MICHAEL HE

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BATMOOSEMIKE
Zenith Studios Apps

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, ImageAI

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)