

# Alwalid S. Khan

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## Education

### Toronto Metropolitan University (Formerly Ryerson University)

September 2022 - April 2026

B.Sc (Hons) Computer Science, Co-op

- **Cumulative GPA:** 4.26/4.33
- **Awards:** Faculty of Science **Dean's List** (2022-Present)
- **Relevant Coursework:** Introduction to Linux & C/C++, Distributed Systems, Operating Systems

## Skills

### Technical Skills:

Java • Python • C++ TypeScript • JavaScript • React.js • Node.js • XML • PostgreSQL • Github • MongoDB • Test Driven Development (**TDD**) • Linux • Unix • Software Development Life Cycle (**SDLC**) • Agile Methodologies

### Soft Skills:

Teamwork • Communication • Resourcefulness • Time Management • Problem Solving Skills • Leadership & Management • Grit

## Experience

### Canadian Mental Health Association

July 2023 - September 2023

IT Intern

Brampton, ON

- Collaborated with a team of **3** interns and **2** managers to design and implement new mental health solutions, leading to a growing increase in product usage currently being used by over **1,000** people
- Engineered automation script for web scraping using **Python** (Selenium, Pandas), **TSQL**, and **Microsoft Azure**, cutting monthly department costs by **15%**
- Deployed the script on an **Azure Pipeline**, applying fundamental **CI/CD** principles to reduce manual labor work by **100+** hours monthly
- Maintained smooth flowing technical services using **Azure Active Directory**, resulting in a **20%** reduction in administrative overhead
- Networked with other mental health experts to further understand and solve mental health problems across Canada, as well as explore technical solutions in the mental health industry

## Projects

### Verve | Java, PostgreSQL, Angular, AWS

[Website Link](#) | [Github Doc](#)

- Developed a scalable full-stack social-media application, utilizing various **REST API** calls to communicate and post content
- Hosted on an **Amazon (AWS) EC2** instance, allowing for easy web-scaling of the microservice
- Conceptualized and designed an **Angular** frontend paired with a **SpringBoot** backend allowing for a robust application
- Leveraged a **PostgreSQL** database for storing user information, handling over **100+** database queries daily

### Sorting & Pathfinding Visualizer | JavaScript, React, HTML, CSS

[Website Link](#) | [Github Doc](#)

- Built a **React** application to visualize and demonstrate various sorting and pathfinding algorithms on arrays and graphs
- Implemented **6** commonly used sorting algorithms and developed unique pathfinding algorithms inspired by **Dijkstra's Algorithm**.
- Documented coding progress using **Mermaid Flowcharts** on a **Github** repository, highlighting growth and ability to work with different frameworks.

### Takumi A.I. | Python, Machine Learning

[Github Doc](#)

- Developed a single player endless runner game using **PyGame & Python**, leveraging various **Machine Learning** models
- Implemented **multi-threading** to improve game performance, resulting in a **20%** increase to player's frames
- Incorporated a **Neuroevolution of Augmenting Topologies** (NEAT) algorithm to run and evolve artificial neural networks, optimizing species population and A.I. run-time length by **15%**
- Documented the code for the **NEAT** algorithm and running the game on a local machine on a **Github** repository, demonstrating excellent communication and organization

### Personal Portfolio | JavaScript, React, CSS

[Website Link](#) | [Github Doc](#)

- Developed a full-stack static portfolio displaying personal projects resulting in **200+** visits monthly
- Deployed on **Cloudflare Pages**, effortlessly integrating Git and a **CI/CD** pipeline using **Travis CI**
- Leveraged **React.js** and enforced coding standards using **ESLint** resulting in an **A** grade maintainability with Code Climate