

Zhong Yuhua (钟宇华)

Email: 1155180196@link.cuhk.edu.hk

Mobile: +86 18688610058

Add: Rm 602, Bldg 3, Feng Dan Bai Lu, CITIC Triumph City, Dongcheng Street, Dongguan, Guangdong

EDUCATION BACKGROUND

Sun Yat-sen University

09/2017 – 06/2021

Bachelor of Science

Major: Mathematics and Applied Mathematics

GPA: 3.3/4.0

Average Points: 83/100

Main Courses: Mathematical Analysis, Geometry and Algebra, Probability Theory, Stochastic Process, Algebra, Numerical Solution of Differential Equations, Numerical Analysis, Operations Research, etc.

The Chinese University of Hong Kong

09/2022 – 10/2023

Master of Science

Major: Mathematics(Big Data Analysis and Computation Stream)

GPA: 3.1/4.0

Main Courses: Financial Mathematics, Linear Analysis, Mathematical Theories of Machine Learning, Social and Economic Networks:Theory, Modelling and Computations, Complex Analysis, Mathematical Image Processing, Mathematics for logistics, etc.

EMPLOYMENT

China Merchants Securities Co., Ltd

07/2023-present

Position: Analyst(Internship); Investment Bank Headquarters

- Deeply participate in IPO due diligence, manuscript collection, and project application;
- Create a table of equity penetration and related parties, and organize, sample, tested and summarized the procurement and distribution data of enterprises;
- The total fundraising amount of the IPO projects I participated in exceeded 7 billion RMB, and the market value exceeded 50 billion RMB.

Beijing SOHU New Media Information Technology Co., Ltd

Position: Operation Officer (Internship)

01/2022-04/2022

- Responsible for the infrastructure construction of the campus forum in the APP;
- Monitor the daily active people of the APP, fill in the data report, and write the operation plan;
- Regularly hold relevant theme activities to attract more people to participate in.

Marco Polo (Second global ceramic tile manufacturer, and is the largest in China)

Position: Data Analyst(Internship); Manufacturing Center

07/2021-07/2022

- Formulate reports that reflect the production quality of various ceramic tiles and their cost for analysis;
- Design KPI and relevant indicators in accordance with the production condition and business performance to stimulate efficiency, applying data analysis in business practice;
- Deal with different types of data and focus on identifying business trends based on statistics, and forward the analysis results and proposals to departments concerned.

COMPETITION & PROJECTS

Assessing the performance of an investment portfolio through simulation and modeling

Topic: Establishing a new investment portfolio evaluation system through simulation modeling

- Select representative indices in the stock market as the stock pool and calculate the returns of the selected index within a specific time interval.

- Simulate the weights of all stocks in the stock pool randomly and get the distribution of returns within a specific time interval.
- Fit a probability distribution function and calculate the probability of exceeding the return of the investment portfolio in situations where it exceeds the benchmark.
- Repeatedly simulate to obtain the confidence interval of the probability of returns exceeding that of the investment portfolio, and use it for evaluation.

Application of Machine Learning in Basketball Games

Topic: Predict CBA game results using hybrid feature extraction and machine learning techniques

- Collect all game data for the 2022-2023 season of the Chinese Men's Basketball Professional League.
- Process the data by using the home team's various statistics from each game as the feature variables and the game outcome as the response variable.
- Use machine learning methods such as Naive Bayes, Neural Networks, KNN, SVM, and Random Forests to train and test processed data, obtain the accuracy of each model and select the best one.
- Investigate the weights and importance of each feature, use hybrid feature extraction to improve the model.

Core Decomposition of Compact Subsets in the Plane and Its Applications

Topic: Study on the Geometric Properties of the Julia Set of McMullen Map

- Investigate the form of the Julia set under different values of parameters and iteration count, examine the local connectivity of the set.
- Extend the concept of external rays in polynomials to the Julia set of rational mappings.
- Summarize the topological structure of the set on the dynamics and parameter planes using relevant knowledge from singular perturbation theory.

