

# Frank Fei – US Citizen

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**QUANTITATIVE TRADING PROJECT & CODE:** Multi-factor LS Equity [Project Link](#)

## EDUCATION

<b>Columbia University</b> Master of Arts: <i>Mathematics of Finance</i> Courses: Math, Stats, Option Theory, Fixed Income, Portfolio Mgmt, Risk	New York, NY Dec 2025 GPA: 3.9
<b>University of Southern California</b> Bachelor of Science: <i>Economics/Mathematics</i> Minors: <i>Computer Science, Applied Analytics</i>	Los Angeles, CA May 2024 GPA: 3.8

## EXPERIENCE

<b>Quantitative CTA Intern</b> Tongxinyuan Fund	Jun - Aug 2025 Beijing, China
<ul style="list-style-type: none"><li>• <b>Live Trading Contribution:</b> engineered, back-tested, calibrated multiple factors, tested their stability on strategies under Monte Carlo, and deployed in live trading strategies</li><li>• <b>Tools Ownership:</b> implemented multi-process Monte Carlo backtesting tools used across the team, and maintained tools codebases and documentations</li><li>• <b>Quant Research:</b> analyzed and researched strong and consistent price trends and connected them with quantitative factors to build the associated signals and strategies</li></ul>	
<b>Quantitative Analyst Intern</b> Bayonne Consulting International	Sep 2024 – May 2025 New York, NY
<ul style="list-style-type: none"><li>• <b>Client-Facing Research:</b> designed and implemented cross-asset multi-factor and machine-learning alpha models for major emerging market ETFs aligned with client's objectives</li><li>• <b>Models Integration:</b> developed, trained, and tested multiple market timing models on CSI300, enhanced out-of-sample performance by combining through dynamic weighting</li><li>• <b>Reproducibility:</b> engineered and updated standardized pipelines for multi-factor model (data processing, factor testing, and model backtesting) to boost reproducibility internally</li></ul>	
<b>Quantitative Research Intern</b> Eastern Spring Capital	Jun - Aug 2024 Beijing, China
<ul style="list-style-type: none"><li>• <b>Sector Rotation:</b> performed individual investigation in Sector Rotation, designed rotation speed factor based on NDCG, and built Multi-Factor Models based on BARRA factors</li><li>• <b>Machine Learning:</b> applied machine learning algorithms including Random Forest, XGBoost, and LightGBM, conducted Walking Forward Optimization to enhance predictive accuracy</li></ul>	

## PROJECT

<b>Risk Calculation System   Quantitative Risk Management Project</b>	May 2025
<ul style="list-style-type: none"><li>• Implemented Monte Carlo, historical, and parametric VaR/ES for equity and option portfolios in Python, with full backtesting capability, flexible input, and automated reporting</li></ul>	
<b>IMC Prosperity (Trading Challenge)</b>	Apr 2025
<ul style="list-style-type: none"><li>• <b>Market Making:</b> analyzed high-frequency order book data and estimated mid-price using order-flow imbalance, depth dynamics, and macro indicators</li><li>• <b>Optimizations:</b> adjusted spread to manage inventory and hedged dynamically if possible</li><li>• <b>Manual Trading:</b> simulated and reacted to the behaviors of other market participants</li></ul>	
<b>Fixed Income Portfolio Management</b>	Sep - Dec 2024
<ul style="list-style-type: none"><li>• 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</li></ul>	

## SKILLS

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

<b>Teaching Assistant</b> at Columbia University: Fixed Income Portfolio Mgmt	Sep 2025 - Present
<b>Columbia University Men's Club Basketball:</b> Member	Sep 2024 - Present
<b>Teaching Assistant</b> at USC: Computer Science (C++)	Aug - Dec 2023
<b>USC Intramural Basketball and Volleyball Teams:</b> Captains, championships	2021-2024