MICHAEL HE

(778) 319 6115 | Waterloo, ON, Canada

EDUCATION

University Of Waterloo - Bachelors of Computer Science Expected Graduation 2024

- Nortel Institute Scholarship & President's Scholarship of Distinction
- Cumulative Average: 90.2% Dean's Honours list
- Relevant Courses: CS 145 (Advanced CS), MATH 145 (Advanced Algebra)
 MATH 147 (Advanced Calculus)

EXPERIENCE

ShotSpot - StarterHacks 2020

January 2020

- Created web app that displays the best photography locations in any city
- Winner of: Most Promising, Best Domain, Best use of AWS
- Built on a Node.js backend that interfaces with our web-scraping python script, deployed with heroku and AWS

Digit Classifying Web App - Creator

December 2019

- Built a web app that can classify an image input as a numerical digit
- Used the **Keras** library alongside **Tensorflow** to train a **CNN** model
- Used **Matplotlib** to display data
- Built the backend with Flask and the frontend with HTML/CSS
- Achieved **90% accuracy**, multiclass classification problem

Table: Food and Entertainment - Hack the North 2019 Fall 2019

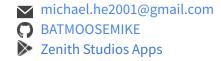
- Worked in a team to create a restaurant and entertainment locator app, that provides recommendations using a KNN algorithm
- Created the Android app using Kotlin, connected it to a Firebase backend, and integrated it with the Google Maps API

Zenith Studios Android Apps - Founder/Lead Developer 2015 - Present

- Created a mathematical model to predict box office gross using categorical statistical method, under 10% margin of error
- Developed a UI-modifying application for checking dead pixels, receiving a 4.5/5 rating with 90%+ approval rating over 5000+ downloads
- Created soundboard application with custom **media control system**
- Developed alarm clock app that implements Android AlarmManager,
 Fragments, and Intents

Stanford Pre-Collegiate AI for Robotics Program - Alumni Summer 2018

- Trained a support vector machine using scikit-learn for a self-driving autonomous robot to follow a visual cue with 100% success rate
- Used finite state machine to create a logic program for robot to navigate an obstacle course with 95% success rate
- Implemented event system using multithreading & event handlers, allowing user to remotely dictate robot behavior



SKILLS

Languages: Java, Python, C, Javascript, XML, Kotlin, PHP, Scheme (Racket)

Web Technologies: HTML/CSS, React, Flask, Angular, Tkinter, Node.js, Heroku, AWS

Machine Learning: TensorFlow, numpy, scikit-learn, Matplotlib, Keras, ImageAl

Systems: Linux (Ubuntu), macOS, PC

Graphics: Blender, Adobe Photoshop & Illustrator, Maya

Tools: Android Studio, Git, Bash, VSCode, Atom, Sublime, XCode

AWARDS/CONTESTS

Top 10 in BC for American Math Competition 10 (2017) & Canadian Open Mathematics Contest (2016 & 2017)

4th place at UBC Physics Olympics (2019)

Score of 30 on Canadian Computing Competition ~ **Top 300** in Canada out of **3000** participants (2018)

Top 0.3% score on SAT exam - **1560/1600** (2017)

One of only 11 sophomores to receive Canadian National AP Scholar Award out of 30,000 Canadian AP students (2017)

Moscrop Secondary French Immersion **Valedictorian** (2019)

One of 10 recipients of the TELUS Entrance Scholarship (2019)