Nathan Verghis

Computer Science Major, Business Economics Minor

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EDUCATION

University of Guelph, Guelph — *Bachelor of Computing*

Sept 2019 - April 2022

At the University of Guelph, I was immediately immersed in the world of computer science as we begin with the most low-level language (C) on UNIX to build a strong foundation in software development.

University of Toronto, Toronto — *Bachelor of Computer Science*

Sept 2018 - April 2019

At the University of Toronto, I learned how to handle rigorous workloads coupled with short deadlines in the frantic effort to keep pace with cutting-edge technology. Left after the first year due to financial reasons, but not without the experience and intuition they taught.

PROJECTS

LockBox— *A Better Way to Secure Your Belongings*

September 2019 – Present

With my peers, we are currently developing an app to act as a key for a safe to provide a more secure way to store items. As well as increasing accountability in large companies, this app will also provide data interpretation so owners can view trends about who is accessing their belongings.

Snake Game (AI in progress)— *An Old Classic With a Modern Twist*

August 2019 – Present

This began with a desire to create a new, more complex AI, but quickly turned into a rabbit hole of delving deeper into the Pygame library as I discovered the intricacies of game design. Using this project, I can design my own neural network from scratch, compelety isolated from the TensorFlow tools.

Digit Recognition AI— *A Machine Learning Algorithm to Recognize Hand-Written Digits*

July 2019 – Present

To get an understanding of the world of artificial intelligence, I undertook this project that most programmers start with, which led me to TensorFlow and a very basic understanding of the multi-variable calculus and statistics that surrounds every AI. In the future I plan on extending the data set to language processing by changing the network

SKILLS

- Python
- Java
- C
- SQL
- JavaScript
- Swift

Strong understanding in using excel spreadsheets, as well as many document and presentation programs

AWARDS

Second Place in Mathletes (2014)

Music Award (2014)

Honour Roll, Ontario Scholar (2014 - 2018)

LANGUAGES

English Fluent,
French Proficient

structure, thereby creating a network to read any English writing.

Sudoku Solver— *A Brute Force Technique to Solve Any Puzzle O(9^n)*

June 2019 – Present

As my first step into complex problem solving, I designed a backtracking algorithm to find a solution for any solvable sudoku puzzle using brute force. The goal is to one day return and create an AI to solve in what will definitely be faster than $O(9^n)$, as AI is a field I am very passionate about, and continuously learning about.

Twitter Bot— *A Bot to Amass Followers and Likes Over Time*

May 2019 - Present

Through my research into computer science, I learned that a great way to understand the many intricacies of artificial intelligence was to take a step into creating virtual robots (bots). This bot was designed to enter an account and randomly like posts in each subject so that over time it will amass followers. The greatest learning experience from this project was learning to web scrape articles in code to create applications to process that data and perform operations.

nathan-verghis.github.io/portfolio/— *My Portfolio Website*

Feb 2020 – Present

During my time spent applying for jobs, I decided being a software student, that it was only fitting that I should have a website to display my skills. This project was very productive, as it taught me invaluable skills and tricks of web development, as well as discovering how host pages on GitHub for free.

EXPERIENCE

Nikki's Pool, Georgetown — *Pool Technician*

May 2019 - Sept 2019

As a Pool Technician, I learned how to logically breakdown a problem to solve several electrical pool-related issues, as well understand the accounting and flow of money working for a small company.

McDonald's, Georgetown — *Crew Member*

Oct 2016 - Nov 2017

As a McDonald's Crew Member, the importance of a strong work ethic and cohesive teamwork is instilled from day one. Here I learned critical skills in dividing an issue amongst my peers to solve problems too large to tackle individually. Timing being crucial in the food industry, I learn to time-manage to work around my colleagues as we served our customers.