2022 ETF Margin and Securities Lending Simulated Trading Competition

Topic: Demo trading with virtual funds

- Carry out financing purchase, financing sale, repayment by selling coupons, purchasing collateral, direct repayment, and cash coupon repayment through the demo account, to make the overall yield higher.
- The highest personal real-time ranking reached the **25th place** in the South China Division.

2019 National College Students Mathematical Competition in Modeling

Topic: Design of multi-layer thermal protective clothing for high-temperature operation

- Preprocess the given data to obtain the necessary information (e.g., Revenue, Profit Margin, Discount Rate).
- Propose a question and investigate whether a low-profit margin leads to higher sales volume and whether higher sales volume results in profitability.
- Conduct a correlation analysis on variables such as total revenue, total profit, profit margin and discount rate to draw conclusions.
- Awarded **Excellence Award** in the Guangdong Province Division.

2018 National College Students Mathematical Competition in Modeling

Topic: Design of multi-layer thermal protective clothing for high-temperature operation

- Review research materials related to the topic.
- Define relevant parameters (e.g., spectral extinction coefficient, material thermal conductivity, thermal radiation flux, etc.).
- Refer to the heat conduction model, set the number of clothing layers, and utilize knowledge of partial differential equations to calculate the temperature of each layer.
- Awarded **Third Prize** in the Guangdong Province Division.

STUDENT ACTIVITY

Volunteer Teaching Activity at Zhuhai Xiangzhou 10th Primary School

09/2017-06/2019

Position: Deputy Director (part-time)

Organized by the Department of Public Welfare, School of Mathematics (Zhuhai), Sun Yat-sen University

- Responsible for planning and organizing activities, writing plans, recruiting volunteers and purchasing materials, and worked on statistics and data entry at a later stage;
- Served as a member of the volunteer team to engage in teaching practice, went to **Zhuhai Xiangzhou 10th Primary School** where I taught math, getting acquainted with teaching preparation and tools.

Field research in Jishan Village, Tangjiawan Town, Xiangzhou District, Zhuhai City

05/2019

Position: Leader of the research team

Organized by School of Mathematics (Zhuhai), Sun Yat-sen University

- Led the research team to investigate the medical development, environmental sanitation industry, catering industry and life quality in Jishan Village.
- Accomplished a detailed summary concerning Jishan Village's overall development information, which was based on analysis of the above industries and the business data collated.

Volunteer Activities of the Skipping Championship (Autumn Competition) in the 2018 "Kangle Cup"

10/2018

Position: Inspector

Organized by the Sports Department of Sun Yat-sen University

- Maintained order and provided guidance to ensure the activities' smooth process.

SUMMARY OF HONORS

Honors in academic study:

- Special Scholarship for Academic Progress in the academic year 2019-2020 (12/2020)
- Excellence Award in 2019 National College Students Mathematical Contest in Modeling (Guangdong Province Division) (11/2019)
- Third-class Merit Student Scholarship in the academic year 2017-2018 (01/2019)
- Third Prize in 2018 National College Students Mathematical Contest in Modeling (Guangdong Province Division) (11/2018)

Honors in sports:

- Champion in the 2021 Sun Yat-sen University Football Association "Kangle Cup" (06/2021)
- 2nd place in the 2020 Sun Yat-sen University Football Association "Kangle Cup" (12/2020)
- Top 8 in the 2020 Sun Yat-sen University Football Association "Football Association Cup" (12/2019)
- 3rd place in the 2nd Autumn Games Men's 200-meter running competition, School of Mathematics(Zhuhai), Sun Yat-sen University (11/2017)

Honors in social works:

- Excellent Volunteers of the School of Mathematics(Zhuhai), Sun Yat-sen University(11/2020)
- Excellent Volunteers of the School of Mathematics(Zhuhai), Sun Yat-sen University(11/2018)