Shengjie Niu

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EDUCATION BACKGROUND

Southern University of Science and Technology (SUSTech)   **Guangdong, China**
Statistics Major - GPA: 3.78/4.0   *Sept. 2019 - Jun. 2023 (Expected)*
Academic tutor: Prof. Qiman Shao
Main Courses: Bayesian Statistic, Multiply Statistic Analysis, Introduction to Theoretical and Practical Big Data, Statistical Linear Model, Applied Stochastic Process, Probability Theory, Mathematical Statistics, Computational Statistics, Discrete Mathematics, Time Series Analysis, Ordinary Differential Equation, Sampling Survey, Statistic Computation and Software, Statistical Data Analysis with SAS, Computer Programming (Java), etc.

ACADEMIC EXPERIENCE

Semi-Supervised Learning for Image Classification   **Elite Programme of SUSTech**
Supervisor: Prof. Chao Wang   *Jun. 2022 - present*
- Outstanding both in total grades and the selection competition to join this programme.
- Discussed with the supervisor the latest papers on semi-supervised learning and image segmentation.
- Proposed innovative semi-supervised learning framework Density-based Spatial Outlier Detection (DSOD).

Data Science Program   **North Carolina State University (remote)**
Grade of project: 100/100   *Jan. 2022*
- Utilized Python, R, and Tableau tools to realize data analysis, modeling, and visualization.
- Utilized long short-term memory (LSTM) and time series to analyse two stocks and predict the future return.

Reinforcement Learning Seminar   **SUSTech**
Supervisor: Prof. Bingyi Jing   *Jun. 2021 - Aug. 2021*
- Discussed the markov decision process and some tabular methods: Dynamic Programming, Monte Carlo Methods, Temporal-Difference Learning and n-step Bootstrapping.
- Served as the keynote speaker for three seminars: Monte Carlo Algorithm, Planing and Learning with Tabular Methods, Heuristic Search and Monte Carlo Tree Search (MCTS).

Computational Statistics Seminar   **SUSTech**
Supervisor: Prof. Guoliang Tian   *Sept. 2021 - Dec. 2021*
- Got familiar with the EM-Type Algorithms: The EM Algorithm, MCEM Algorithm, ECM Algorithm, EM Gradient Algorithm and OLS Algorithm.
- Discussed the quadratic lower–bound (QLB) Algorithms and some applications.

Discrete Mathematics   **SUSTech**
Student Assistant   *Sept. 2021 - Dec. 2021*
- Detected errors in the assignment, answered questions for the students, which accumulated experiences in communicating with teacher and students.
- Participated in the project on how to solve linear recurrence relations in the language of linear algebra.

SKILLS & INTERESTS

- **Computer Languages**: Python, R, Java, SAS, etc.
- **Tools**: Jupyter notebook, LaTex, R studio, Pycharm, VS code, Anaconda, etc.
- **Interests**: Statistical Machine Learning, Semi-supervised Learning for Image Classification, Reinforcement Learning.

AWARDS & ACHIEVEMENTS

- Outstanding student scholarship (SUSTech)   *Oct. 2022*
- Honorable Mention of Mathematical Contest In Modeling   *Apr. 2022*
- Third Prize of Guangdong Province in National Mathematics Competition   *Nov. 2021*
- Outstanding student scholarship (SUSTech)   *Oct. 2021*
- Outstanding student scholarship (SUSTech)   *Oct. 2020*