ZHANG, HONGBAO

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EDUCATION

The Chinese University of Hong Kong, Shenzhen *August 2023 – July 2025*
Master of Science in Data Science, GPA: 3.75/4.0

Xiamen University *September 2019 – June 2023*
Bachelor of Arts in Economics, GPA: 3.63/4.0

The University of Hong Kong *January 2022 – May 2022*
BSc. Exchange, Faculty of Science

RESEARCH EXPERIENCE

The Hong Kong University of Science and Technology *September 2025 – Present*
Predoctoral Research Fellow, Department of Finance

Supervisors: Prof. Yingying Li and Prof. Xinghua Zheng

- Contributed to the MAXSER-SDF paper revision by replicating benchmark papers, conducting simulations on factor selection and SDF estimation, and evaluating pricing and portfolio performance with robustness checks.
- Built a high-frequency data library for tick-to-minute cleaning, jump detection, and factor construction.
- Maintained JKP firm-characteristic datasets for portfolio optimization and SDF estimation.
- Prepared materials for research talks, conferences, and graduate-level teaching in large-scale portfolio optimization and financial statistics.

PhD Level Coursework (Audited): Theoretical Asset Pricing, Empirical Asset Pricing, Empirical Corporate Finance.

RESEARCH PAPERS AND PROJECTS

To Think or Not to Think: Exploring the Unthinking Vulnerability in Large Reasoning Models
NeurIPS 2025 Workshop (accepted)
Coauthors: ZHU Zihao, WANG Ruotong, KE Xu, LYU Siwei, WU Baoyuan *Paper*

- Identified an *Unthinking Vulnerability* in Large Reasoning Models and developed *Breaking of Thought* attacks to bypass reasoning through delimiter manipulation.
- Introduced *Monitoring of Thought* to improve LRM inference efficiency and safety.

HID: A Hierarchical Framework for Multi-Granularity Visual-Textual Inconsistency Detection
Coauthors: ZHU Zihao, WU Guanzong, LYU Siwei, WU Baoyuan *Paper*

- Developed a semantic-graph framework for multi-granularity visual-textual inconsistency detection.

Adaptive Parameter Tuning of Evolutionary Computation Algorithms
Statistics in Biosciences (accepted)
Coauthors: Kwok Pui Choi, Tze Leung Lai, Xin T. Tong, Ka Wai Tsang, Weng Kee Wong *Paper*

- Developed an adaptive parameter-tuning method with oracle properties for high-dimensional optimization.

Analyzing Sentiment Discrepancies: Executives vs. AI in Earnings Calls

Master's Capstone Project (Supervisor: Prof. Rui Shen at CUHK-Shenzhen)

– Developed the Human-AI Sentiment Discrepancy Index (HASDI) from earnings-call transcripts and examined its associations with stock returns and firm performance.

A Quantitative Investment Strategy of ETFs based on Ensemble Learning of Technical Indicators

Undergraduate Thesis (Supervisor: Prof. Haiqiang Chen at Xiamen U)

– Built and backtested ETF strategies using Tree-model ML methods and 50+ technical indicators.

PROJECT EXPERIENCE

Decision-based Black-box Adversarial Attack Using PSO Optimization

– Developed AdvPSO to generate adversarial examples through particle swarm optimization in a black-box setting.

Multimodal Genshin

– Built a multimodal AI assistant to help Genshin Impact players with an ORPO aligned LLM, RAG on Genshin materials, and a fine-tuned diffusion model to generate better customized Genshin images.

TEACHING EXPERIENCE

The Hong Kong University of Science and Technology *Teaching Assistant*

DBAP 5410 — Asset Allocation and Portfolio Analysis (DBA, 2026)

FINA 5250 — Empirical Methods in Finance (MSc, 2026); TA evaluation: 4.95/5

WORK EXPERIENCE

ZHESHANG SECURITIES *Shanghai*

Intern, Electricity and New Energy Group *May 2022 – September 2022*

– Authored three industry research reports on the electricity and new energy sectors.

CHINA EVERWIN ASSET *Shenzhen*

Intern, Department of Financial Engineering *June 2021 – August 2021*

– Helped develop a factor-based model for evaluating long-term quantitative fund performance.

ACHIEVEMENTS

Outstanding Graduates, Duan Family College, CUHKSZ *Spring 2025*

Academic Outstanding Scholarship (First Tier), CUHKSZ *Spring 2025*

Fung Scholarship, HKU *Spring 2022*

XMU Anniversary Sportsmanship Scholarship, XMU *Spring 2022*

National Project in Innovation and Entrepreneurship Training Program for College Students, XMU *Spring 2022*

Contemporary Undergraduate Mathematical Contest in Modeling, First Honor in Fujian, XMU *Fall 2021*

Academic Excellent Scholarship, XMU *Fall 2020*

Champion of Xiamen Universities Football League Tournament, XMU *Fall 2020*

OTHER INFORMATION

Language skills: Chinese (native), English (fluent). IELTS: 7.5/9.0 (2025, 2020); GMAT: 680 (2021).

Technical skills: Python, R, Microsoft Office (proficient); Stata, SPSS, SAS, MATLAB (intermediate).

Interests: Football, Trekking