

# GONG JINQI

Master of Science in Analytics at the University of Southern California

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## EDUCATION

- University of Southern California

California, USA

Master of Science in Analytics

08/2024 - present

Department of Industrial and Systems Engineering, Viterbi School of Engineering
- University of Macau

Macau, China

Bachelor of Science in Mathematics with Specialization in Statistics and Data Science

09/2020 - 06/2024

Department of Mathematics, Faculty of Science and Technology

Main Courses (Medium of Instructions: English): *Linear Algebra (A), Multivariable Calculus (A), Data-driven Sampling Methods (A), Multivariate Data Analysis (A), Computational Statistics (A), Topics in Statistics and Data Science (A), Nonparametric Statistics (A), Graduation Project (A)*

CGPA: 3.66/4.0

## EXPERIENCE

- University of California, Berkeley

California, USA

Visiting Student, Spring 2023

01/2023 - 05/2023

Berkeley Global Access (BGA)

Main Courses: *Numerical Analysis (A-), Introduction to Artificial Intelligence (A-)*
- Tsinghua University

Beijing, China

Research Assistant | Advisor: Shaoping Ma, Professor

06/2023 - 10/2023

Information Retrieval Lab at Tsinghua University (THUIR)

Research Area: *Information Retrieval, Recommendation System, Neural Network, Deep Learning, Large Language Model*

## RESEARCH

- Stock Model Analysis and Investment Strategy Based on Chinese Characteristics Valuation System 11/2023

Silver Medal, First Prize (Top 0.17%) | "Greater Bay Area Cup" Financial Mathematical Modeling Competition

Description. *By implementing machine learning algorithms and classification models, we constructed five key characteristic indicators of the Chinese Characteristics Stock Valuation (CCV) system, quantitatively described and classified the characteristics of CCV stocks, and developed short-term and long-term investment portfolios with considerable returns.*
- Double Correction Framework for Denoising Recommendation 06/2023 - 10/2023

(Paper accepted by the ACM SIGKDD Conference 2024)

At Tsinghua University

Description. *Existing loss-based approaches to discard noisy labels have two limitations: the loss is unstable due to random initialization of parameters, and the discard may introduce inconsistencies in the training and testing spaces. A double correction framework for denoising recommendation is proposed to solve the problems.*
- The Art of Data Augmentation and Parameter Expansion in Markov Chain Monte Carlo 01/2024 - 05/2024

At University of Macau | Supervisor: Zhi Liu, Professor

Description. *We summarize recent developments in integrating Data Augmentation and Parameter Expansion techniques to enhance MCMC efficiency, and precisely define the Parameter Expansion Data Augmentation (PX-DA) algorithm, which refines the traditional methods and exhibits improved convergence properties, as supported by theoretical analysis and extensive simulations, and contributes to advancing Bayesian methods, providing a more robust framework for handling complex models.*
- Matrix Functions with Chebyshev Polynomials 04/2023 - 05/2023

At University of California, Berkeley

Description. *Under the guidance of Prof. Michael Lindsey, more general functions of matrices can be constructed as limits of polynomials. By approximating general functions with Chebyshev polynomials, one can derive efficient algorithms for performing matvecs easily. Diverse experiments were demonstrated by Matlab to prove the efficiency of this method.*
- The Pac-Man Projects 01/2023 - 05/2023

At University of California, Berkeley

Description. *The goal of this project is through specific Python practice on classic Pac-Man game to obtain foundational AI concepts, such as informed state-space search, probabilistic inference, and reinforcement learning. These concepts underly real-world application areas such as natural language processing, computer vision, and robotics.*

ACHIEVEMENTS / AWARDS

- Faculty of Science and Technology Outstanding Final Year Project (Top 3%)

2023 - 2024

Academic scholarship awarded by the University of Macau.  
In recognition of outstanding final year project accomplishments.  
Awarded to three projects from the Department of Mathematics in the Faculty of Science and Technology.
- David and Barbara Pong Founding Master’s Scholarship (Top 1%)

2023 - 2024

Contribution scholarship awarded by Choi Kai Yau College, University of Macau.  
An annual award for outstanding contribution to the college during the academic year.  
In recognition of the original songs "See You at UM" and "You Are a Guiding Light", which I wrote, sang, and filmed a music video for the University of Macau. Released on the university’s official social media and streamed on screens across campus.
- Lou Tou Vo Mathematics Scholarship (Top 3%)

2021 - 2022

Academic scholarship awarded by the University of Macau.  
An annual award for outstanding academic performance during the academic year.  
Awarded to two students from the Department of Mathematics in the Faculty of Science and Technology.
- UM Top Ten Outstanding PR Student Ambassadors

2021 - 2022

Contribution award issued by the Communications Office, University of Macau.  
An annual award recognizes the top ten PR Student Ambassadors who have made outstanding contributions.
- Lou Tou Vo Mathematics Scholarship (Top 3%)

2020 - 2021

Academic scholarship awarded by the University of Macau.  
An annual award for outstanding academic performance during the academic year.  
Awarded to two students from the Department of Mathematics in the Faculty of Science and Technology.
- UM Residential College Foundation Scholarship (Top 3%)

2020 - 2021

Contribution scholarship awarded by Choi Kai Yau College, University of Macau.  
An annual award for outstanding contribution to the college during the academic year.  
In recognition of my music performances and contributions at the formal hall dinner.
- UM Top Ten Outstanding Student Reporters

2020 - 2021

Contribution award issued by the Communications Office, University of Macau.  
An annual award recognizes the top ten UM Reporters who have made outstanding contributions.
- UM Dean’s Honor List

2020 - 2024

Academic award issued by the Faculty of Science and Technology, University of Macau.  
A semester award for students with high GPA.

LEADERSHIP AND TEAMWORK OUTREACH

- Chief UM Reporter-University of Macau

09/2020 - 06/2024

Photographer, writer, interviewer.  
Publish photographs, articles, and videos on the official social media of the university.
- Public Relations Student Ambassador-University of Macau

09/2020 - 06/2024

English and mandarin docent.  
Welcome and guide guests and tourists from all over the world to visit the campus.
- Spring 2023 Global Ambassador-Univerisity of California, Berkeley

01/2023 - 05/2023

Social media outreach, cultural communication.  
Share photographs and stories on the official social media of the university.
- Choi Kai Yau College Residential Assistant-University of Macau

08/2022 - 06/2024

Student leader.  
Assist the college and fellows in managing the daily affairs of the college and organizing activities.
- Choi Kai Yau College Soccer Team-University of Macau

09/2020 - 06/2024

First team player.  
Won the 2nd runner-up in the 2021, 2023 Masters’ Cup with the team.

TECHNICAL SKILLS AND INTERESTS

<b>Languages:</b> Mandarin, English, Cantonese	<b>Programming Languages:</b> Python, R, Matlab, SQL, Java, C, LaTeX
<b>Discovery:</b> Photoshop, Drone, Rubik’s Cube	<b>Music:</b> Piano, Composition, Vocal, Chinese Traditional Instruments
<b>Art:</b> Photography, Calligraphy, Painting	<b>Sports:</b> Tennis, Soccer, Basketball, Table Tennis, Badminton