XINGYU LI

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EDUCATION

City University of Hong Kong *Aug 2020 - Oct 2021*
MSc. Financial Engineering with Distinction *Hong Kong*
Southern University of Science and Technology *Aug 2016 - Jul 2020*
BEc. Financial Engineering *Shenzhen, China*
University of Sydney Semester Exchange, *Sydney, Australia* *Feb 2020 - Jun 2020*
McGill University Business Analytics, *Montreal, Quebec, Canada* *Jan 2020 - Feb 2020*
University of Oxford Summer School, *Oxford, United Kingdom* *Aug 2019*

PROFESSIONAL SKILLS

Programming	Python (Data Analytics, ML & DL, CV, NLP), R, SQL, Java, HTML/CSS, C++, VBA
Office Software	Excel (Formula, Pivot & Macros), PowerPoint, Bloomberg, Wind, Photoshop, Premiere
Language	English (Proficient), Mandarin Chinese (Native), Cantonese (Basic)

WORK EXPERIENCES

Natixis Corporate & Investment Banking *Sep 2022 – present*
Trainee, Quantitative Risk Analyst at Enterprise Risk Management & Data Office *Hong Kong*

ESG Project: Climate Risk Assessment (Project Manager)

- Communicate with FO, LoD1&2, and IT, design CRST framework & methodology for €10Bn+ APAC portfolio.
- Pitch pilot exercise methodology and result to CRO & Group Head Office, and $1.5M budget was approved.
- Analyze HKMA, MAS regulation requirements, and NGFS guidance & scenarios on climate risk assessment.

a. Physical Climate Risk

- Research on geoscience of climate hazards (flood, drought, storm, earthquake, volcano, wildfire, etc.).
- Independently collect open source data (NASA, EM-DAT, etc.) and develop world heatmaps of climate hazards damage by Python (geopandas, folium) with longitude & latitude of each climate event in the past 100 years.
- Simulate potential damages globally and visualize each counterparty climate risk exposure in net EAD.
- Communicate with internal Credit Risk to review quantitative results to consolidate risk assessment framework.
- Negotiate with external rating institutions (RMS in Moody's) to compare and perfect our climate risk solutions.

b. Transition Climate Risk

- Analyze how increasing carbon price impacts counterparties' financial statements (EBITDA, FFO, Equity, etc.).
- Design VBA programs to stress PD&RWA in 3 scenarios (current policy, delayed transition, and net zero 2050).

Operational Risk Monitoring & Early Warning Signals Design (Project Manager)

- Get Market Risk, Operational Risk, and Data Scientists on board and agree on the scope to focus on internal frauds related to GM activities and specifically on quotations provided by traders.
- Ask for access from internal systems, configure Hadoop, extract and merge data by SQL including yield value, sensitivities, Greeks, controls, bid & ask by curve and PnL by book.
- Understand market data generating procedures including IPV process, PnL procedures.
- Manage project and report the latest progress to all stakeholders weekly.

Severe Geo-political Stress Test on Greater China Portfolio (Project Member)

- Design scenarios SWIFT, with Economic Research and BPM team.
- Design indicators based on the ST results to monitor risk (TB CONCREAT)

Risk Appetite Framework Monitoring (Project Member)

- Monitor transverse risk in APAC portfolio
- Update the numbers each month and make report to Exco. (TB CONCREAT)

Institute for Future Finance in Shenzhen, Shenzhen, China (Goverment Institution) *Jun 2020 – Jul 2020*
Intern, Research Assistant

- Independently completed FinTech research reports, published them on public platforms and supported local government decisions.
- Tracked cutting-edge trends in the financial technology field and collected information from the latest papers and government policies concerning blockchain, cryptocurrency, and artificial intelligence.

Ping An Insurance (Group) Co. of China Ltd., Shenzhen, China *Oct 2019 – Feb 2020*
Intern, Risk Assistant in Systematic Risk Management Team

- **Time Series Analysis** - Selected macroeconomic indexes from Wind and Bloomberg (GDP, M2, etc.); explored indicator correlations using graphs and algorithms such as hierarchical clustering; established time series analysis models like VAR through R to conduct stress testing; tested cointegration relations and predicted the subsequent four seasons economic situation.
- **Smart Policy - Natural Language Processing** - Obtained central policy texts of Chinese financial regulators via web crawler, used Python to deal results with NLP, and analyzed the impact of policies on the financial industry and companies.

East Asia Qianhai Securities Co., Ltd., Shenzhen, China *Dec 2018 – Jan 2019*
Intern, SQL Developer in Department of Financial Technology

- Analyzed structures of company's existing software; developed RDBMS through PL/SQL developer.
- Based on Springboot, Mybaits, and Gradle developed functionality to export data in formatted reports through Java programs under micro-service distributed frameworks.

ACADEMIC EXPERIENCE

Department of Information Systems and Management Engineering, SUSTech
Research Assistant *Aug 2020 - Dec 2021*
Advisors: **Prof. Daning Hu** and **Prof. Tao Lu**

- **Research Areas**: **Machine Learning, Data Mining, Social Networks, FinTech**
- Review information systems, computer science, and finance journals; replicat papers and produce ideas, specific research on neural network structure design, mobile platforms, and decision-making under uncertainty.
- Sentiment Analysis: crawl over one million text data from Douban.com and segment it into words through jieba; Grade each record from -1 to 1 through NLTK and SnowNLP and label with emotions.
- Constructe networks through unstructured datasets; measure nodes in networks by centrality; visualize networks by igraph and NetworkX.

ENTREPRENEURSHIP EXPERIENCE

Nan Feng Dian Dian Co., Ltd., Shenzhen, China *Apr 2017 – Jun 2018*
Co-Founder
The first start-up company founded in SUSTech by students sold takeaways.

- Designed and managed database through MySQL; analyzed customers' ordering habits by modeling and visualizing background data; profits doubled, attracting $100,000 capital venture.
- Managed staff relationships, organized promotional activities, and communicated with relevant administrative departments to support operations.

SELECTED PROJECTS

Predict Airbnb Prices in Sydney *2020*

- Conducted feature engineering for 83 variables (10,000+ records), including response variable transformation, merging sparse categories, dealing with outliers, and creating dummy variables.
- Predicted prices through machine learning algorithms like Bagging, Random Forests, and XG Boosting. The Model Stacking (RF + XGBT) improved accuracy to 95.6% in 2min 19s.

Pacman game *2019*

- Designed and interpreted operation logic of Pacman game using Python program.
- Implemented BFS, DFS, Greedy, A* searches to make Pacman reach his goal with minimal cost.

Tianchi Competition - Great Life Benefits: O2O Coupon Usage Forecast *2019*

- Visualized actual online and offline consumer behavior data using Python and predicted users coupon usage within 15 days of receipt.
- Calculated average AUC to gauge models performance; ranked top 100/20,000+ participants.

Flight Reservation and Entertainment Systems *2017*

- Designed flight ticket booking systems for customers and administrators; Functions of the real-time entertainment systems covered online shopping, ordering meals, and watching movies with an embedded video player.
- Employed Hibernate for persistence and completed GUI using JavaFX CSS.

ACTIVITIES/AWARDS

Excellent Graduation Thesis (Design), SUSTech *Jun 2020*
The third prize of the National College Students Mathematical Contest in Modeling
China Society for Industry and Applied Mathematics *Otc 2017*
Club Active Star of Shuren College (only winner), SUSTech *May 2017*
Freshman Scholarship Excellence Award, SUSTech *Sep 2016*