CHENKAI WANG

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WORK EXPERIENCE

Southern University of Science and Technology, China   Sep. 2024 - Jan. 2025

Full-time Research Assistant, Supervisor: Prof. Peng Yang   Department of Computer Science and Engineering

EDUCATION

Southern University of Science and Technology, China   Sep. 2022 - Jul. 2024

M.S. in Mathematics (**with distinction**)   GPA: 88.6/100

Supervisor: Prof. Peng Yang   Department of Statistics and Data Science

Southern University of Science and Technology, China   Sep. 2017 - Jul. 2022

B.S. in Statistics   GPA 3.03/4.00 (Last Year: 3.82/4.00, Last Semester: 3.92/4.00)

Supervisor: Prof. Yifang Ma   Department of Statistics and Data Science

PREPRINTS

Article (as the first author)

Wang, C., Ren, J., & Yang, P. (2024). alleviating non-identifiability: a high-fidelity calibration objective for financial market simulation with multivariate time series data [*submitted to IEEE Transactions on Computational Social Systems, Major Revision*]. *arXiv:2407.16566.*

Articles (as a middle author)

Zhao, J., Zhang, C., **Wang, C.**, & Yang, P. (2025). Trajectory-level based reward shaping for mining formulaic alpha factors via reinforcement learning. *In Preparation.*

Yuan, X., Shang, Z., Wang, Z., **Wang, C.**, Shan, Z., Qi, Z., Zhu, M., Bai, C., & Li, X. (2024). preference aligned diffusion planner for quadrupedal locomotion control [*submitted to IROS 2025, Under Review*]. *arXiv:2410.13586.*

HONORS AND AWARDS

Outstanding Graduates honor, *SUSTech*   2024

Outstanding Graduate Student, *SUSTech*   2024

Excellent Student Cadre, *SUSTech*   2023

National Encouragement Scholarship, *SUSTech*   2020, 2021

Provincial Second Prize in Chinese Mathematics Competitions, *Chinese Mathematical Society*   2021

Provincial Third Prize in Chinese Mathematics Competitions, *Chinese Mathematical Society*   2020

PROJECTS

Advanced Network Science Project and Homework   Sep. 2022 - Jan. 2024

Individual Homework and Project, Prof. Yanqing Hu   Shenzhen

- Page Rank and Spam Farm in Graphs [HW 1 & 2].
- Small World Phenomena and the Greedy Algorithm [HW 3].
- ER Network and Giant Component [HW 4].
- Community Structure, Spectral Analysis, and its Generalization [HW 5].
- Added constraints to Jon Kleinberg's network model, proved the corresponding expected delivery time, and implemented greedy algorithm in Python to validate results [Final Project].

Semi-parametric regression Project: Linear-based and other applicable methods for riboflavin dataset (n =71, p=4088, regression problem)   Jan. 2023

Individual Project, Prof. CHEN XIN   Shenzhen

- Randomly split data into 80% training (n = 57) and 20% testing (n = 14) sets to ensure unbiased generalization evaluation.
- Applied Lasso, Elastic Net, LARs, PCA Regression, and Random Forest for model fitting, using LOOCV to generate 57 distinct data pairings and 5-fold cross-validation to optimize coefficients.
- Used features from both Lasso and LARs to build a linear model and checked for normality, independence, and homoscedasticity.
- Used the ensemble approach to combine 57 individual models, selecting the best based on MSE and error range.

TEACHING ASSISTANTS

Southern University of Science and Technology:

MA212: Probability and Statistics, 2023 Spring, rated excellent by the lecturer: Prof. Guoliang Tian

MA204: Mathematical Statistics, 2023 Spring, rated excellent by the lecturer: Prof. GABRIELLE JING

STA217: Introduction to Data Science, 2024 Fall, rated excellent by the lecturer: Yifang Ma

MISCELLANEOUS

Languages: *English*: Fluent, TOEFL (83)   *Chinese (Mandarin):* Native

Computational Skills: Python, MATLAB, LaTeX.

Interests: Movies, Reading, Basketball, Running, Voluntary Activity (more than 80 hours).