CHENHAO ZHAO

530 Church St, Ann Arbor, MI | zchenhao@umich.edu

EDUCATION

University of Michigan   Aug. 2021-Dec. 2022
Master of Science in Quantitative Finance and Risk Management   Ann Arbor, MI

Sun Yat-Sen University (SYSU)   Sept. 2017-June 2021
Bachelor of Science in Mathematics and Applied Mathematics   Zhuhai, China
Minor in Finance
- GPA: *3.7/4.0*
- Key Courses: Mathematical Analysis, Advanced Algebra, Data Structures, Complex Function, Functional Analysis, Abstract Algebra, Probability Theory

RESEARCH

Representations of Square by Certain Septenary Quadratic Forms   Dec.2020-May 2021
Research assistant to Professor Dongxi Ye
- Studied the theory of integer solutions of quadratic forms, found the vacancy of the current theory
- Sorted out the research methods of previous scholars tried to solve the problem of the number of integer solutions of Septenary quadratic form
- Finally, proved and calculated 12 kinds of integer solutions, extended classical theory.

Nine-by-Nine Sudoku Solver Based on C++   May 2019-June 2019
- Built map container for inputting Sudoku digits
- Judged whether to fill an empty cell with a number by Bool functions, labelled grids without numbers with 0
- Input a specific number in a grid and backtracked if it fits to Sudoku rules with Bool functions

MCM-Deployment of Drones and Arrangement of Emergency Supplies for Disaster Area   Jan. 2019
- Calculated the distance between each disaster area using C++ and MATLAB, determined the best location to drop the cargo container
- Devised appropriate combination of drone fleet by taking cruising range, loading capacity, video capacity and volume of drones into consideration, estimated the required amount of medical supplies and categories
- Planned the route for the drones with multi-objective linear programming algorithm
- Applied 3D-KLP process to decide the optimal packing configuration of cargo containers to improve the packing efficiency, based on geometric methods and discrete algorithms

INTERNSHIP

CITIC Securities, Guangzhou, China: *Management Trainee*   July 2020-Aug.2020
- Analyzed customers' automatic investment plan (AIP), and estimated risks quantitatively
- Utilized C++ and the investment data of the last 2 years to calculate investment returns of different portfolios
- Compared the calculation results to select the best AIP
- Assisted the mentor to finalize investment strategy and asset allocation plans for clients

AIA Group, Hong Kong, China: *Trainee*   Aug.2019
- Obtained financial market data using Orient Wealth software, and built portfolio with its portfolio analysis tool
- Gathered past stock/fund data, calculated expected return and volatility over a period of time by MATLAB
- Estimated the correlation coefficients between different stocks and funds qualitatively and quantitatively
- Utilized the expectation, variance and correlation coefficients to predict the return and volatility of portfolio

LEADERSHIP & ACTIVITIES

Go (Weiqi) Department: *Department Director*   Sept.2019-Aug. 2020
- Organized weekly training sessions for 100+ members, led members to participate in competitions

Practice Department of Youth League: *Department Director*   Aug.2018-June 2019
- Organized social practice activities, such as "Down to Countryside Movement" with 30+ participates, and "Top Company Visits" with 170+ participates

SKILLS

- **Technical**: C++, Python, MATLAB, STATA, Microsoft Office, driving
- **Extracurricular**: Go *(15 years+)*, Guitar *(4 years+)*, Running *(4 years)*