

Matthew Salazar

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🧠 SKILLS

Languages

Java, C/C++, Python, VHDL, HTML, CSS, MatLab

Developer Tools

Git, GitHub, Visual Studio Code

Operating Systems

Windows, MacOS, Linux

Computer-Aided Design (CAD)

Solidworks, AutoCad, KiCad, Fritzing

🎓 EDUCATION

Bachelor of Engineering: Computer Engineering (Co-op)

University of Guelph

09/2022 – 04/2027

Guelph ON, Canada

- **Relevant Coursework:** Data Structures, Digital Systems Design.

📁 PROJECTS

WIRELESS ROBOTIC HAND [🔗](#)

Arduino, C++, Solidworks, Fritzing

- Designed 3D-printed robotic hand in **SolidWorks**, enabling dynamic gesture replication.
- Established wireless communication between **Arduino Nano's** with NRF24L01 transceiver modules.
- Implemented data transmission and servo control through **C++** microcontroller programming.
- Featured on the **University of Guelph's College of Engineering & Physical Sciences** website [🔗](#).

FILE PROCESSING SYSTEM [🔗](#)

Java, Object-Oriented Design, API, Git

- Created a **JSON**-based file processing system, which took in defined processing elements with local or remote operations.
- Extracted file content and size, then filtered files based on specified conditions.
- Integrated **Laserfiche API** for remote directory access.

CRYPTOMAGIC [🔗](#)

C, Algorithm Design, Git,

- Developed a file encryption tool with a **custom encryption method**.
- Supported both **encryption** and **decryption** of files through command-line arguments for file path and operation selection.
- Achieved secure data transformation with user-defined encryption logic.

ALARMBOT [🔗](#)

Python, API, Git

- Created an alarm bot using **Discord's API** and asyncio library for timely notifications
- Provided personal notifications for exams and tests, with a custom message specified by the user.

🏢 EXPERIENCE

Electrical Team Member

University of Guelph Robotics

09/2022 – Present

Guelph ON, Canada

- Utilizing **KiCad** to create schematic designs and layouts for custom PCB.
- Ensuring proper cable management and routing to minimize interference and maximize reliability.
- Conducted in-depth research on RS485 communication protocols

Summer Student

Utilicon Engineered Precast Structures

05/2023 – 09/2023

Bradford ON, Canada

- Prepared moulds for concrete pouring by creating rebar foundation, cleaning and oiling.
- Achieved a smooth finish to the product by vibrating and floating the concrete
- Performed general maintenance duties.

🏠 COMMUNITY INVOLVEMENT

Big Buddy

University of Guelph Engineering Society

09/2023

Guelph ON, Canada

- Provided guidance and mentorship to incoming computer engineering students, by sharing personal experiences and facilitating open discussions.
- Created a supportive environment where engineers could connect and build relationships through various activities.