JP PENG

Raleigh, NC 27606 | (626) 650-8800 | jpeng7@ncsu.edu | linkedin.com/in/jinjiapeng

EDUCATION

North Carolina State University December, 2025
Master of Financial Mathematics Raleigh, NC
GPA: 3.82/4.0

University of California, Irvine June 2024
Bachelor of Science, Mathematics Irvine, CA
Bachelor of Arts, Business Administration, Emphasis in Finance
GPA: 3.6/4.0

Relevant Coursework: Machine Learning, Partial Differential Equations, Linear Algebra, Vector Calculus, Advanced Statistics & Probability, Stochastic Processes, Real & Complex Analysis, Derivatives Pricing, Fixed Income Products, Time Series

PROFESSIONAL SUMMARY

Quantitative portfolio analyst with experience developing systematic equity strategies, volatility forecasting models, and multi-factor risk frameworks. Skilled in portfolio construction, alpha research, and risk-adjusted optimization using statistical and machine learning techniques. Strong background in Python-based research and large-scale financial data analysis.

SKILLS

- **Portfolio & Investment Modeling:** Multi-Factor Strategies, Alpha Research, Portfolio Optimization, Risk Parity, Factor Exposure Control, Performance Attribution, Backtesting, Volatility Forecasting, Barra CNE5 Risk Model, VaR Analysis
- **Programming & Technical:** Python (NumPy, Pandas, SciPy, scikit-learn, Numba), SQL, DBeaver, R, Matlab, SAS, Bloomberg Terminal, Interactive Brokers; Machine Learning: PCA, Linear/Logistic Regression, Random Forest, Gradient Boosting/XGBoost, K-means & KNN
- **Quant Methods:** Monte Carlo Simulation, Time Series Modeling, Regression, Fama–MacBeth, Statistical Inference
- **Language**: Bilingual: English & Mandarin

INDUSTRY EXPERIENCE

Ubiquant | Summer Quantitative Development Internship July 2025 – August 2025
Quantitative Development IT Supporter Tsinghua Science Park, Beijing

- Engineered vectorized Python pipelines for large-scale trade and market data, accelerating research and portfolio analytics
- Conducted Implementation Shortfall and transaction cost analysis to evaluate execution quality and reduce slippage
- Developed order–trade reconciliation tools to improve accuracy of portfolio P&L and performance attribution
- Automated reporting dashboards for trading, P&L attribution, and real-time risk monitoring to support portfolio decisions

Ubiquant | Summer Quantitative Research Internship April 2025 – July 2025
Quantitative Research Intern – Systematic Equity Strategies Tsinghua Science Park, Beijing

- Built SQL-based equity/dividend database and imported data to Python Spyder environment through PYODBC; replicated 101 formulaic alpha signals across large-cap universe with liquidity and volume sample space filters
- Evaluated alpha factors' predictive strength using IC hypothesis testing (t-statistics significance) and Fama–MacBeth regressions; retained statistically significant factors for portfolio construction
- Developed rolling EGARCH volatility forecasts and regime-switching HMM to dynamically adjust allocations across high/low-frequency strategies; constructed a daily trading strategy based on effective factors and volatility severity
- Backtest (2023–2025) delivered 14.4% cumulative return with positive daily excess returns and controlled drawdowns
- Integrated MSCI Barra CNE5 multi-factor risk model; applied PCA on return matrices (NumPy-based) to decompose latent risk factors and analyze explained variance; optimized portfolio under risk-parity and exposure constraints, improving Sharpe ratio from 0.9 to 1.2 with 6% maximum drawdown

NCSU | Stock Price Monte Carlo Simulation with Jump Diffusion GBM January 2025 – March 2025
Researcher Raleigh, NC

- Built Monte Carlo jump-diffusion framework to model equity dynamics and tail risk for portfolio stress testing estimated 95% VaR and scenario losses to inform position sizing and capital allocation
- Applied variance reduction techniques to improve simulation efficiency for large-scale portfolio evaluation
- Priced options and analyzed hedge effectiveness to manage downside exposure

Safran Cabin, Inc. | Supply Chain Internship June 2023 – September 2023
Supply Chain Strategic Purchasing Intern Huntington Beach, CA

- Applied statistical demand forecasting and cost analysis in R and SQL to optimize inventory and supplier decisions
- Built data dashboards and P&L forecasts to support budget planning and operational efficiency improvements
- Negotiated vendor contracts and identified cost-saving opportunities through quantitative analysis