

Education

University of Toronto – St. George | September 2017-Present

- Candidate for B.A.Sc. in Engineering Science. (cGPA: 3.94, Average: 91.1%)
- Major in Machine Intelligence Engineering
- **Coursework:** Algorithms and Data Structures, Probabilistic Reasoning, Matrix Algebra and Optimization, Foundations of Computing, Introduction to Machine Learning, Artificial Intelligence.

Experience

Research Intern (Machine Learning)

Deep Genomics

May 2020 – Present

- Building a predictor to incorporate multiple aspects of gene regulation and protein expression to predict effectiveness of antisense oligonucleotide therapeutics for specific gene targets.
- Predictor will be used to rapidly test and design target antisense oligonucleotides *in silico*, aiding in the company progress towards treating rare genetic disorders.

Student Researcher

National University of Singapore

May – August 2019

- Worked full-time in researching the theoretical and numerical simulation of drying mechanics of okara.
- Compiled a MATLAB numerical model based on the coupled partial differential equations of heat and mass transfer and performed sensitivity analysis on various environmental parameters.

Student Researcher

University of Toronto

May – August 2018

- Worked full-time in researching machine learning applications in financial engineering, under Professor Chi-Guhn Lee.
- Using Python and current machine learning libraries, promising neural networks such as RNNs and LSTMs were developed in areas such as Black-Scholes option pricing, implied volatility predictions, and historical-implied correlations in volatility.

Extracurriculars

Research Assistant

LIPAD

November 2019 – Present

- Built a siamese neural network and incorporating transfer learning. Trained to learn high-level image features to identify the apparent safety of Google Street View images.
- Implemented full data manipulation pipeline to download, preprocess, and augment data.
- Built Word2Vec word embeddings on Canadian parliamentary records to analyze semantic change over time and party.

Executive

UofTAI

May 2020 – Present

- Part of the research group, focusing on recreating papers, participating in Kaggle competitions, and contributing to open-source libraries.
- Currently working on setting up virtual talks with industry and research professionals in the field of AI and ML.

Project Associate

UofT Machine Intelligence Student Team

September 2019 – March 2020

- Collaborated in a 5-person team with graduate students to overcome challenges in computer vision in medical imaging.
- Examined the robustness of generated data, currently working towards an objective statistic for the quality and accuracy of GAN – generated images using a variety of techniques, including variational autoencoders, Frechet Distances, and more.

Skills

Programming

- Proficiency in C, Python, MATLAB. Familiar with C++, HTML/CSS, Java, LaTeX.
- Proficiency with pandas, scikitlearn, Tensorflow, Keras, PyTorch, plotly.

Languages

- Fluent in English and Mandarin.