# SIMON SUN

simon.sun@nyu.edu ■ www.linkedin.com/in/ttss


## EDUCATION

**NEW YORK UNIVERSITY** New York, NY
**The Courant Institute of Mathematical Sciences**
**MS in Mathematics in Finance** (expected - Dec. 2020)

- ***Coursework:*** Brownian motion, Markov chain, martingales, Monte Carlo method, ARMA model, VaR, pairs trading and conintegration, GARCH, likelihood function, variable/model selection

**BA in Liberal Arts Study, Minor in Computer Science** (2015 - 2019)

- ***Coursework:*** Black-Scholes model and Greeks, bi/tri-nomial pricing, implied volatility, Black-Litterman and robust portfolio optimization, econometrics, algo. and data structures, OOP in Java

## EXPERIENCE

**ZheShang Securities Asset Management** Shanghai, China
***Quant Research Intern on Volatility Index and Arbitrage*** (June - July 2019)

- Reproduced the Chinese volatility index iVIX for the past 3 years within an average error of 2%, after cleaning last 3 years' data of ETF50 options collected through Tianruan API on python
- Tested the volatility predicting ability of (i)VIX by analyzing the Riemann sum in calculation and annualized historical volatility of the underlying securities; validated its fame as fear gauge
- Simulated the put-call parity arbitrage strategy on ETF50 options and analyzed the limitation on return of this strategy, caused by the lacking of market liquidity and option choices in China

**Bibox Group** New York, NY
***Fall Partime Intern*** (Sep. - Dec. 2018)

- Facilitated the acquisition of DEx.top, a crypto exchange owned by Bitmain, through conducting due diligence on its business model, technical white paper and financial reports analysis.
- Assisted the quant research team on testing the crypto evaluation model by cleaning and inputting data into the model from CMC and adjusting coefficients of the regression model in Python
- Recommended supervisor 3 crypto projects to be listed on the Bibox Exchange each week

**Deloitte Consulting** Shanghai, China
***Summer Fulltime Associate*** (June - Aug. 2018)

- Practiced due dilligence for the HR division of client company to help them develop plans to fit their recruiting, salary, human resource reservation system to technology changes
- Organized roadshow competition for thirty new retail startups from Silicon Valley and Zhongguan Village with partnership of Plug & Play and coordinate the daily event with guest speakers

## PROJECTS

**New York University** New York, NY
***Time Series Analysis and Prediction on S&P500 (Python)***

- Cleaned data of 7 input variables since Jan.1880 and analyzed the (auto)-correlations of them to determine the statistically significant variables to predict S&P500 and gold price
- Applied both multivariable regression and auto-regression to simulated 2 investment strategies; the result showed that investing in gold and SPX interchangeably doubled the profit of only on SPX

***Option Pricing (Python)***

- Coded Black-Scholes and trinomial pricing models on both American and European options
- Inversed the Black-Scholes formula and calculated the implied volatility of the underlying asset to tested the volatility smile theory; visualized the Greeks of options based on the code

## COMPUTER SKILLS/OTHER

***Programming Languages:*** Java, Python, R, C
**Other Software:** MATLAB, MINITAB, Microsoft Office
***Languages:*** Chinese (native), English (fluent)