	Aug 2024
2022 INFORMS Annual Meeting	Oct 2022
11th World Congress of Bachelier Finance Society	June 2022

Posters

NYC Operations Day	Mar 2025
Columbia DSI Financial and Business Analytics Poster Session	Mar 2025
Columbia DSI Financial and Business Analytics Poster Session	Nov 2022

ACADEMIC SERVICE

Referee

Quantitative Finance
Journal of the Operational Research Society
Digital Finance

Session Chair

2024 INFORMS Annual Meeting	Oct 2024
11th World Congress of Bachelier Finance Society	June 2022

INDUSTRY EXPERIENCE

Tower Research Capital, Mako/Ace Trading Team — Feb 2023-May 2023
Quant Trader Intern — New York, NY, USA

- Built 20,000+ HFT alphas; strategy Sharpe ratio exceeded 5
- Created selection algorithm and C++ tools; integrated into pipeline

Millennium Management, Equity Derivatives Quant Team — Jun 2022-Aug 2022
Quant Researcher Intern — New York, NY, USA

- Solved 2-D PDEs for Asian options with ADI methods
- Production-grade C++ code with advanced features

LevelHead Capital, LLC, Quantitative Value Investing — Jan 2018-Jul 2018
Quant Trader Intern — New York, NY, USA

- Stock prediction with DL
- Value investing via ML

TEACHING EXPERIENCE

Columbia University
Teaching Assistant — New York, NY, USA

- IEOR E4602, Quantitative Risk Management — Fall 2023
- IEOR 4630, Asset Allocation — Spring 2023
- IEORE 4732, Computational Methods in Finance — Spring 2022
- IEORE 4701-001, Stochastic Models for Financial Engineering — Fall 2021
- IEORE 4701-002, Stochastic Models for Financial Engineering — Fall 2021
- IEOR 4524, Analytics in Practice: MSBA Capstone — Spring 2021
- IEOR 4100, Probability, Statistics and Simulation — Fall 2020
- IEOR 4101, Probability, Statistics and Simulation — Fall 2020
- IEOR 4707, Financial Engineering: Continuous Time Models — Spring 2020
- IEOR 4735 Structured & Hybrid Products — Fall 2018