GONG JINQI

Bachelor of Science in Mathematics | Statistics and Data Science | University of Macau

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EDUCATION

•**University of Macau** *Macau, China*
Department of Mathematics, Faculty of Science and Technology *09/2020-present*
Major in Mathematics with Specialization in Statistics and Data Science
Main Courses (Medium of Instructions: English): *Linear Algebra (A), Multi-variable Calculus (A),*
Probability (A-), Applied Statistics (A-), Ordinary Differential Equation (A-), Stochastic Process (A-),
Linear Statistical Analysis (A-) CGPA: 3.59/4.0

EXPERIENCE

•**University of California, Berkeley** *California, USA*
Berkeley Global Access (BGA) *01/2023-05/2023*
Visiting Student, Spring 2023
Main Courses: *Numerical Analysis (A-), Introduction to Artificial Intelligence (A-)*

•**Tsinghua University** *Beijing, China*
Information Retrieval Lab at Tsinghua University (THUIR) *06/2023-present*
Research Assistant | Advisor: Shaoping Ma, Professor
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 submitted to The Web Conference (WWW) 2024 | Under Review)
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 Multi-Dimensional Framework of Comprehensive Evaluation of Large Language Models** *06/2023-9/2023*
At Tsinghua University
Description. *Supervised by Prof. Shaoping Ma, this work is an attempt to find a comprehensive and widely acceptable multi-dimensional framework for the evaluation of the overall performance of Large Language Models. Based on concrete experiments by using Python on the dataset OpenAI-Evals, the rationality of this multi-dimensional framework is verified.*

•**Matrix Functions with Chebyshev Polynomials** *04/2023-5/2023*
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** *01/2023-5/2023*
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.*

•**Traffic Sign Classification** *10/2022-11/2022*
At University of Macau
Description. *We implement a python program to apply support vector machine, random forest, and neural network methods to train models to classify traffic signs. Besides, we use the method of confusion matrix to find out the labels that are difficult to classify and also compare the performance of each classifier in an intuitive way.*

Achievements/Awards

- **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.

- **David and Barbara Pong Founding Master's Scholarship-Best Reflection Report (Top 1%)** *2021 - 2022*
  Contribution scholarship awarded by Choi Kai Yau College, University of Macau.
  An annual award for outstanding contribution to the college during the academic year.
  The scholarship is in recognition of the original song "See You at UM", which I wrote, sang, and filmed a music video for the University of Macau. The work was released on the university's official social media and streamed on screens across campus.

- **UM Top Ten Outstanding PR Student Ambassadors** *2021 - 2022*
  Contribution award issued by the Communication 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.
  The scholarship is in recognition of my wonderful performances at the formal hall dinner.

- **UM Top Ten Outstanding Student Reporters** *2020 - 2021*
  Contribution award issued by the Communication Office, University of Macau.
  An annual award recognizes the top ten UM Reporters who have made outstanding contributions.

- **UM Dean's Honor List** *2020 - Present*
  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 - Present*
  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 - Present*
  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 - Present*
  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 - Present*
  First team player.
  Won the 2nd runner-up in the 2021, 2023 Masters' Cup with the team.

- **Advanced Research Laboratory of Resources-Tsinghua University High School** *09/2017 - 06/2020*
  Modeler, drone pilot, researcher.
  Drive drones to capture and model the campus landscapes, and print them by 3D printers.

- **Golden Sail Traditional Orchestra-Tsinghua University High School** *09/2014 - 06/2020*
  Head of orchestra, chief of suona and bili (Chinese traditional instruments), soloist, host.
  Held concerts at the United Nations Headquarters, the Kennedy Center, and the Palace of the Arts.

Technical Skills and Interests

Languages: Mandarin, English, Cantonese
Discovery: Photoshop, Drone, Rubik's Cube
Art: Photography, Calligraphy, Painting

Programming Languages: Python, R, Matlab, SQL, Java, C, LaTeX
Music: Piano, Composition, Vocal, Chinese Traditional Instruments
Sports: Tennis, Soccer, Basketball, Table Tennis, Badminton