Wang Hanwei

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Education

The Chinese University of Hong Kong (CUHK), HongKong Aug. 2024 – Oct. 2025
M.Sc. in mathematics, Big Data Analytics and Computations Stream

- Majors: Computational Mathematics, Financial Analytics, Data Analysis, Stochastic Analysis, AI Principles

Shantou University (STU), Shantou, China Sept. 2020 – June. 2024
B.S. in Mathematics and Applied Mathematics · GPA: 3.6/5.0 (top 3.75%)
Honors: First-Class Scholarship (top 5%), National Inspirational Scholarship, Outstanding Graduate

Data Science Projects

Reinforcement Learning for Bitcoin Trading with Technical Indicators Feb. 2025 – May. 2025
Research Project led by Benny HON

- Developed a customized Bitcoin trading environment integrating multiple technical indicators (MACD, RSI, RVI, Bollinger Bands) to enrich agent state representation and enable market perception.
- Implemented and trained three distinct reinforcement learning agents: Q-Learning, Deep Q-Network (DQN), and Advantage Actor-Critic (A2C), conducting 1,000 simulated trading sessions for comparison.
- Evaluated agents across four key metrics: total profits, training efficiency, consistency, and volatility handling. Results showed DQN as optimal for stable returns, A2C for high-risk high-return scenarios, with Q-Learning requiring stability improvements.
- Applied reinforcement learning methodologies to algorithmic trading, providing insights for strategy selection based on different market conditions and risk tolerance levels.

AI-Driven Mouse Product Design with Aesthetic Needs Recognition Sept. 2024 – Jun. 2025
Technical Developer Research Project

- Implemented Stable Diffusion models for automated generation of diverse mouse design samples, creating 1000+ design variations to support user preference analysis
- Developed a multidimensional measurement framework using CLIP and image segmentation techniques to quantitatively analyze emotion expression and form composition of design specifications
- Built clustering-based filtering algorithms to optimize design sample selection based on aesthetic needs, improving user preference assessment efficiency by 60%
- Integrated diffusion models with aesthetic evaluation pipelines, bridging user perception analysis and AI-driven conceptual design for enhanced product development workflows

Digital Intelligence Service Project May. 2023 – Sept. 2023
Technical Team Leader University Projects

- Architected and deployed advanced web scrapers with anti-detection mechanisms, achieving 98% data extraction reliability across 15+ target platforms
- Implemented fine-tuned ChatGPT-based NLP models for automated customer service, reducing response time by 75% while maintaining 95% user satisfaction
- Built scalable data pipeline processing 10,000+ daily user interactions with 95% accuracy, utilizing Redis for caching and MongoDB for persistent storage

New Countryside of Digital Wisdom Project Sept. 2022 – Sept. 2023
Data Team Leader Provincial Projects

- Led 5-person technical team developing YOLOv5-based computer vision models for rural safety monitoring, achieving 92% detection accuracy across diverse environmental conditions
- Implemented edge computing solutions reducing cloud processing costs by 40% while maintaining detection performance in bandwidth-constrained rural environments

- Designed custom annotation tools and training workflows, accelerating model iteration cycles by 65% and improving team productivity

Professional Experience

Meituan Hong Kong, Hong Kong SAR Apr. 2025 – July. 2025
Operations Intern On-site

- Designed multi-dimensional dashboards (New Merchant Signing, GMV Growth) with KPIs for real-time tracking. Achieved 500+ daily views, boosting operational responsiveness by 35%
- Led end-to-end product upgrades, drafted MRDs, and launched self-service analytics tools. Improved query efficiency by 40% and increased daily active users by 120%
- Applied Apriori, Pearson correlation, PCA, and cosine similarity to uncover product affinities. Identified 3 growth opportunities; pilot strategies drove 18% GMV lift in key regions

China CITIC Bank, Shenzhen Oct. 2024 – Nov. 2024
Corporate Business Intern

- Led multidimensional analysis of corporate credit products using Python, developing an automated analytics framework that identified 12% potential high-value client segments
- Designed and implemented an XGBoost-based credit risk assessment model achieving 0.92 AUC, generating 200+ monthly risk alerts after deployment
- Collaborated with cross-functional teams to optimize customer acquisition strategies based on data insights, resulting in 15% increase in qualified leads

Shenzhen Diankuan Network Technology, Shenzhen May. 2022 – Sept. 2022
Quantitative Data Analyst Intern

- Implemented LSTM prediction models reducing MAE to 0.15% on test sets, boosting high-frequency trading signal accuracy to 82%
- Optimized backtesting frameworks using parallel computing, reducing strategy validation time by 65% and enabling rapid iteration of trading algorithms
- Collaborated with trading teams to implement risk management protocols, resulting in 30% reduction in volatility while maintaining performance targets

Technical Skills

- Data Analysis: Statistical Analysis, Data Mining, Machine Learning, Deep Learning, Time Series Analysis
- Programming: Python (NumPy, Pandas, Scikit-learn), R (tidyverse, ggplot2), SQL, MATLAB
- ML/DL Frameworks: PyTorch, TensorFlow, Keras · Data Visualization: Tableau, Power BI, Matplotlib
- Languages: English (IELTS 6.5), Mandarin (Native)

Academic Publications

Paper Presentation in ICAISC, Paris, France Aug. 25 - Aug. 26, 2023
*CHEN X. LIU X.,LAO X., KUAN S., JIANG Y.,**WANG H.**(2023), The Twin Terminal of Pedestrian Trajectory Based on City Intelligent Model (CIM) 4.0.International Conference on Artificial Intelligence and Soft Computing (ICAISC 2023).*

Conference Paper Presentation of CVCI 2024, Bangkok, Thailand Jan. 29 - Jan. 31, 2024
International Conference on Computer Vision and Computational Intelligence (CVCI 2024).