Fareed Rasheed

152 Burnham Crescent, Cambridge, Ontario
226-218-6772 fsrasheed2017.com www.linkedin.com/in/fareed-rasheed/ https://fareedrasheed.github.io/

Education

University of Waterloo **2024-2029**
BASc; Mechatronics Engineering *Waterloo, ON*

- Relevent Courses: Data Structures and Algorithms, Mechatronics Engineering, Circuits, Digital Computation

Work Experience

Swish Solar **Jan 2025 - May 2025**
Engineer Assistant *Kitchener, ON*

- Engineered a prototype for a self-cleaning solar panel system, increasing efficiency by 40% through automated dust removal.
- Developed an advanced prototype of a thermal management system, enhancing solar panel performance by 10% with optimized heat dissipation.
- Designed and simulated high-voltage power electronics using PSpice, ensuring precision and reliability.
- Collaborated with an interdisciplinary team to launch a pilot program to deploy our prototypes in real-world conditions
- Conducted market research to identify industry challenges and develop innovative solutions to increase the efficiency of solar panels

Projects

Lego CNC Milling Machine | *C++, Robotics* **Fall 2024**

- Designed and built a 3-axis milling machine using Lego, programmed in C++.

EnerPro; HVAC and Energy Auditing App | *Java, Android Studio* **Winter 2025**

- Created an Android application using Java and Android Studio to streamline the data collection process of HVAC and energy consultants during on-site reviews.
- Built an intuitive UI for managing user projects, enabling seamless storage, tracking, editing and exporting of data.
- Conducted customer and business outreach to assess demand, refine product design, and ensure market viability

Arduino Sign Language Interpreter | *C++, Arduino, ML* **Fall 2024**

- Designed a sign language interpreter using C++, Arduino and accelerometers with Bluetooth capabilities.
- Implemented an Example-based Sensor Prediction (ESP) system to train a machine learning algorithm to detect and identify gestures to convert motion into speech.
- Pitched the prototype to a panel of judges.

Arduino 3-axis Robot Arm | *C++, Arduino, 3-D Printing, CAD* **Summer 2024**

- Developed a custom 3-axis robotic arm, leveraging OnShape for design, 3D printing for fabrication, and C++/Arduino for programming.

Technical Skills

Software / Hardware: Python, Java, C++, Android Studio, Arduino, ESP32, Circuitry, PSpice
Design: SolidWorks, Fusion360, AutoCAD, 3D Printing, Laser Cutting, Rapid Prototyping

Leadership / Extracurricular

Waterloo Rocketry **Fall 2024 – Present**
Controls Subteam *University of Waterloo*

- Developed state estimation model to compute the status of the rocket used to control canards to eliminate roll, significantly increasing performance, apogee and stability of the rocket.