Falah Sheikh

+1 (587)-969-6241 | falah.h.sheikh@gmail.com | LinkedIn | GitHub | falahsheikh.com

Education

University of Calgary — *Calgary, AB*
Bachelor of Science in Computer Science — *Aug. '22 – Sept. '26*

Experience

Software Engineer — *Calgary, AB*
Engenuics Technologies Inc — *Sep. '23 – Present.*

- Mastered the technical intricacies of embedded hardware and firmware, demonstrating a deep understanding of their interplay.
- Engineered robust solutions for embedded systems using IAR Systems and Altium Designer, ensuring adherence to stringent standards.
- Drove efficient firmware development through adept C programming skills, strategically optimizing code for resource-constrained environments.
- Applied expertise in utilizing APIs for seamless program integration within existing frameworks, showcasing adaptability and a keen understanding of software integration.
- Critical testing and troubleshooting skills with essential lab equipment.

Software Engineer — *Calgary, AB*
TechStart UCalgary — *Oct. '22 – Apr. '23*

- Collaborated with a cross-functional team of six to deliver a project within a set timeline and scope.
- Implemented object recognition and distance estimation using Python and OpenCV to develop a robotic arm that could adapt and learn from real-time data.
- Developed a custom OpenAI gym environment for the Kinova Gen 3 robotic arm, which enabled simulated training and provided a platform for testing and fine-tuning.
- Transferred the learned policy to the physical robot in just 2.5 days using computer vision through OpenCV, enabling the robot to successfully pick-and-place objects, demonstrating the ability to apply innovative technologies to real-world problems.
- Video Demonstration | GitHub Repository

Robotics Team Engineer — *Calgary, AB*
Alberta Collegiate Robotics — *Sep. '22 – Mar. '23*

- As part of a three-person team, collaborated to design, develop, and engineer an autonomous sumo bot with specific dimensions of 10 by 10 centimeters using CAD software.
- Set up motor and sensor configuration for the sumo bot and calibrated sensors for optimal function using Arduino.
- Implemented autonomous control algorithms for the sumo bot to navigate its environment and optimize movements for competitive advantage during matches.
- Video Demonstration | GitHub Repository

Projects

AMSystem | *Python, Tkinter, MySQL* — *Mar. '22 – May. '22*

- Developed GUI applications using the Python Tkinter library for database management systems with features such as input validation and data storage in a MySQL database.
- Integrated MySQL databases with Python to establish a connection and perform CRUD operations on "student records" and implementing error handling for smooth execution.

Technical Skills

Languages: C/C++, Python, HTML/CSS, SQL, Java
Frameworks: Flask, OpenCV, JUnit
Developer Tools: Git, VS Code, PyCharm, IntelliJ IDEA, IAR Embedded Workbench, CLion