

CHENKAI WANG

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WORK EXPERIENCE

Southern University of Science and Technology, China Sep. 2024 - Feb. 2025(Expected)
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

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, Under Review*]. *arXiv:2407.16566*.

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 ICRA 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 Inspirational 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 Project and Homework, Prof. Yanqing Hu Shenzhen

- Proved the expected delivery time with extra constrain based on Jon Kleinberg's network model.
- Implemented greedy algorithm with Python, confirming consistency between theory and simulation.
- Conducted reports on PageRank, trust rank, ER network components, and community detection.

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

- Applied Lasso, Elastic Net, LARs, PCA Regression, and Random Forest for model fitting, using LOOCV to generate 71 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 71 individual models, selecting the best based on MSE and error range.

Sample Survey Project: Study conditions for SUSTech Undergraduates Mar. 2020 - Jun. 2020

Planner and Designer, Prof. CHEUNG Siu Hung Online

- Conducted an entire sample survey process (include focus group meeting, questionnaire design, pilot study, data collection and analysis, presentation, etc.) to collect the study condition.
- Used ANOVA and paired-sample t-tests to compare on-campus and online study conditions, including assignment and review, sleep and exercise, and class learning.

Statistical Linear Model Project: Socioeconomic Factors on HIV Dec. 2020

Individual Project, Prof. CHEUNG Siu Hung Online

- Fitted regression models (full model, stepwise regression) to identify key factors influencing HIV prevalence.
- Diagnosed models for normality, linearity, variance homogeneity, and multicollinearity to ensure validity.

Time Series Analysis Project: Analysis of Monthly Airline Passenger Dec. 2019

Group member, Prof. Xuejun Jiang Online

- Processed data with transformations and fitted an ARIMA model based on ACF/PACF analysis.
- Diagnosed the model using residual plots, Q-Q plots, and the Ljung-Box test.

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).