

Alexander Jando

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SUMMARY

Engineering student at McMaster University with strong experience in software, robotics, and hardware systems. Proven ability to design, build, and deploy real engineering solutions including AI software, autonomous vehicles, and mechanical systems.

Experienced working in high responsibility environments and delivering working technical products.

EDUCATION

McMaster University

Bachelor of Engineering (B.Eng.), General Engineering

Focus: Mechatronics, Computer and Mechanical Engineering

Expected Graduation: 2029

École Sentinel Secondary School

Bilingual Dual Dogwood Diploma

TECHNICAL SKILLS

Programming: Python, C++, Java, JavaScript, MATLAB

Web: HTML, CSS, React, Next.js, Flask

Databases: SQL (SQLite), MongoDB

AI and Computer Vision: NLTK, OpenCV, NumPy

Version Control: Git

Operating Systems: Linux, Windows

Embedded Systems: Arduino, Raspberry Pi, Jetson Nano

CAD: Autodesk Inventor, OnShape

Cloud and Hosting: Oracle Cloud, Cloudflare Tunnel, GitHub Pages

EXPERIENCE

McMaster University

Engineering Project Manager & Software Lead

September 2025 – December 2025

- Led and coordinated a multidisciplinary engineering team through planning, design, and final system delivery
 - Managed project scope, timelines, and task allocation across mechanical and software components
 - Designed mechanical parts in Autodesk Inventor and manufactured components using 3D printing and laser cutting
 - Developed Python-based control software and integrated Raspberry Pi and Arduino motor control systems
 - Oversaw system integration and testing to achieve reliable, repeatable robotic performance
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Hypercharge Canada

EV Charger Technician Intern

June 2023 – August 2023

- Prepared and configured over 100 EV charging stations for deployment by initializing firmware and registering units on the Hypercharge network
 - Disassembled and repaired malfunctioning or uncalibrated chargers by replacing internal hardware components
 - Performed hardware testing, electrical checks, and quality control to ensure devices were field ready
 - Used hand and power tools including drills and screwdrivers to assemble and service units in a warehouse production environment
 - Documented device status and followed strict safety and quality procedures
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Hollyburn Country Club

Lifeguard and Swim Instructor

August 2024 – June 2025

- Ensured safety of swimmers through active surveillance, emergency response, and risk assessment
 - Instructed swimmers of all ages, developing strong communication and leadership skills
 - Maintained compliance with safety and operational standards
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Whistler Blackcomb

CSIA Level 2 Ski Instructor

November 2022 – May 2024

- Delivered technical skiing and mountain safety instruction to individuals and groups
 - Assessed performance and adapted lesson plans to student ability
 - Worked in high-risk outdoor environments requiring responsibility and clear decision making
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PROJECTS

NoNotes – AI Powered Note Taking Platform

Hackathon Project | Backend Lead

- Built the backend AI system for an audio to text and note summarization platform used in a 48-hour hackathon
- Developed a Flask API and SQLite database to store, process, and retrieve user notes
- Implemented natural language processing using NLTK to extract and summarize important information from text
- Integrated speech to text processing to convert spoken audio into searchable notes
- Designed system logging and API endpoints to support a full web-based frontend
- Project won first place at HappyHacks II

Video Demo: <https://www.youtube.com/watch?v=EBiBeUzb0xY>

Skydle – Online Wordle Game for Hypixel Skyblock

Solo Project

- Designed and built a full stack interactive web game using React and JavaScript
- Pulled live game data from an external API to dynamically generate puzzles
- Deployed a production version on GitHub Pages with a public live demo
- Improved on the original concept by adding enhanced logic, UI, and gameplay features

Live demo: <https://alex-jando.github.io/Skydle/>

PY-RAT – Python Remote Administration Tool

Solo Project

- Designed and built a complete remote administration system in Python
- Created a custom socket-based communication protocol for efficient data transfer
- Implemented live camera streaming using OpenCV and NumPy
- Developed security research features including credential access testing and remote command execution
- Packaged the full application into a distributable executable using PyInstaller

GitHub: <https://github.com/Alex-Jando/PY-RAT>

FIRA RoboWorld Cup Autonomous Race Car

Team Project | National 1st Place, International 2nd Place

- Designed and built an autonomous line following race car with a teammate
- Programmed Raspberry Pi and Arduino systems using Python and C
- Used a Logitech camera and computer vision edge detection to track road lines in real time
- Implemented a PID controller to adjust steering based on visual input
- Performed extensive physical testing and tuning to achieve reliable race performance

News Article: <https://www.nsnews.com/local-news/west-van-high-school-trio-wins-national-robotics-championship-sets-eyes-on-world-stage-8817010>

Q-Arm Order Packing Robot

Team Project | ENG 1P13 Engineering Design Project

- Designed and modeled a custom robotic end effector in Autodesk Inventor
- Built control software to automate object pickup and placement
- Created mechanical CAD assemblies and tested gripping mechanisms for reliability

Project Site: <https://www.notion.so/P-1-Robotic-End-Effector-System-2c2a5473791681db954af45b4c336348?pvs=74>

AI Short Story Video Generator

Solo Project

- Built a locally run AI system that generates short form videos from a single prompt
- Automated story generation, image creation, and video rendering into a complete pipeline

Sample Video: https://github.com/Alex-Jando/AIShortStoryVideoMaker/raw/refs/heads/master/examples/sample_video.mp4

HTTP-PyServer

Solo Project

- Created a lightweight Python HTTP server framework focused on simplicity and performance
- Published the package to PyPI for public installation and use

PyPi: <https://pypi.org/project/HTTP-PyServer/>

Personal Engineering Portfolio

Solo Project

- Designed and built a responsive engineering portfolio using Next.js, HTML, CSS, and JavaScript
- Implemented server-side rendering and SEO to improve load times and search visibility
- Deployed on a Linux server running in Oracle Cloud with Cloudflare Tunnel for secure 24/7 access
- Managed hosting, updates, and version control using Git to maintain a live production site

Live Site: <https://jando.live>

MyPlate – Nutrition and Macro Planner

Team Project | Awarded Developer of the Year

- Built a mobile nutrition and meal planning application using Java in Android Studio
- Designed features for tracking macronutrients, meals, and daily nutrition goals
- Implemented data storage and retrieval to save user food logs and preferences
- Developed a clean and simple user interface focused on usability and fast data entry

GitHub: <https://github.com/Alex-Jando/GOA2023-MyPlate>

CERTIFICATIONS

National Lifeguard

Standard First Aid and CPR C

Swim and Lifesaving Instructor

CSIA Level 1 Ski Instructor

CSIA Level 2 Ski Instructor

DELF B2 French Certification

AWARDS

1st Place, HappyHacks II Hackathon

1st Place, FIRA RoboWorld Cup National Autonomous Car Division

2nd Place, FIRA RoboWorld Cup International Autonomous Car Division
CyberTitan Platinum Division
Developer of the Year, GameOfApps

INTERESTS

Robotics, Artificial Intelligence, Mechanical Systems, Coding Competitions, Skiing, Rugby, Gym

LANGUAGES

English (Native)
French (Fluent, DELF B2)

REFERENCES

Available upon request