RUNKUN (VINCENT) XIE

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EDUCATION

Columbia University, New York, NY — Expected Dec 2019
- *MA in Mathematics of Finance*, GPA: 4.00/4.33
- Coursework: Stochastic Calculus, Numerical Analysis, Non-linear Option Pricing, Time-Series Modeling; Deep Learning, Signal Processing, Algorithm Analysis; Derivatives Modeling, Fixed Income Portfolio, Financial Risk Management
- Awards & Associations: Davis Fellowship; Quantitative Analyst at Columbia Quant Group

Central University of Finance and Economics (one of China's best finance-oriented university), Beijing — Jun 2018
- *BE in Financial Engineering*, GPA: 3.87/4.00, top 10%
- Coursework: Differential Equations, Real Analysis; C++, Data Structure, Database; Finance, Econometrics, Investment

University of Michigan, Ann Arbor, MI — Aug 2016
- *Summer Program in Quantitative Methods of Social Research*, GPA: 4.00/4.00
- Coursework: Advanced Time Series Analysis, Simultaneous Equation Models, Regression Analysis

EXPERIENCE

Huatai Securities (China's Top 4 Investment Bank, Financial Engineering Group) — Jun 2019 – Aug 2019
Quantitative Research Intern — Beijing
- Strategy Implementation: implemented cyclical asset allocation strategy using Python, extracted cyclical information and synthesized signals by Fourier Transform and SUMPLE algorithm (strategy id on Wind Terminal: MACRO.WI)
- Strategy Development: researched on papers, refined and modified existing strategy independently (investment timing, weight adjustment, and risk control), and improved its Sharpe Ratio from 1.44 to 1.86
- Machine Learning: estimated the non-linear relationship between asset return and cycle factors, increased prediction accuracy of the strategy by 5% using Random Forest and other Machine Learning techniques

China Galaxy Securities (Top 10 Investment Bank in China) — Feb 2018 – Jun 2018
Quantitative Developer Intern — Beijing
- Quant Development: built matrix-based backtest system for alpha exploration and multi-factor strategy using Python
- Alpha Research: Interacted with SQL Database, tested short- and medium-term alphas in "101 Formulaic Alphas" project
- Strategy Implementation: implemented Barra model, backtested multi-factor strategies, and achieved 1.39 Sharpe Ratio
- Quant Modeling: selected descriptors by Information Coefficient, generated factors using Principle Component Analysis, forecasted factor return and covariance by GARCH model, and optimized portfolio weights by Convex Optimization

China International Capital Corp (China's Top 2 Investment Bank, top Wealth Service Institution) — Oct 2017 – Jan 2018
Quantitative Analyst Intern — Beijing
- Quant Research: worked closely with quantitative researchers in Wealth Research team and assisted their research
- Quant Modeling: developed VBA programs to automatically conduct attribution analysis by Brinson Model, analyzed the performance sustainability of hedge funds using Transition Matrix, and conducted risk attribution analysis by Barra Model
- Quant Analytics: tracked holdings, evaluated performances, and generated weekly reports for 47 hedge funds by VBA

Jindian Investment — May 2017 – Jul 2017
Quantitative Research Intern — Beijing
- Strategy Development: assisted investment managers in strategy development, combined multi-factor model and market timing to generate trading strategies, programmed and tested trading signals for stock selection and market timing
- Alpha Research: added selected signals to the strategy, tuned parameters and yield a Sharpe Ratio of 1.75

PROJECTS

Nonlinear Option Pricing, *Columbia University* — Feb 2019 – May 2019
- Course Overview: applied non-linear PDE model to tackle derivative pricing and evaluation problems
- Quant Modeling projects: American option pricing using Longstaff-Schwartz and TVR methods, portfolio optimization based on HJB equation and Backward SDE, and implied volatility estimation by Stochastic Local Volatility model

Application of Deep Learning in the Prediction of Stock Trend, *CUFE* — Feb 2018 – May 2018
- Quant Modeling: estimated and predicted price trends of stock indexes and index futures using Deep Learning models
- Strategy Development: The LSTM-high-frequency strategy achieved 2.38 Sharpe Ratio and outcompeted other models

SKILLS & INTERESTS

- **Programming & Tools**: Proficient in Python, MATLAB; Significant Experience with C/C++, Excel VBA, SQL; Git, Bash; Experience with R, SAS, Stata, SPSS; Financial Terminals: Bloomberg, Wind; Microsoft: Excel, Word, PowerPoint
- **Certificates & Associations**: CFA Level II, FRM Level I, SAS Advanced Programmer; member of GARP, IAQF
- **Interests**: Tennis, Gomoku, Guitar,