Moaz Sholook

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EDUCATION

Carleton University <div align="right">**April 2027**</div>

Bachelor of Computer Science Honours, Software Engineering & AI/ML Stream - CO-OP option <div align="right">*Ottawa, ON*</div>

- **GPA:** 3.3/4.0
- **Relevant Course Work:** Object Oriented Programming (Java), Object Oriented Software Engineering (C++), System Programming (C), Software Engineering (C++), Web Development (HTML/CSS/JavaScript)

TECHNICAL SKILLS

Languages: C/C++, Embedded C, JavaScript, HTML, CSS, Java, Python, Swift, SQL, Go, Rust, Ruby
Frameworks: Spring Boot, React.js, Node.js, Express, Tailwind CSS, JavaFX, Flask, TensorFlow, PyTorch
Developer Tools: Linux, MacOS, Eclipse, Git, JIRA, Bitbucket, Sourcetree, Visual Studio Code, Jenkins
Other: Raspberry Pi, Arduino

EXPERIENCE

Student Programmer/Analyst <div align="right">**January 2025 - Present**</div>

Innovation, Science and Economic Development Canada <div align="right">*Ottawa, ON*</div>

- Designed and implemented dynamic user interfaces by developing **LWCs** using **Salesforce** technologies
- Optimized **JavaScript** classes that incorporate **SQL queries** and **DML** operations to streamline processes
- Followed **Agile** methodologies regarding software development and deploying code from QA to Production
- Completed **1-2 bugfix/feature tickets per week**, contributing to a **4%** increase in MyCIPO adoption rates
- Modified **JavaScript and HTML** code of a page to update button disable logic, preventing users from violating guidelines, streamlining the application acceptance process and reducing immediate application rejections by **20%**
- Refactored **Java** code and **RESTful APIs** to reduce code smells by **87%** to improve maintainability
- Utilized **Jenkins** for debugging and checking build errors

PROJECTS

Insulin Pump Simulator | *Qt C++* <div align="right">[Demo](#) [Github](#)</div>

- Built a real-time, intuitive GUI with **Qt Widgets** to show insulin levels, battery status, and glucose trends
- Displayed a live, glucose chart using **QtCharts** based on both user input and CGM data stored in a **CSV** file
- Connected components using Qt's **signal-slot** system, QTimer and **multithreading** for real-time updates
- Used **C++ STL** and **JSON** for file I/O, error handling, and data structure management and profile storage

Smart Environmental Monitoring System | *ESP32, Embedded C* <div align="right">[Github](#)</div>

- Programmed real-time control loops in **Embedded C** on the ESP32 for sensor sampling and data analysis
- Interfaced **DHT11**, **photoresistor (LDR)**, and microphone sensors using custom analog and digital circuits
- Designed and wired the full system on a breadboard, optimizing layout for signal integrity and modulaturity
- Displayed live and averaged environmental data on a **16x2 LCD** using the **LiquidCrystal** library
- Resolved inconsistent sensor readings through iterative circuit tuning and serial-based software debugging

Momento - Hack the Hill 2024 | *Python, Raspberry Pi, MongoDB, ReactJS* <div align="right">[Github](#)</div>

- Assembled a device using a **Raspberry Pi** and a compact webcam to create a fully functional wearable
- Automated image capture functionality using **Python (OpenCV)**, ensuring efficient processing of visual data
- Integrated **OpenAI's image recognition API** to analyze captured images and describe them in real time
- Configured a **.env** file to manage environment variables and deploy the Flask server for backend integration
- Designed and implemented a **MongoDB** database to store captured images and their corresponding descriptions
- Developed a **ReactJS** web app with an AI-powered chat assistant (**ChatGPT API**) and a journaling interface
- Leveraged **Git** for effective version control and team collaboration throughout the development process

EXTRACURRICULARS

Carleton BioCare - Software Developer <div align="right">**March 2025 - Present**</div>

- Designed the PCB for the prosthetic arm's control system, ensuring seamless integration with ECG sensors.
- Programmed finger flexion using ESP32, optimizing motor control for responsive movement.
- Developed a **React Native** mobile app, enabling wireless control and real-time feedback for user interaction.