

## EDUCATION

### Master of Science in Biostatistics, University of Toronto

- Emphasis in Artificial Intelligence and Data Science option

September 2021 — June 2022

### Bachelor of Science, University of Toronto

- Minor in **Statistics** and Immunology, Major in Health & Disease

September 2017 — June 2021

### Relevant Coursework

- Introduction to Computer Science, Mathematical Expression and Reasoning for Computer Science, Software Design, Software Tools and Systems Programming, Applied Bayesian Statistics

## SKILLS

### Programming Languages

Python, Java, C, C++, R, SQL, Shell

### Technology

MySQL, MongoDB, API, Linux, Ubuntu, TensorFlow, scikit-learn, UML, Deep Learning, Neural Networks

### Web Development

HTML, CSS, JavaScript, Node.js, Django, express.js, react.js

## PROJECTS

### NBA 2021 Champion Prediction

May 2021 - June 2021

<https://github.com/ericlin1230/NBA-2021-Prediction>

- Retrieved NBA team datasets since 1980 season to May 1st 2021 from Kaggle, cleaned and joined the data using **tidyverse** in R.
- Created a decision tree with Gini criterion using **scikit-learn** in **Python**.
- Used **TensorFlow** with different layers and techniques such as Batch Normalizatoin, Dropout, Early Stopping.
- Predicted Milwaukee Bucks as the champion with decision tree and predicted Brooklyn Nets and Milwaukee with TensorFlow.

### Sharger

February 2021

<https://devpost.com/software/sharger>

- First place at UofTHacks VIII Hackathon for GM - Putting EVerybodyIn an EV prize.
- Collaborated on a web application based on **react.js** and **express.js** that connects EV owners, allowing them to rent out their chargers or let them look for a nearby charger to charge their electric car.
- Worked on the back-end using **express.js**, searching using **Google Maps API** and database using **MongoDB**.

### Mall Monitor

January 2021

<https://devpost.com/software/mall-monitor>

- Awarded as a finalist for Hack The North 2020++ Hackathon out of over 3000 participants.
- Worked on a product that detects people in and out of an area using camera footage with **YOLOv3** and **OpenCV**.
- Contributed to the back-end with **express.js** and database with **MongoDB**, assisted on Microsoft Azure deployment.

### Tech Conference Application

September 2020 - December 2020

<https://github.com/ericlin1230/Tech-Conference-Application>

- Collaborated with group of students under agile setting on a Tech Conference Application using **Java** for CSC207 Software Design.
- Contributed towards the event functionality and program compilation and assisted on the controllers.
- Applied clean architecture rules and design patterns towards the design of the application.
- Utilized **Git** to version control with group members, created **JavaDoc** for documentation.

### Discord Bot: UofTHelpBot

July 2020 - August 2020

<https://docs.nikel.ml/showcase>

- Designed a Discord bot using **Node.js** & **Nikel API** to assist students and provide an easier way to search up information regarding courses, exam schedules, and more.
- Currently deployed and maintained on **Heroku**, serving various discord servers with total **10,000+** users.

## EXPERIENCE

### Practicum/Research Student - Dr. Pingzhao Hu Lab

September 2021 - Present

- Will work on clustering single-cell RNA-seq data with a tensor factorization driven approach.
- Will reduce dimension of data with tensor factorization and compare with other established clustering approach.

### Research/Teaching Assistant - ENV399 with Dr. Brad Bass

September 2019 - August 2021

<https://asasa.me/ENV399-Hackathon/>

- Conducted simulations on the impact of immunization and social distancing regarding COVID-19.
- Received publication on **UofT Arts & Science website**
- Worked on functions of COBWEB with **Java** and leads weekly office hours to assist research students.

### Research Student at Coburn Lab, University Health Network

September 2019 - April 2021

- Investigated the relation of IgA to HIV susceptibility (2019-2020) and the different bacteria related to chronic lung allograft dysfunction and the detection of bacteria specific IgA (2020-2021).
- Prepared and heat killed CLAD/HIV related bacteria, performed ELISA and qPCR experiments.
- Collected and analyzed data from experiments, visualized for presentations using **R**.