

Xinyi Zhang

Email: xzhang2373@wisc.edu | Tel: (+86)18600801056 | Personal Website: <https://www.astrona-zhang.com/>

EDUCATION BACKGROUND

Nankai University (Based on China College Entrance Exam, Top 0.82%) **09/2018 – 06/2022**

- **B.E of Finance - International Merit Finance Scholars Program** (Consisted of **28 top students selected from 500+ candidates** among Mathematics, Data Science, Engineering, Physics, Economics, etc; Rigorous, Challenging and Highly Competitive)
- **GPA: 90.29/100; 3.83/4.0**; Outstanding Academic Scholarship with Highest Honor (**Third-Year Ranking: 1/28, 1/181**); Candidate of Tianjin's Entrepreneurship Scholarship (0.1%); Merit Visiting Student Fellowship (0.1%); Kaggle Challenge (Bronze Medal); E&Y Thesis Contest -- Top 10 in China; National Mathematics Competition Final (2nd Prize); National Physics Olympiad (3rd Prize)
- **Teaching Assistant** to *Financial Econometrics, Principles of Economics*

University of California Berkeley **01/2021 – 05/2021**

- 2021 Spring Semester (GPA: **92.27/100**)

University of Wisconsin, Madison **07/2019 – 08/2019**

- 2019 Summer Session (GPA: **4.0/4.0**)

Coursework (Math): Real Analysis(attending) | Functional Analysis (attending) | Optimization Analysis (attending) | Financial Econometrics (TA) | Linear Algebra | Field Theory and Infinite Series | Advanced Calculus | ODE | Statistics | Stochastic Processes | Econometrics (PhD Level) | Financial Engineering (100/100)

Coursework (Programming & Modeling): Machine Learning (attending) | Data Structures and Algorithms | Python Programming (Michigan - Coursera) | Data Science (MIT - Coursera) | Statistics & MATLAB Application | National Computer Rank II Examination (C++, Top 1%)

RESEARCH EXPERIENCES

Research Assistant | Harvard University, Prof. David Yang **08/2021 – Present**

- Studied China's Investment impact on Africa's democratization status over historical effect, infrastructure effect, and substitution effect
- Assisted in database constructing using information from the Ministry of Commerce; conducted exact data matching of over 1000 Chinese investment projects in Africa (e.g building infrastructures like roads and railroads) for further regression analysis

Collaborative Research | Stanford University GSB, research fellow Peilin Yang **03/2021 – Present**

- Initialized an extension to the equivalence between Local Projection (LP) and Vector Autoregressions (VAR) in estimating the same impulse response function (Møller and Wolf, *Econometrica*); concluded that the conclusion in their paper relies heavily on Cholesky decomposition
- Constructed high frequency data by Karadi's method to testify our assumption; conducted estimation with DSGE, SVAR-IV, LP-IV models

Kaggle Challenge | Complexity Rating of Literacy Passages **07/2021 – 09/2021**

- Built 5 learning models based on Tensorflow, CLRP, Roberta-Base, Roberta-Large and SVM to predict the complexity of literary passages for grades 3-12 classroom use; leveraged Apex, AWP to improve training performance and integrated 5 models to reduce overfitting
- Assessed the performance of Naïve Bayes, K-Nearest Neighbor and Logistic Regression on scoring, covering metrics of accuracy, sensitivity, specificity, precision, Matthews correlation coefficient, and balanced classification rate
- Achieved "Kaggle CommonLit Readability Prize -- **Bronze Medal**", received a total **ranking of top 6%**

Quant Challenge | Simulated Stock Trading Challenge, NKQuant Club **11/2020 – 03/2021**

- Conducted simulated stock trading with a virtual account of 1 million RMB; attaining a topmost **daily rate of return of 21%**
- Leveraged natural language processing (NLP) tools in Python to extract information from more than 2 million pieces of online news so as to inform trading. Systematically practiced pairs trading, grid trading, cross-market trading, and trend tracking
- Applied two hedging strategies based on 1) minimal variance hedging ratio estimated from the time series of price changes between portfolio and index futures, and 2) optimal hedging ratio estimated using CAPM model

Research Assistant | Nankai University, Prof. Tian Xia **09/2019 – 01/2021**

- Coauthored to study Monetary Policy's Info-Effect based on co-movement of high-frequency federal fund rate and S&P 500 indexes
- Leveraged Threshold-VAR to categorize economic uncertainties, obtained posterior distribution based on Gibbs Sampling and MLE

WORKING EXPERIENCES

Data Analyst Intern | Genertec (Beijing) Investment Fund Management Co., Ltd. **Beijing, CHN**

- Conducted research into the biomedical industry, performed due diligence on companies producing hybrid operating rooms
- Tracked the performance of more than 20 issued private equity (PE) products based on industrial, attribution, and risk factor analysis
- Published 6 weekly journals to 150+ collaborating investors, covering analyses in asset allocation, net worth tracking on target firms
- Maintained asset custody management systems for model research, strategy trading, and risk control with highest efficiency among interns

Research Fellow Intern | Peking University **Beijing, CHN**

- Conducted in-depth field study of more than 50 start-up biomedical enterprises in Ili. Used Python for fuzzy identification of commodity names and Harmonized System code matching, and data cleaning and visualization of 1.5 million pieces of trade records
- Published and presented conference paper in the 9th *Shanghai International Institute Finance Center Conference (SIIFC 2021)*

Co-Founder | Start-up Soft-Robotics Company **Beijing, CHN**

- Co-founded a company aiming to combine robot control with graphical programming to encourage kids learning about robot programming and 3D printing; designed "Soft-Robot" APP by C++ to control the robots remotely on iPad
- Up to now, our R&D department has applied for 11 utility model patents; Sold 600 sets of products with **0.7 million RMB** sales
- Won prizes in the "*National Internet & Entrepreneurship Competition*". Held roadshow and wrote business proposal based on comparisons with LEGO, DJI, mBot, Sony (koov) during the competition, **raised \$125,000** as start-up fund

Quantitative Trading Intern | CSC Financial Co., Ltd. **Beijing, CHN**

- Conducted Python modules in developing the "Event-Driven Stock Trading Platform" to guide stock selection, portfolio optimization, and transaction decision-making
- Updated technical indicators, including overlays (moving average, Bollinger Bands) and oscillators (stochastic oscillator, MACD, RSI)
- Calculated momentum alpha factors for stock selection, covering OPSD, alpha13, ADX, turnover return, Bias turnover, and etc
- Performed automated stock trading by Python and conducted by a backtest on 5-year Chinese market, achieved **17% annual return**

PROGRAMMING AND OTHER SKILLS

Programming: C++ | Python | SQL | MATLAB | R | Stata | Latex | Fortran | Julia | Maple

Language: Chinese (native), French (rudimentary), English (**GRE: V: 161 / Q: 170 / Total: 331 | TOEFL: R: 30 / L: 30 / S: 26 / W: 29 / Total: 115**)

Piano and Pipa: Professional (**Amateur 10th Grade**); Performed in **International Spring Festival Concert** in US and Canada

Extracurricular Activity | Athlete of College Tennis Team; Dean of Student Representative; Volunteer Pioneer in Covid-19 Pandemic