Brendan Gorchinsky

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EDUCATION

Western University

September 2021 – June 2025

Bachelor of Engineering Science – Software Engineering | GPA: 3.61 / 4.0 (88%)

• Dean's Honor List (2021 – 2025), Western AI Developer, UES Conference Delegate Selection Committee

TECHNICAL SKILLS

Programming Languages: C#, TypeScript, JavaScript, Python, C++, HTML/CSS, SQL **Libraries and Frameworks**: ASP.NET Core, React.js, Node.js, Express.js, OpenGL **Tools and Platforms**: Git/GitHub, SQL Server, Microsoft Azure, Unity, Postman

EXPERIENCE

Summer Student, Golf Operations

June 2024 – August 2024

City of Hamilton

- Operated ride-on and handheld equipment to maintain the tee decks, greens, and bunkers.
- Applied soil and seed to the tee decks to support turf regeneration and repair where needed.

Estimating Student (Coop)

May 2022 – August 2022

PCL Construction

• Assisted in closing the tendering stage for 2 separate divisions- miscellaneous metals, and demolition for a multimillion-dollar special project by communicating with subtrades and performing on-screen takeoffs.

PROJECTS

AppTrack | C#, TypeScript

- Created a **full-stack** web application for managing and tracking job applications featuring built-in analytics to display application outcomes and trends.
- Designed and built a **RESTful Web API** backend in **ASP.NET Core**, interacted with by a **React.js** frontend, using **SQL Server** for storage enabling CRUD operations on job applications, updates, and accounts with authentication.
- Implemented secure authentication and authorization using the ASP.NET Core Identity framework with JWT access and refresh tokens stored in HTTP-only cookies.
- Deployed and hosted AppTrack on Microsoft Azure using App Services and Azure SQL Database, with automated CI/CD pipelines configured with GitHub Actions.

Easy Metrics | C++

- Developed a Windows application for monitoring real-time AMD GPU and CPU hardware performance metrics.
- Utilized SFML with ImGUI for window creation providing deep customization for the on-screen metrics overlay.
- Gathered over **10 real-time hardware performance metrics** per second using **ADLX** for interfacing with AMD hardware and used **C++** optimizations to avoid impacting system performance.

Animal Image Clustering Model | Python

- Built an unsupervised image clustering system in Python to group images of five animal species using K-Means.
- Preprocessed and extracted features from raw image data for clustering and visualization.
- Applied feature extraction techniques to improve clustering quality and explored integration with transfer learning.

Rustborn: A 2D Sandbox Game | C#, Unity

- Collaborated with an **Agile** team using Unity VC, and **Jira** with **Confluence** to design and develop a 2D sandbox game featuring mining, crafting, building, and combat mechanics in a procedurally generated world which was voted as a **top 5 software engineering capstone project** of the year by classmates.
- Developed a procedural world generation system using random binary maps and the **marching squares algorithm**, with cave and ore structures generated via a **random walk algorithm**.