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 - 05/2026 (Expected)*
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 GPA: 3.66/4.0

Experience

•University of California, Berkeley *California, USA*
Visiting Student, Spring 2023 | Berkeley Global Access (BGA) *01/2023 - 05/2023*

•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, Natural Language Processing, 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. *Machine learning algorithms and classification models were implemented to construct five key characteristic indicators of the Chinese Characteristics Stock Valuation (CCV) system. The characteristics of CCV stocks were quantitatively described and classified, leading to the development of short/long-term investment portfolios that generated 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. *Recent developments in integrating Data Augmentation and Parameter Expansion techniques were summarized to enhance MCMC efficiency. The Parameter Expansion Data Augmentation (PX-DA) algorithm was precisely defined, refining traditional methods and demonstrating improved convergence properties through theoretical analysis and extensive simulations. This contributed 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, general functions of matrices were constructed as limits of polynomials. Chebyshev polynomials were used to approximate general functions, leading to the derivation of efficient algorithms for performing matrix-vector multiplications. Matlab experiments were conducted to demonstrate the efficiency of this method.*

Achievements / Awards

•Faculty of Science and Technology Outstanding Final Year Project (Top 3%) *2023 - 2024*

•David and Barbara Pong Founding Master's Scholarship (Top 1%) *2023 - 2024*

•Lou Tou Vo Mathematics Scholarship (Top 3%) *2020 - 2021 / 2021 - 2022*

•UM Residential College Foundation Scholarship (Top 3%) *2020 - 2021*

•UM Dean's Honor List *2020 - 2024*

Skills

Programming Languages: Python, SQL, R, Matlab, Java, C, AMPL
Tools: LaTeX, Markdown, Tableau
Languages: Mandarin (native), English (full professional), Cantonese (professional working)