Miao Di

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EDUCATION

NATIONAL UNIVERSITY OF SINGAPORE   **Aug 2021 - Jan 2023**

Master of Science in Statistics

Graduate Certificate in *Data Mining for Industry (Competence)* obtained as part of the Master's program.
With relevant coursework in *CS5288 Knowledge Discovery and Data Mining*, *ST5227 Applied Data Mining*.

BEIJING NORMAL UNIVERSITY   **Sep 2017 - Jul 2021**

Bachelor of Science in Statistics

EXPERIENCE

DUKE-NUS MEDICAL SCHOOL - Singapore   **Jan 2023 - present**

A research-focused institution in collaboration with Duke University and the National University of Singapore.

Senior Research Assistant

- Executed extensive data analysis using R and Python to support research projects in clinical data, including analyzing datasets, optimizing algorithms, assessing model performance, and interpreting results to provide actionable insights.
- Contributed to several peer-reviewed articles on machine learning applications in clinical and biological data analysis. Conducted literature reviews, performed data analysis, and collaborated on manuscript drafting.
- Main contributor in a federated learning benchmark project with electronic health record (EHR) data. Led research efforts, conducted data analysis, and contributed to manuscript drafting.

ENVISION DIGITAL - Singapore   **Mar 2022 - Jul 2022**

Data Analyst

- Analyzed real data about solar energy using Python and SQL to identify patterns and trends.
- Generated reports based on data analysis findings to inform project decision-making.
- Collaborated with team members to improve programming for more accurate data pattern identification.
- Contributed to enhanced performance in troubleshooting and forecasting through data analysis insights.

ACADEMIC PROJECTS

Federated Learning for Clinical Structured Data:
A Benchmark Comparison of Engineering and Statistical Approaches

Nov/2023

- Key contributor to the Federated Learning (FL) benchmark project, focusing on coding and executing FL algorithms in R and Python, optimizing their performance and conducting detailed evaluations. Created visualizations to present results effectively and provided crucial input to enhance the research paper. Contributed significantly to formal analysis and methodology design, and played a key role in writing and editing tasks.

Evaluating the Efficacy of Federated Scoring Systems with Heterogeneous Electronic Health Records

Mar/2024

- Facilitated significant data analysis, visualization, and result evaluation for the project. Also played a pivotal role in editing and refining the research paper. Our collaborative efforts enhanced the FedScore framework by integrating engineering-based FL algorithms, increasing its robustness to real-world heterogeneity.

Bridging Data Gaps in Healthcare: A Scoping Review of Transfer Learning in Biomedical Data Analysis

Jul/2024

- Screened and reviewed manuscripts, providing feedback on content, structure, and presentation. Assisted with formatting, data visualization, and table preparation to improve the clarity and quality of the research papers.

ADDITIONAL

- Technical Skills: R, python, SQL, SAS, Power BI, LaTeX
- Additional Courses: Completed *Managing Big Data with MySQL* course on Coursera, with certificate.
- Language Skills: English (Business Professional), Mandarin (Native), Japanese (Conversational)
- Certifications: Japanese-Language Proficiency Test (JLPT) Level N2