Eric Solak

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EDUCATION

McMaster University | Hamilton, ON — 2022 - Present

Degree: Bachelor of Software Engineering, 4th-year

- cGPA: 3.70/4
- Relevant courses: Data Structures and Algorithms, Object-Oriented Programming, Software Design III, Software Testing

TECHNICAL SKILLS

Programming Languages

- Python, C++, Java, JavaScript, HTML/CSS, C, SQL, Haskell, Bash, MATLAB

Development Tools

- Git, PyTorch, TensorFlow, JUnit, Maven, UML, SonarQube, SQLite, WSL, Apache Commons CLI, Expo

WORK EXPERIENCE

Brantford Golf and Country Club | Brantford, ON — Sep 2019 - Present

Outdoor Golf Services Leader

- Overseeing the maintenance of the golf cart fleet, ensuring optimal functionality and an excellent member-guest experience.
- Developed a **digital system using Python to efficiently track staff attendance** and clock-in/clock-out times.
- Serving as a member of the **Health and Safety Committee** to promote workplace safety and compliance.

PROJECTS

Capstone Project - Hands-free AI Dictation — Sep 2025 - Present

- Developing server-side architecture, including API routes and backend services to support **real-time AI processing**.
- Implementing **data pipelines and integration with AI models** for speech-to-text functionality.
- Authored technical documentation and system diagrams to support development, testing, and future maintenance.

Neural Network Wildfire Risk Classification | Python, PyTorch — Sep 2025 - Dec 2025

- Developed a neural network to classify regions into low, medium, and high wildfire risk using 118k+ samples from NASA FIRMS and Open-Meteo.
- **Significantly outperformed baseline classifiers** by achieving a 94.3% test accuracy and high F1-scores across all classes.

AI Mobile Application - SneakPeek | Python, PyTorch, React, JavaScript — Jan 2025 - Mar 2025

- Developed mobile app for **AI-powered sneaker identification** and social forum.
- **Trained custom AI model** using a DenseNet201 architecture on a custom dataset for sneaker identification.
- Integrated backend with Blackboard Architecture style to incorporate a multi-agent system to **optimize prediction accuracy**.

Simulated Drone Rescue Mission | Java, JUnit, Maven, Git — Sep 2023 - Dec 2023

- Developed **autonomous flight software** over procedurally generated islands in a major three-person project at McMaster University.
- Designed and executed **test cases with JUnit** to verify functionality of software components.

LEADERSHIP EXPERIENCE

Impact Initiative | McMaster University — Mar 2023 - Apr 2023

Coordinator

- IMPACT (Interdisciplinary, Mentorship, Practical, Applied, Community, Transformative) Initiative, an interdisciplinary collaborative project in which students create devices to help those living with various medical conditions.
- Collaborated with a team of Engineering students to refine the ergonomics and functionality of an adaptive kitchen tool, resulting in an intuitively usable and effective device for individuals with visual impairments.