

EDUCATION

Master of Science, Biostatistics, University of Toronto

2021 – 2022

Honors Bachelor of Science, Actuarial Science and Statistics, University of Toronto

2016 – 2021

PROFESSIONAL EXPERIENCE

Biostatistical Analyst

Sep. 2022 - Present

The Hospital for Sick Children

Toronto, Canada

- Collaborating with clinicians and medical experts to refine **trial design**, **data analysis** and interpretation. Assisting with the production of table, figures, and **SAPs** for effective communication.
- Simulating synthetic patient data using appropriate parametric distributions and creating outcome variables for future analysis.
- Identifying methodological approaches and fitting various models, such as generalised linear mixed models, based on the data structure using **Bayesian** analysis methods to decide the appropriate sample size, power, Type 1 error, and other operating characteristics for more effective adaptive trial design using **R**, **Stan**, and **JAGS**.
- Writing up project reports and preparing manuscripts for publication submissions.

Research Intern

Sep. 2021 - Aug. 2021

The Hospital for Sick Children

Toronto, Canada

- Undertook clinical trial analysis and built generalised mixed-effects models for various outcomes, such as ordinal categorical outcome, binary outcome, and time-to-event outcome under **Bayesian** framework using **R**, **Stan**, and **JAGS**.
- Prepared manuscript for the submission to the Journal of Clinical Trials.
Comparison of Computational Algorithms for the Bayesian Analysis of Clinical Trials (submission in progress)

Teaching Assistant

Sep. 2021 – Aug. 2022

University of Toronto

Toronto, Canada

- Led tutorials and office hours for undergraduate courses to solidify students' understanding of different statistical concepts and programming skills in **R** and **Python**
- Delivered and graded assessments and helped with the design of the curriculum.

Chief Marketing Officer

May 2019 – Dec. 2019

AUTA(Start-up)

Haerbin, China

- Brought together a team of 4 to build a MVP of an automation software and business model from scratch.
- Conducted cold calls with 46 consultants and HR professionals to assess market capacity.
- Collected and analyzed market relevant data and generated performance reports according to historical data and current trends using **Excel** and **R**.
- Conducted market research to develop marketing strategies and identify potential sales opportunities.

ACADEMIC PROJECTS

Statistical Analysis for Projects Using NHANES Data, St. Michael's Hospital

Apr. 2022 – Sep. 2022

- Participated in **systematic review** process to help researchers with refining research questions.
- Downloaded and **merged data** from **NHANES database** for selected variables and ensured data quality.
- Performed data cleaning, wrangling and conducted exploratory **survey data** and statistical analysis based on proposed research questions related to identify depression risk factors in **R**, including **ANOVA**, **t-tests** as well as **causal analysis**.
- Helped with preparing the statistical methods part of the manuscripts.
Domain, not intensity, of physical activity may be responsible for its protective effect against depressive symptoms (submitted under review)

Paper Review, Advanced Statistical Learning

- Explained existing LDA methods and motivation of the regularized optimal affine discriminant (ROAD) method.
- Performed **Monte Carlo simulations** to replicate the ROAD method, while visualizing the result in **R** using **ggplot2**.
- Performed **Monte Carlo simulations** to compare embedded feature selection methods such as **LASSO** and **RIDGE**.

SKILLS

Languages R, Python, SQL, SAS, HTML

Software/Tools RMarkdown, WinBUGS, JAGS, Microsoft Suite, Tableau, LaTeX, Git