

## RUNKUN (VINCENT) XIE

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### EDUCATION

- Columbia University**, New York, NY Expected Dec 2019
- *Master of Arts 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, Risk Management
  - Quantitative Analyst at Columbia Quant Group, Oct 2019
- Central University of Finance and Economics (CUFE)**, Beijing, China Jun 2018
- *Bachelor of Economics in Financial Engineering*, GPA: 3.87/4.00
  - Coursework: Probability and Statistics, ODE/PDE, Real Analysis; Algorithm and Data Structure, C++ Programming, Database; Finance, Accounting, Financial Derivatives, Investment, Econometrics, Microeconomics, Macroeconomics
- University of Michigan**, Ann Arbor, MI Aug 2016
- *Summer Program in Quantitative Method of Social Research*, GPA: 4.00/4.00
  - Coursework: Advanced Time Series Analysis, Simultaneous Equation Models, Regression Analysis

### EXPERIENCE

- HuaTai Securities Co., Ltd**, *Quantitative Research Intern*, Beijing, China Jun 2019 - Aug 2019
- Implemented several modifications (investment timing, weight adjustment, and risk control) on company's global asset cycle rotation strategy, and improved its Sharpe Ratio from 1.44 to 1.86 (strategy ID on Wind Terminal: MACRO.WI)
  - Collected macro-economic data, generated macro factors by PCA, and combined them with the asset allocation strategy
  - Applied Random Forest to the asset allocation strategy, estimated the non-linear relationship between asset return and cycle factors, and increased prediction accuracy by 5%
- China Galaxy Securities Co., Ltd**, *Quantitative Research Intern*, Beijing, China Feb 2018 - Jun 2018
- Designed and implemented a matrix-based backtesting system for alpha exploration using Python
  - Selected descriptors by IC and IR criterion, generated factors using Clustering and PCA, forecasted factor return and covariance by exponentially weights, and adjust covariance prediction by GARCH model
  - Exploited over 50 short-term factors, evaluated multi-factor strategies, and achieved 1.39 out sample Sharpe Ratio
- China International Capital Corp. Ltd**, *Quantitative Analyst Intern*, Beijing, China Oct 2017 - Jan 2018
- Tracked holdings, evaluated performances, and generated weekly reports for 47 hedge funds
  - Researched on the target funds, covered topics such as performance attribution, risk evaluation, and style drift effect
  - Developed a VBA program to automatically conduct attribution analysis on fund performance table by Brinson Model
  - Analyzed and reported on the performance sustainability of pure stock hedge funds in China using Transition Matrix
- JinDian Investment Co., Ltd**, *Quantitative Research Intern*, Beijing, China Jul 2017 - Sep 2017
- Built and maintained backtesting framework in MATLAB, combined multi-factor model and market timing to generate trading strategies which yield a Sharpe Ratio of 1.75
  - Interacted with SQL Database, programmed and tested trading signals for stock selection and market timing

### PROJECTS

- Nonlinear Option Pricing**, *Columbia University* Feb 2019 - May 2019
- Applied non-linear PDE model to tackle derivative pricing and evaluation problems
  - Projects including American option using Longstaff-Schwartz method, portfolio optimization based on HJB equation and Backward SDE, and implied volatility estimation by Stochastic Local Volatility model
- Portfolio Risk Calculation System**, *Columbia University* Sep 2018 - Nov 2018
- Lead a team to developed risk calculation system to compute Monte Carlo, historical, and parametric VaR and Expected Shortfall of portfolios containing stocks and options under moving windows and exponential weighting schemes
  - Backtested VaRs against history, drafted model documentation and risk reports
- Application of Deep Learning in the Prediction of Stock Trend**, *CUFE* Feb 2018 - May 2018
- Applied Deep Learning models to major Stock Indexes and Index Futures under high-frequencies data
  - The LSTM-based high-frequency trading strategy achieved 2.78 Sharpe Ratio and outcompeted other models

### SKILLS & INTERESTS

- **Programming & Tools:** Python, MATLAB, C/C++, SQL, VBA; Git, Bash; Bloomberg, Wind
- **Professional:** CFA Level II, FRM Level I, SAS Advanced Programmer; member of GARP, IAQF
- **Language:** Mandarin (Native), English (Fluent)
- **Interests:** Tennis, Guitar