Chengcheng Gu

ccgu95@gmail.com | (734) 353-2298 | 2283 Stone Road, Ann Arbor, MI 48105

EDUCATION

University of Michigan, Ann Arbor, MI Sept. 2017-Present

M.S. in Quantitative Finance and Risk Management *GPA: 3.7/4.0*

Courses: Machine Learning, Financial Mathematics, Applied Statistics, Stochastic Analysis, Data Mining

East China Normal University, Shanghai, China Sept. 2013-Jun. 2017

B.S. in Mathematics and Applied Mathematics (Minor in Finance) *GPA: 3.7/4.0*

Courses: C++/Python Programming, Probability, Statistics, Real/Complex Analysis, Micro/Macroeconomics

PROFESSIONAL EXPERIENCE

MX Capital, Shanghai, China May. 2018-Aug. 2018

Quantitative Researcher Intern

- Constructed both Market Taking and Making trading strategies on high-frequency data using multi-dimensional Stochastic Process, covering commodity futures, stock index futures and crypto currency futures
- Designed back-tests including performance testing and optimization of parameters using Genetic Algorithm with Python and R
- Back-test on Bitcoin future strategy resulted in over 30% expected annual return with $1M liquidity
- Assisted programmer in developing new API

Guolian Securities, Wuxi, China Sept. 2016-Mar. 2017

Quantitative Researcher Intern

- Conducted data cleansing and basic data processing
- Exploited, compounded and manipulated factors and test factors' effectiveness with help of regression method and analyzed the reasonableness of the effective ones
- Assisted in building Multi-Factor Model and deciding factor weight based on Information Coefficient(IC) and Information Ratio(IR)
- Tuned the model through back-tests to adjust the factor selection and factor weight based on the performance

Nielsen Co, Shanghai, China Jun. 2016-Aug. 2016

Financial Market Analysis Assistant

- Gained knowledge on target financial products through desk research, wrote proposal for a prospective project
- Designed questionnaires to be distributed before and after the project
- Used PowerPoint charts and graphics to conduct horizontal and vertical comparisons, analyzed the project effects through data comparisons, made recommendations for improvement

PROJECT EXPERIENCE

Bitcoin Trading Strategy based on Machine Learning Techniques Sept. 2018-Present

- Implemented classification models like Logistic Regression, SVM, Hidden Markov, and Neural Network to predict the increasing or decreasing trends of Bitcoin price with Python
- Conducted back-tests to choose the best classifier on the basis of prediction accuracy
- Adjusted strategy to improve Sharpe ratio

Currency prediction on ARS/USD Sept. 2018-Oct. 2018

- Selected and filtered proper factors to construct a linear regression model on exchange rate
- Compared the prediction result with other fundamental methods including economic indicators, RPPP, UIRP and UH, and generated a report

Bathtub Water Efficiency Model Feb. 2016

- Built a Temperature-Water Velocity model, a Double-Layer Media model, and a Grid Segmentation model in Matlab to study heat conduction and determine the position and velocity for adding hot water
- Applied Brownian Motion to predict movement of hydrone
- Won Meritorious Winner Prize in MCM/ICM

SKILLS

- Programming and data processing tools: Python, R, C++, Matlab