

Will McIntyre

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Skills

Software

Languages: Python, C++, SQL (MySQL, SQLite), HTML5/CSS3, C#, C, VBA
Tools: Flask, Git, Bash./Shell, Linux, Agile Development, ASP.NET

Hardware & Manufacturing

Tools: SOLIDWORKS, GD&T, PCB Construction, ERP Software, AutoCAD, PIC Microcontroller Programming
Methodologies: VSM, Process-Flow Analysis, LEAN Manufacturing

Professional Experience

05/2023 – 08/2023
Guelph, Ontario

Process Improvement and Design Engineer, Metalumen Manufacturing Inc.

- Overhauled manufacturing production workflows and mechanical designs, resulting in annual savings over **\$85 000** and **2200** working hours.
- Implemented **LEAN** manufacturing principles and redesigned lighting fixture components in **SOLIDWORKS** for standardization.
- Led the design, scaling and deployment of an automation application using **Python** and **VBA**, resulting in a **350%** reduction in time study analysis.

07/2021 – 08/2021
Waterloo, Ontario

Software Engineering Intern, SSIMWAVE Inc

- Collaborated directly with the head of Engineering and DevOps team of ~15 members, building integrated **command line** tools and unit tests with Python that were directly pushed to the SSIMWAVE main branch.
 - Redesigned and optimized Gitlab's Pipeline **REST API** integration, leveraging **MySQL** and **JSON** data handling techniques in an Agile development environment.
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Projects

08/2023 – 09/2023

Mindfuel, Flask Web Application, CLI [↗](#)

- Conceptualized, designed, and developed Mindfuel, a **Flask**-based web application with a back-end CLI hosted on the **PythonAnywhere** cloud that sends inspirational quotes daily to subscribers.
- Leveraged modular OOP principles and integrated the **SQLAlchemy ORM** with a **MySQL** database for scalability, currently in use by **20+** subscribers.

02/2023 – 03/2023

will-mcintyre04.github.io, Portfolio Website [↗](#)

- Customized and deployed a portfolio website using **HTML**, **CSS** and **SCSS** showcasing skills and projects.
 - **100+** unique website impressions since deployment.
 - Tracked and resolved 20+ issues using Atlassian's **Jira** Software and **Kanban** board, linked to **GitHub** repository.

01/2023 – 02/2023

Questionable Questions, .NET Web Application [↗](#)

- Developed a web application using **ASP.NET Core 6.0** and the **MVC** design pattern in **C#**, **HTML** and **CSS** that tracks memorable questions asked in lecture in a local database.

09/2022 – 12/2022

Tic-Tac-Toe Robot, MTE 100/121, University of Waterloo [↗](#)

- Designed a robot using a LEGO EV3 and **RobotC** that successfully plays Tic-Tac-Toe against a user.
- Integrated hardware and software design, employing a Minimax algorithm with input from an array of color, IR, ultrasonic, and gyro sensors, resulting in a **40%** reduction in response time. Photos here [↗](#).

01/2022 – 06/2022

Firefighter Robot, TEJ4UI, Laurel Heights Secondary School

- Modelled and produced a robot in a partnership from scratch capable of detecting, approaching and extinguishing a flame while navigating a maze.
 - Streamlined PCB development and soldering while troubleshooting and programming **microcontrollers**, increasing time efficiency navigating the maze by **200%**.
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Extra Curriculars

09/2022 – 04/2027
Waterloo, Ontario

University of Waterloo Varsity Men's Volleyball, University of Waterloo

- Demonstrated **leadership** as assistant captain within a 20 member team, contributing to common goals and influencing individuals.
 - Training **25+ hours** a week while balancing academic classes.
 - Ken Davies Memorial Award Recipient. [↗](#)
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Education

09/2022 – 04/2027
Waterloo, Ontario

Candidate for Mechatronics Engineering, University of Waterloo

- Relevant courses include MTE 100 (AutoCAD, Solidworks design), MTE 121 (C++ , RobotC), MTE 140 (Algorithms and Data Structures) and MTE 262 (Microprocessors and Digital Logic)
 - Paul Craven Engineering and Athletics Excellence Award [↗](#) , President's Scholarship of Distinction
 - 91.18 Cumulative GPA
 - Academic All Canadian