Haseeb Shaikh

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Education

McMaster University — Hamilton, ON
B.Eng, Computer Engineering (ECE) — *Expected Graduation: April 2027*

- Deans' Honour List Scholar | **GPA: 3.79/4.0**
- **Relevant Coursework** : Data Structures and Algorithms, Principles of Programming, Logic Design, Microprocessor and Embedded Systems Design, Circuits and Waves, Electronic Devices and Circuits

Experience

Sales Associate — August 2023 – Present
Columbia Sportswear Company — *Halton Hills, ON*

- Assisted **100+** customers per shift and accurately processed up to **300 transactions** daily.
- Consistently exceeded **sales targets**, personally generating **$2,000+** in single shifts.
- Managed **inventory flow**, restocking **100+ SKUs** per day using **store systems**.
- Received **positive customer reviews** and **employee appreciation cards** from store managers.

Team Member — Jan. 2025 – Present
McMaster Robo Sub — *Remote*

- Researched **pressurization systems** for underwater enclosures in AUVs.
- Assisted in evaluating **material trade-offs** in mechanical design.
- Contributed to integration discussions with **embedded systems**.

Projects

CampConnect | *Node.js, Express.js, MongoDB, Mongoose, Cloudinary, MapTiler, Passport.js, Render, Bootstrap*

- Built a **CRUD-based web platform** enabling users to browse, create, and manage campground listings.
- Implemented **secure user login** and **role-based authorization** to protect user-generated content.
- Integrated **MongoDB Atlas** for scalable cloud data storage and **Cloudinary** for image upload and delivery.
- Designed **dynamic routes** and templated views for a seamless, user-friendly experience.

Embedded Spatial Mapping Project | *C, Python, Assembly, Microcontroller Systems*

- Developed a microcontroller-based system for **360° spatial scanning** using stepper motor and ToF sensor.
- Programmed data acquisition and control logic in C with **I2C/UART protocols** for real-time measurements.
- Utilized Python to generate **3D models** from raw sensor measurements, enabling detailed spatial visualization.
- Optimized system performance, improving scan accuracy and speed by over **50%** through testing and calibration.

Snake Game | *Visual Studio, C++, Object-Oriented Programming (OOP)*

- Developed a **C++ version** of the classic Snake Game by fully utilizing **OOP principles**.
- Implemented **advanced gameplay features**, including **dynamic speed control**, to enhance interactivity and provide a more engaging user experience.
- Designed and optimized the **user interface** to improve usability, enhancing responsiveness and interactivity through **iterative testing and development**.
- Applied **advanced debugging** and **memory management**, ensuring **zero memory leaks**.

Revenge of the Recycling System | *PyCharm, Python, Rasberry Pi, Autodesk Inventor, PrusaSlicer*

- Designed an **automated sorting system** for the **Quanser Q-arm robotic platform** by developing Python code, achieving a **40% increase in sorting speed** and a **20% reduction in error rates**.
- Designed and simulated **hopper-lifting mechanism** in **Autodesk Inventor**, then **prototyped with 3D printing**.
- Tested **robotic workflows** in a **digital environment** using **PyCharm** for code development.

Technical Skills

Programming Languages: Python, Java, C/C++, HTML, CSS, JavaScript, Assembly, HDL (Verilog), Matlab
Programming Environments: Visual Studio, IDLE, NetBeans, Quartus, Keil uVision5
Developer Tools: Git, GitHub, AutoDesk Inventor, AutoCAD, Solid Works, PrusaSlicer (3D Printing), Ansys Granta Edu, PSpice, WaveForms - Digilent Reference, React.js, Express.js, Bootstrap, Bulma, Node.js, MongoDB, Mongoose, EJS, Passport.js, Helmet, Cloudinary, Render, MS Office
Lab Equipment: MSP432E401Y Microcontroller, Oscilloscopes, Multimeters, Function Generators, etc...