# RUNKUN (VINCENT) XIE

132 W 123 St, New York, NY 10027 | (929) 210-1433 | Runkun.Xie@gmail.com | www.linkedin.com/in/runkunxie

## 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; Financial Risk Management, Fixed Income Portfolio 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; Risk Management, 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: Applied Gaussian Filter and Fourier Transform to extract cyclical information from asset signals, used SUMPLE algorithm to synthesize asset signals, and generated cycle factors on certain frequencies
- 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
- 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
*Wealth Management Quantitative Analytics 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

**Standard & Poor’s** — May 2017 - Jul 2017
*Financial Risk Analyst Intern* — Beijing

- Participated in a credit rating project for a top financial institution in China, conducted fundamental research on 19 counterparty companies, rated target companies using Scorecards Model, drafted and presented rating reports for the client
- Processed default data by mapping S&P’s default rates to credit ratings defined by Basel III

## 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

**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

## 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