ANDREW (YUSONG) PAN

(201) 885-8009 ■ yp910@nyu.edu

EDUCATION

New York University, the Courant Institute of Mathematical Sciences New York, NY
MS in Mathematics in Finance (expected – January 2019)

- ***Math & Stats***: Stochastic calculus, multivariate regression, time series
- ***Finance***: Derivatives pricing, portfolio optimization, risk management, volatility forecasting
- ***Computer Science***: Big data, machine learning, statistical inference, monte carlo methods

University of Michigan Ann Arbor, MI
BS in Mathematics and Statistics (Sept.2015 – May.2017)

- ***Math & Stats***: Numerical method, ODE, econometrics, regression

Syracuse University
Mathematics and Statistics (Sept.2013 – May.2015) Syracuse, NY

EXPERIENCE

GTechFin Inc New York, NY
Quantitative Analyst Intern (Python, SQL) Jun.2018 – Aug.2018

- Predicted S&P 500 movement and achieved 72% accuracy based on historical data back-testing by incorporating Hidden Markov, XGBoost and Decision Trees
- Enhanced predicting accuracy by utilizing PLS to synthesize financial and quantity factors
- Maintained the research database, renew and improve it by SQL server in UNIX platform

GuoYuan Securities Co., Ltd Hefei, China
Quantitative Analyst Intern (Python) Jun.2017 – Aug.2017

- Analyzed portfolio excess returns by utilizing Mean Variance Analysis and risk adjusted indices
- Simulated bilateral exposure of credit risk using stochastic intensity under ISDA framework
- Monitored risk exposure for all trading activities using ES, CVA, stress testing and scenario analysis

RESEARCH and PROJECTS

Option Pricing (Java) New York, NY

- Priced vanilla European and Asian Option by Monte Carlo Simulation using Anti-Thetic decorator
- Applied ActiveMQ system and GPU programming to achieve faster convergence
- Priced American options by trinomial tree and evaluated theoretical boundary of early exercising
- Calibrated implied volatility and modeled the parameterization of the IV smile by SVI model

Interest Rate (Python) New York, NY

- Bootstrapped the IR curve with tension spline by interpolating various interest rate instruments
- Derived the IR curve from Eurodollar futures and interest swap rates

Forecasting Factors with Economic Indicators (Python) New York, NY

- Tested economic indictors' effectiveness and performed sparse PCA to analyze the information quantity
- Utilized various machine learning techniques to analyze features' ability to forecast factor performance
- Backtested factor performance using forecasting models; implemented walk forward cross validation
- Constructed portfolio to compute risk premia with respect to market benchmark

COMPUTER SKILLS/OTHER

Programming Languages: Python (2 years), Java (1 year), R (2 years), SQL (1 year), MATLAB (1 year)
Other Software: Microsoft Office Suite, Bloomberg