He Zhu

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EDUCATION

THE UNIVERSITY OF TEXAS AT AUSTIN **GPA 3.7/4.0**
2020
Master of Computer Science (Part-Time)
- Advanced Operating Systems, Machine Learning

UNIVERSITY OF CONNECTICUT **GPA 3.9/4.0**
2018 – 2020
Master of Financial Mathematics (Risk Management)
- Financial Programming in OOP(C#, C++), Machine Learning in Finance, Time Series
- Securitized Product, MBS, ABS, Market Risk, Credit Risk, Statistics in Finance

CHONGQING TECHNOLOGY AND BUSINESS UNIVERSITY **GPA 3.6/4.0**
2014 – 2018
Bachelor of Finance
- Statistics, Calculus, Probability, Linear Algebra

TECHNICAL SKILLS

- Programming: Python, C, C++, C#, Java, Microsoft Excel VBA
- Core: Socket, IPC, System Programming, TCP/IP
- Libraries: Scikit-Learn, Tensorflow, NumPy, Pandas, STL, Boost

EXPERIENCE

WALL STREET NORTH LLC **Stamford, CT**
05/2019 – present
Quantitative Developer Intern

- **Tools Development:** Interfaced closely with risk manager to develop in-house Excel add-in software to speed up specific computational work and batching quantitative reports.
- **Software Development:** Analyzed functional requirements and technical requirement to develop and maintain in-house financial software, including mortgage model backtesting platform, mortgage pricing application, options pricing engine and economic capital modeling application using C++, C# or Python as need.
- **Data Engineering:** Configured and optimized in-house SQL database server and clients on each desktop to support analysts to perform analysis. Adapted python to develop real-time data pipeline to automate the process of connection to vendor database, data cleaning, data storage and data extraction.
- **Model Development:** Followed industry best practice to develope and calibrate various models including stochastic interest rate models, extic options pricing models, default and prepayment forecasting models, structured products pricing models to support analysts to perform research and analysis.
- **Model Documentation:** Assisted risk manager and analysts to perform model documentation by providing scenarios assumptions, model constraints, regulatory guideline, mathemtical and statistical rationale, industry best practice, source code and other related information.

DISCIPLINED ALPHA LLC **Boston, MA**
05/2019 – 07/2019
Capstone Project

- Infrastructure: Facilitated the research by designing and implementing the architecture of a lightweight backtesting engine in Python that accepts data input from CSV, JSON and XML.
- Alpha Research: Applied Logistic Regression and factor engineering to build a robust scoring system. Developed a long/short equity trading strategy based on the scoring system and won 1st among 6 teams.

PERSONAL PROJECTS

Cloud Disk Application
- A high-performance distributed cloud disk software. Adapted Nginx, fastDFS, MySQL, Redis as sever core components. Adapted Qt as the client core framework.

NoSQL Memory Database
- a high-performance key-value memory database. Adapted TCP socket programming and serialization to enable the safe data transmission. Implemented optimistic lock and multiple transactions including multi, exec and discard. Adapted Google LevelDB as a persistence engine to store the data on the disk.