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, Database, Algorithm Analysis; Fixed Income Portfolio Management, Financial Risk Management
- Quantitative Analyst at Columbia Quant Group

Central University of Finance and Economics (CUFE), Beijing — Jun 2018
- *BE in Financial Engineering*, GPA: 3.87/4.00, top 10%
- Coursework: Probability and Statistics, ODE/PDE, Real Analysis; Machine Learning, Algorithm and Data Structure, C++ Programming; Finance, Accounting, Derivatives Pricing, Investment, Econometrics, Macroeconomics

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 (Top 4 Investment Bank in China) — Jun 2019 – Aug 2019
Quantitative Research Intern — Beijing
- Strategy Implementation: implemented cyclical asset allocation strategy (strategy id on Wind Terminal: MACRO.WI)
- Technical Overview: extracted cyclical information from asset signals by Gaussian Filter and Fourier Transform, synthesized asset signals and generated cycle factors on certain frequencies using SUMPLE algorithm
- Strategy Development: researched on papers, modified the strategy, and improved its Sharpe Ratio from 1.44 to 1.86
- Quant Modeling: applied Random Forest and other Machine Learning techniques to the asset allocation strategy, estimated the non-linear relationship between asset year-on-year return and cycle factors, and increased prediction accuracy by 5%

China Galaxy Securities (Top 10 Investment Bank in China) — Feb 2018 – Jun 2018
Quantitative Research Intern — Beijing
- Quant Development: implemented a matrix-based backtest system for alpha exploration and multi-factor models by Python
- Strategy Implementation: built the Barra model, backtested multi-factor strategies, and achieved 1.39 Sharpe Ratio
- Technical Overview: selected descriptors by IC/IR criterion, generated factors using Clustering and PCA, forecasted factor return and covariance by Exponential Weighting and GARCH, and optimized portfolio weights by Convex Optimization
- Alpha Research: Interacted with SQL Database, tested short- and medium- term alphas in "101 Formulaic Alphas" project

China International Capital Corp (Top 4 Investment Bank in China) — Oct 2017 – Jan 2018
Quantitative Analyst Intern — Beijing
- Quant Modeling: developed a VBA program 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: applied Machine Learning models to major stock indexes and index futures under high-frequency data
- 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, Guitar