

Ehan Idrak Hassan

Ottawa, ON • ehan20204@gmail.com • [LinkedIn](#) • [Portfolio](#) • [Github](#)

EDUCATION

Carleton University

Ottawa, Ontario

Bachelor of Computer Science Honours - Computer Science: Cybersecurity Stream

Sept 2022 – Apr 2026

Awards: Carleton University In-Course Scholarship (Merit-Based Scholarship)

Selected Coursework: Abstract Data Types & Algorithms, Discrete Structures I & II, Systems Programming, Fundamentals of Web Applications, Programming Paradigms, Database Management Systems, Linear Algebra I & II, Calculus, Object-Oriented Software Engineering, Operating Systems, Statistical Modeling, Computer Game Design & Development, Applied Cryptography and Authentication

TECHNICAL SKILLS

Languages: Java, C++, C#, JavaScript/NodeJS, Python, Godot, HTML/CSS, SQL, Lua, GML

Developer Tools: SQLite, Linux Oracle Virtual Box, SQL Server, MongoDB, ReactJS, Elastic, Blue Prism, Visual Studio Code, IntelliJ IDEA, NetBeans, Git, Arduino, CMake, Tableau, GitHub, OpenGL, Eclipse, PyCharm, Unity, Unreal Engine, Vite, Multer, Axios, CORS

PROJECTS

LocutusAI - AI Speech and Presentation Coach

Ottawa, Ontario

Backend Developer

Sept 2024

- Developed as part of a hackathon, built a scalable backend using Node.js and Express.js, integrating the Deepgram API to analyze user speech for filler words, stuttering, and tone, enabling detailed feedback for improving presentation skills.
- Implemented secure file handling with Multer, and ensured seamless data processing with axios, optimizing real-time analysis for both audio uploads and live speech input.
- Configured CORS to support cross-origin requests, enabling smooth integration between the React front end and backend services for a responsive user experience.

Advanced OpenGL C++ Game Framework System

Ottawa, Ontario

Developer

Jan 2024 - Apr 2024

- Developed a game framework system using OpenGL, C++, and CMake, incorporating motion animation, transformations, and shaders, with hierarchical object management for efficient rendering.
- Enhanced gameplay by implementing AI pathfinding using Dijkstra's and A* algorithms, alongside a dynamic maze generation system, resulting in a 40% increase in user engagement.

Spotify/iTunes Inspired Music Playlist Software App

Ottawa, Ontario

Developer

Oct 2023 - Dec 2023

- Engineered a full-stack web application using Node.js and SQLite, allowing users to create, modify, and manage personalized music playlists with seamless song search functionality.
- Developed a user authentication system that includes guest registration and secure login functionality, with persistent user data storage using SQLite and SQL databases.
- Integrated iTunes API to enable real-time song retrieval and enhanced the user experience by preventing duplicate entries and supporting custom playlist sharing, leading to a 30% increase in user retention and satisfaction.

WORK EXPERIENCES

SPDA Education

Brampton, Ontario

Tutor / L2L (License 2 Learn Tutor)

Dec 2020 – Aug 2022

- Certified Tutor specializing in math, science, and programming for K-8 students, employed tailored teaching strategies to address unique learning styles.
- Proven Success: Collaborated with 20+ students, achieving an average 15% improvement in test scores and boosting academic confidence.

Coding Tutor

Brampton, Ontario

Python, Java, JavaScript, C++ Instructor

Mar 2020 – Dec 2020

- Led Online Coding Sessions for grades 8-12, covering fundamental to advanced Python, Java, C++, and JavaScript topics.
- Mentored Students in problem-solving and coding best practices, leading to higher project completion rates and positive participant feedback.