

---

## LANGUAGES AND TECHNOLOGIES

- Python, HTML, CSS, JavaScript, SQL, Java, Scheme
- MongoDB, Express, React, Node, Git, JSON, XML, APIs
- Data science, machine learning with TensorFlow, scikit-learn, matplotlib, seaborn, and pandas

---

## EXPERIENCE

### Kumon | Teaching Assistant

May 2019 – March 2020

- Graded classwork and homework for **3 shifts (10 hours)** per week at the Fairview Kumon centre
- Helped high school students with course material, including **calculus**, **statistics**, and **geometry**

### Ryerson University | Data Science Researcher

June 2019 – September 2019

- Researched the effects of team dynamics on university group project performance
- Cleaned large datasets, visualized data, and **data mined** with numpy, pandas, matplotlib and seaborn
- Developed machine learning models with **Python** using the scikit-learn library (neural network, SVM)

---

## PROJECTS

(ALL FOUND AT [GITHUB:SIMHONCHOURASIA](https://github.com/simhonchourasia))

### UIO: Expense Tracker with Friends ([link](#))

- Created a web-based app using the **MERN stack** to allow easy account creation and money tracking
- Made the frontend with **React and Redux**, and used **Express** and **Node** to connect to **MongoDB** server
- Uses **JWT authentication** to let users securely register and log in

### Poker Hand Generator ([link](#))

- Developed a webapp using **React** and **JavaScript** to find all possible poker hands from a given hand of cards

### Investment Portfolio Display ([link](#))

- Web application created using **Python** and Streamlit to display an investment portfolio in real time
- Uses WealthSimple API to retrieve stock positions, Yahoo Finance API to find stock price history, and pandas to accumulate information and display portfolio value on a graph

### Machine Learning From Scratch ([link](#))

- Creating a neural network implementation in **Python** from scratch, without standard data science libraries
- Contains a linear algebra library, implements backpropagation to solve classification/regression problems

### TFuse: Tweet Sentiment Analyzer ([link](#))

- Natural language processing model with **TensorFlow** and Google's Universal Sentence Encoder in **Python** to perform sentiment analysis on a dataset of **1,000,000** tweets
- Overall **second place winner** at Ignition Hacks 2020, out of **62** projects

---

## ADDITIONAL EXPERIENCES AND AWARDS

- **SHAD Fellow (2018)**: Engaged in STEM lectures and activities at SHAD McMaster University
- **Quantum Cryptography School for Young Students (2020)**: Invited to online series of seminars and problem-solving sessions involving linear algebra, statistics, algorithms, and quantum cryptography hosted by the University of Waterloo's Institute for Quantum Computing
- **Math Competitions (2019, 2020)**: Top rankings in Canadian Open Mathematics Challenge (top 1%), American Invitational Mathematics Exam (top 5%), Euclid (top 0.7%)
- **Scholarships**: Presidential Scholarship of Distinction, Math Faculty Scholarship, TD Achieve the Dream Canada

---

## EDUCATION

### University of Waterloo

2020-2025

- Honours Computer Science with Co-op program
- Enrolled in selective **advanced courses**, including Advanced Functional Programs, Advanced Algebra, and Advanced Calculus 1 (CS145, MATH145, MATH147, CS146, MATH146, MATH148, and STAT230)
- **CGPA**: 95.4% (**4.0**)