Frank Fei – US Citizen

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QUANTITATIVE TRADING PROJECT & CODE: Multi-factor LS Equity, 1.4 Sharpe, 5%MaxDD Project Link

EDUCATION

Columbia University — New York, NY
Master of Arts: *Mathematics of Finance* — Dec 2025
Courses: Math, Stats, Option Theory, Fixed Income, Portfolio Mgmt, Risk — GPA: 3.9

University of Southern California — Los Angeles, CA
Bachelor of Science: *Economics/Mathematics* — May 2024
Minors: *Computer Science, Applied Analytics* — GPA: 3.8

EXPERIENCE

Quantitative CTA Intern — Jun - Aug 2025
Tongxinyuan Fund — Beijing, China

- **Live Trading Contribution**: engineered, back-tested, calibrated multiple factors, tested their stability on strategies under Monte Carlo, and deployed in live trading strategies
- **Tools Ownership**: implemented Monte Carlo backtesting tools used across the team, and maintained shared codebases and documentation for multiple tools
- **Quant Research**: analyzed and researched strong and consistent price trends and connected them with quantitative factors to build the associated signals and strategies

Quantitative Analyst Intern — Sep 2024 – May 2025
Bayonne Consulting International — New York, NY

- **Client-Facing Research**: designed and implemented cross-asset multi-factor and machine-learning alpha models for major emerging market ETFs aligned with client's objectives
- **Models Integration**: developed, trained, and tested multiple market timing models on CSI300, enhanced out-of-sample performance by combining through dynamic weighting
- **Reproducibility:** engineered and updated standardized pipelines for multi-factor model (data processing, factor testing, and model backtesting) to boost reproducibility internally

Quantitative Research Intern — Jun - Aug 2024
Eastern Spring Capital — Beijing, China

- **Sector Rotation**: performed individual investigation in Sector Rotation, designed rotation speed factor based on NDCG, and built Multi-Factor Models based on BARRA factors
- **Machine Learning**: applied machine learning algorithms including Random Forest, XGBoost, and LightGBM, conducted Walking Forward Optimization to enhance predictive accuracy

PROJECT

Risk Calculation System | Quantitative Risk Management Project — May 2025

- Implemented Monte Carlo, historical, and parametric VaR/ES for equity and option portfolios in Python, with full backtesting capability, flexible input, and automated reporting

IMC Prosperity (Trading Challenge) — Apr 2025

- **Market Making**: analyzed high-frequency order book data and estimated mid-price using order-flow imbalance, depth dynamics, and macro indicators
- **Optimizations**: adjusted spread to manage inventory and hedged dynamically if possible
- **Manual Trading**: simulated and reacted to the behaviors of other market participants

Fixed Income Portfolio Management — Sep - Dec 2024

- Analyzed and optimized bond portfolios and hedged by different instruments such as futures and swaps using Excel and Bloomberg, tested different strategies such as steepener, barbell, and butterfly in response to market movements

SKILLS

Python, Excel, Bloomberg, SQL, C++, Tableau, JAVA, Git — English, Mandarin

ACTIVITIES

Teaching Assistant at Columbia University: Fixed Income Portfolio Mgmt — Sep 2025 - Present
Columbia University Men's Club Basketball: Member — Sep 2024 - Present
Teaching Assistant at USC: Computer Science (C++) — Aug - Dec 2023