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[linkedin.com/in/\[Redacted\]](#)



[github.com/\[Redacted\]](#)

Education

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Sept. 2021 – Aug. 2023

Master of Science in Statistics, 92%

- **Research:** Developed a novel robust and regularized causal inference algorithm with application to genetic epidemiology. Utilized R and Unix shell scripts on cluster machines to efficiently generate large-scale data simulations, effectively demonstrating the method's superior performance in estimating causal parameters compared to competitor methods.
- **Teaching:** Supported students as a teaching assistant in four statistics courses spanning first to fourth-year material, including tutorials, assignment feedback, and collaboration with instructors for effective materials. Additionally, assisted students in mastering effective Git usage to enhance their version control and collaboration skills in data science and statistical analysis projects.
- **Awards:** Natural Sciences and Engineering Research Council of Canada - Canada Graduate Scholarships Master's program (declined), Faculty of Science Graduate Award, Margaret Wylie Memorial Scholarship in Statistics

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Sept. 2017 – May 2021

Bachelor of Science in Math and Statistics, Minor in Computer Science, 3.85/4.0

- **Activity:** Operated a personal tutoring business, assisting up to five undergraduate students per term with weekly sessions. Focused on enhancing their grasp of foundational statistics concepts and boosting their academic performance.
- **Courses:** Data Structures and Algorithms, Computing Machinery, Database Management Systems, Generalized Linear Models, Causal Inference, Machine Learning, Mathematical Statistics, Statistical Design of Experiments, Time Series, Biostatistics, Bayesian Statistics
- **Awards:** Pearl and Samuel Huang Scholarship in Computer Science, Program for Undergraduate Research Experience (PURE) Grant, Alberta Innovates Student Research, Markin Undergraduate Student Research Program (declined), Jason Lang Continuing Undergraduate Scholarship, Owen Family Scholarship, Air Liquide Canada Scholarship, Alexander Rutherford Scholarship

Experience

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May – Aug. 2022

Machine Learning Intern

- Implemented TensorFlow deep learning models to predict orthotic shell designs using 1500+ records of triangular mesh data, improving accuracy and reducing time-to-market. Conducted data pre-processing using NumPy, Pandas, and Matplotlib for high-quality model input and performed model evaluations to ensure prediction accuracy.
- Presented findings and recommendations to senior leadership, and generated short and full reports effectively communicating technical concepts to non-technical stakeholders.

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May – Aug. 2019, May – Aug. 2020

Data Analyst Intern

- Created an analytical dataset by aggregating 500+ breast cancer patient records from 10 data sources using SQL queries. Utilized R to analyze the quality of life of breast cancer patients 2 years post-diagnosis employing techniques like Multinomial Logistic regression, Random Forest, and Elastic Net for variable selection and inferential model development.
- Demonstrated strong research and writing skills by producing a preliminary manuscript based on literature review and results, resulting in three successful funding opportunities totaling \$18,000 and the presentation of research findings at two symposiums.

Projects

Cell Type Deconvolution on Differential Gene Expression Analysis of COVID-19 | R, GitHub

May 2022

- Analyzed SARS-CoV-2-induced transcriptional changes from 430 individuals with PCR-confirmed SARS-CoV-2 and 54 negative controls dataset from North America. Effectively utilized Git to collaborate with my team throughout the project. Employed R and high-dimensional biology packages, including GEOquery, Biobase, and DESeq2, to perform cell type deconvolution and differential gene expression analysis. Notably, our analysis resolved confounding factors and significantly enhanced the accuracy of results.

Predicting Emergency Department Waiting Times | Python, Jupyter Notebook

September 2021

- Created an accurate emergency department waiting time predictor using machine learning on 10,000+ patient records from 2020. Employed various techniques including Support Vector Machines, Random Forest, and a Customized Artificial Neural Network in Python. Achieved high prediction accuracy and precision through extensive data pre-processing and feature engineering. Submitted to the Advancement of Artificial Intelligence Conference for 2021.

API for Recreational Sports League Management | Python, SQL

April 2021

- Created an efficient Flask-based RESTful API for recreational sports leagues. Leveraged Python, Flask, and SQLAlchemy to design and build the solution. Established endpoints for scheduling games, recording results, and generating standings. Implemented robust authentication and authorization features. Rigorously tested the API with tools like Postman to ensure accuracy and error handling.

Technical Skills

Languages: Python (TensorFlow, scikit-learn, NumPy, Pandas, Matplotlib), R (ggplot2, tidyverse, glmnet, caret), SQL, Bash
Frameworks/Tools: Linux, VS Code, GitHub, Jupyter Notebook, Google Colab, Compute Canada