# Matthew Salazar

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## EDUCATION

**Bachelor of Engineering: Computer Engineering (Co-op)** 09/2022 – 04/2027
*University of Guelph* Guelph ON, Canada
- **Relevant Coursework:** Data Structures, Digital Systems Design.

## SKILLS

**Languages**
C/C++, Java, 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

## PROJECTS

**WIRELESS ROBOTIC HAND** 05/2023 – 09/2023
*Arduino, C++, Solidworks, Fritzing*
- Designed a 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** 01/2023 – 05/2023
*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.

**ALARMBOT** 06/2023 – 08/2023
*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.

**CRYPTOMAGIC** 11/2022 – 12/2022
*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.

## EXPERIENCE

**Electrical Team Member** 09/2022 – Present
*University of Guelph Robotics* Guelph ON, Canada
- Utilizing **KiCad** to implement a PCB breakout for the GPIO Expansion Connector on the **Rudi-NX**, sorting all required connections together.
- Ensuring proper routing to minimize interference and maximize reliability.
- Conducting extensive research on the **RS485** communication protocol.

**Summer Student** 05/2023 – 09/2023
*Utilicon Engineered Precast Structures* 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** 09/2023
*University of Guelph Engineering Society* 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.