

#### SOFTWARE ENGINEERING STUDENT · University of Waterloo

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Skills

Languages Python, Java, C, C++, JavaScript, C#, HTML5, CSS3, SQL

Frameworks Node.js, Matplotlib, p5.js, Processing.js, Flask, Spark, Arduino, RobotC, Bootstrap Machine Learning/Data Google Cloud Vision, Wolfram NLP, AutoML, TensorFlow, Hadoop, Scikit-Learn, PyTorch

Tools/Platforms GitHub, GitLab, Linux, AWS, R-Pi, Visual Studio, Software Engineering Tools (Violet UML, Gantt, Pert)

# **Experience**

#### **Software Development Intern**

Toronto, ON

HATCH CANADA

Jan 2019 - June 2019

- Created **prototypes** for a framework that managed how coding hints were organized and delivered to users in **Python**.
- Automated a system that delegated "skill" attributes to problems based on sample solutions, allowing users to query the problem database by competency and saving about \$10 000.
- Used **processing.is** and **p5.is** to code solutions and documentation to practice problems for over **35 900** students.

#### **Back-End Developer**

Richmond Hill, ON

- June 2018 May 2019 **EXPERTMATH TUTORS**
- Developed a **Java** program that automatically coordinated scheduling and anticipated finances.
- Eliminated the need for manual scheduling and allowing tutors to track expected income.
- Coded/maintained www.expertmath.ca using HTML5, CSS3, and Bootstrap, and managed hosting with cPanel.

## **Student Web Developer**

Richmond Hill, ON

RHHS STUDENT COUNCIL

Sept 2018 - June 2019

- Programmed a QR-Code sign-in system which automated guest entry during events with over 2000 attendees.
- Coded a desktop application in **Java** that automated the scheduling of sporting activities such as tournaments.
- Developed and maintained www.rhhsstuco.ca using HTML5, CSS3, Bootstrap, and Javascript.

# **Projects**

Thina Toronto Hacks 2

- SMS based virtual assistant that allows users to access information from the internet without WiFi/mobile data.
- Uses natural language processing to determine succinct responses to queries, optimizing response time.
- Built in Node.js using Wolfram Alpha, Twitter, Google Maps, Google News, Smmry, OpenWeatherMap, and Twilio APIs.

## **Vysion**

Electric City Hacks

- Visual recognition project designed to assist those with visual impairments through the use of machine learning.
- Built in **Node.js** with Google Cloud Vision, AutoML, Clarifai, and OpenCV.
- Determines users' surroundings and reads out relevant text, objects, and environments from various ML databases.

#### Murmur

Software Engineering 101

- Python project that triangulates sounds over time to generate heat-maps and find quiet locations in buildings.
- Performs sound analysis on NumPy data obtained from Raspberry Pi modules, and uses amplitude-based vector **addition** to determine the positions of the sounds.

#### Leonardo

Hack the North 2018

- Data analysis application that allows companies to find ideal locations for their businesses from transaction data.
- Uses Hotelling's Principle to suggest locations with similar transaction activity as the desired business.
- Built in **Node.js** using the TD Da Vinci API at **Hack the North 2018**.

## **Education**

### **University of Waterloo**

Waterloo, ON

CANDIDATE FOR BACHELOR OF SOFTWARE ENGINEERING (HONOURS)

Sept 2019 - Apr 2024

# **Achievements**

2018	International Finalist, DECA International Career Development Conference	Atlanta, GA, U.S.A
2018	First Place, PLYC "Pitch It!" Pitch Competition	Markham, ON, CA
2018	SHAD Fellow, SHAD Canada	Ottawa, ON, CA
2017	First Place + Grand Prize, RBC #FutureMaker Innovation Award, Toronto Hacks 2	Toronto, ON, CA
2017	WolframOne Award, Electric City Hacks	Peterborough, ON, CA