ZHENGYANG FEI

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Education

University of Toronto *Toronto, Canada*
M.Sc. Biostatistics, Dalla Lana School of Public Health **Nov 2025**
Relevant Coursework: Categorical Data Analysis, Survival Analysis, Statistical Programming, Machine Learning, Applied Bayesian Methods, Causal Inference

University of Toronto *Toronto, Canada*
HB.Sc. Applied Statistics and Mathematics **Jun 2024**
Relevant Coursework: Experimental Design, Statistical Learning, Data Analysis, Tensor-on-tensor Regression

Technical Skills

Programming Tools and Productivity Softwares: R, Python, SAS, JAGS, GitHub, Microsoft Office Suite, Visual Studio, MiKTeX, Adobe Acrobat, Adobe Premiere Pro

Experience

Institute for Better Health - Trillium Health Partners **May - Aug 2025**
Data Analyst - Researcher (Supervisor: Dr. Simona Minotti) *Mississauga, Ontario*
- Contributed to a hospital-wide equity analysis by working with high-dimensional complex inpatient experience survey data to support statistical modeling efforts.
- Researched methods for extracting themes from free-text using text mining and natural language processing.
- Used statistical software (R, SAS) for analysis, including the I-MAIHDA multilevel model for identifying disparities in patient-reported experience across intersecting social strata, informing hospital equity strategies.
- Collaborated with a team of multidisciplinary researchers to ensure data quality and consistency.
- Delivered actionable insights to hospital leadership through formal reports and presentations, influencing quality improvement priorities; contributed to a manuscript under preparation.

University of Toronto - MiDATA Lab **Nov 2024 - Present**
Data Analyst - Researcher *Toronto, Ontario*
- Student researcher at the MiDATA Lab, contributing to a range of ongoing projects including clinical research on juvenile arthritis and MR/PET radiomics features accuracy.
- Used statistical software (R, SAS) to develop models and create data visualizations for exploratory and inferential analysis across both small and large datasets.
- Interpreted analytical results, drafted summary reports, and contributed to manuscript writing for journal submission.
- Collaborated with a team of multidisciplinary researchers to ensure data quality and consistency.
- Conducted literature review for appropriate methodologies.

University of Toronto **Sep 2022 - Present**
Teaching Assistant *Toronto, Ontario*
- Fulfilled core TA responsibilities across multiple undergraduate courses—including differential, integral and multivariable calculus, linear algebra, probability and statistics, statistical modeling, and data analysis—by leading tutorials, grading assessments, and hosting office hours.
- Served as Head TA for the Statistical Modelling course, creating lecture videos, co-developing course materials with the coordinator, and designing marking schemes to support consistent evaluation.

Projects and Competitions

Atrial Fibrillation Prediction Modeling Using ECG and EHR Data ([Link]) **2025**
- Performed missing data imputation using the MICE package with predictive mean matching (PMM).
- Conducted variable selection and model evaluation to optimize predictive performance using features derived from ECG measurements and electronic health records.
- Trained and tuned survival gradient boosting and random survival forest models to predict new-onset atrial fibrillation.
- Presented project findings as a poster at the 2025 Statistical Society of Canada (SSC) Student Research Competition.

Multiple Imputation Deletion R Package ([Link]) **2024**
- Developed an R package (DIMP) that addresses the issue of Multiple Imputation then Deletion by removing imputed outcomes, enabling users to perform analyses and build models using observed outcomes alongside imputed covariates.