YU PENG

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EDUCATION

The University of Sydney Jul 2025-April 2027
Master of Philosophy (MPhil), Computer Science (92/100)
Advisors: Josiah Poon, Matloob Khushi Sydney, Australia

- **[Research]** Time series & AI for Finance, 3 first-author papers under review at **ICDM (CORE A*)**:
  - Cryptocurrency price prediction — Exploring the data structure of crypto and questioning the effectiveness of time-series models
  - Cryptocurrency price prediction — Modeling cross-asset dependencies with Graph Neural Networks
  - Kalman Filter × Cybernetics trading system — **Interpretable** modeling robust to **distribution shift**
  - (Ongoing) Financial LLM × Reinforcement Learning — improving LLM reasoning/decision-making and cross-domain generalization in finance
  - (Ongoing) High-Frequency Trading × Reinforcement Learning — **memory-augmented** RL for **predictive profitability**
  - (Ongoing) NeuroAI × Criticality — distilling **computational principles** from brain mechanisms to design **better algorithms**

  Following the **time-series** frontier — **Trend decomposition, periodicity extraction, Fourier transform**, passionate about deploying AI in finance and turning frontier methods into real business value.
- **[Engineering]** Independently designed and deployed the financial AI platform **Tidewater Intelligence**, integrating automated market/news collection, LLM-based financial analysis, and *Alpha Lab* — a regime-aware multi-agent research module that models six market-state agents as virtual traders, managed by a portfolio-manager hyper-agent.

Massachusetts Institute of Technology Jan 2026-April 2027
MicroMasters in Statistics and Data Science MITxOnline

- Probability, Fundamentals of Statistics, Machine Learning, Data Analysis

Chongqing University of Posts and Telecommunications Sep 2015-Jul 2019
B.Eng. in Communication Engineering (Honors) Chongqing, China

- **Core courses**: Engineering Mathematics, C++ Programming, Data Structures & Algorithms, Stochastic Mathematics, Linear Algebra, Discrete Mathematics

WORK EXPERIENCE

Beijing Junyi Private Fund Management Co., Ltd. Jun 2021-Jan 2024
Commodity Researcher / Assistant Investment Manager Beijing, China

- **[Investment]** Co-built the futures investment desk with the CIO, led research and decision-making across multiple accounts (AUM RMB 278M: 6 public products RMB 138M + 11 MOM products RMB 140M). Reported directly to the CIO (majority shareholder)
- **[Performance]** Personal investment decisions generated **RMB 16.2M** in cumulative returns for the firm, validating an independent research framework and judgment in highly volatile markets
- **[Industry / Supply-chain Research]** In-depth research on macro metals, ferrous & building materials (steel, glass), and agricultural products. Built proprietary hog and cotton industry databases

Zhishe Management Consulting Co., Ltd. Nov 2019-May 2021
Research Analyst Beijing, China

- **[Company Analysis]** Led IPO research and subscription for US/HK equities. Independently completed fundamental analysis and investment recommendations for **30+ companies** (tech, consumer), served 1,300+ individual and institutional clients
- **[Research Output]** Employee No. 1. Co-founded the venture with a **McKinsey**-background founder. Produced 400+ daily and 50+ weekly financial reports, serving 300,000+ users and generating RMB 2.4M in revenue

PROJECTS

WorldQuant University • Applied Data Science Lab Aug 2025-Jan 2026
- Completed full-stack data-science training: data collection (Web API, MongoDB/SQL), modeling (regression/classification, time series), and end-to-end interactive app deployment
- Built an interactive web app that fetches data from a server, writes to a SQL database, and runs predictive models

J.P. Morgan Quantitative Research Program Oct 2025
- Built a credit-default probability model to predict client default rates

AWARDS

6th Susquehanna (SIG) Quant Trading Competition (54/300) 2025

2nd "Qianlong Cup" Private-Fund Live-Trading Competition (China Securities, CSC) 2023
- Among 4,000 competing products, managed "Huagao Junyi CTA" — **Annual Rank 6 / Monthly Rank 2**

3rd Xinhu Futures Live-Trading Competition ·Annual Outstanding Private Product Award 2023

"Discovery Cup" Network Marketing Competition • 2nd Prize (Western Region) 2017

CQUPT English Business Idea Challenge • Champion (Top 1) 2016

Tianjin District-level Merit Student (Top 1%, 3/270) 2014

SKILLS

AI / Technical: Python, Machine Learning, Time-Series Forecasting, Transformer, Graph Neural Networks, Claude Code / Codex

Certificates / Languages: Fund & Futures Practitioner Qualifications, PTE 67, NCRE Level-2 (C), Mandarin (Level 2-A)

Interests: Writing (online popularity award, Qingdao literary competition), avid reading in economics & philosophy (e.g., *Das Kapital*, *Tao Te Ching*)