Yousif Fadhel

Electrical and Biomedical Engineer

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SKILLS

Programming Languages - Python, Java, C, C++, HTML/CSS, JavaScript, Assembly (NASM), MATLAB, Verilog

Data Structures and Algorithms - Stacks, Queues, Bubble Sort, Inheritance, Singly and Doubly Linked Lists

Lab Skills - Circuit Design, Oscilloscope understanding, PCB layout, 3D printing, FPGA Design, SLD Design

Microsoft Office Administration Tools - Microsoft Word, Microsoft Excel, Microsoft PowerPoint

Tools - Git, Adobe Photoshop, Autodesk Inventor (AutoCAD), SolidWorks, AD3, WaveForms, Pspice, Quartus, Keil, LTspice

EDUCATION

McMaster University - (B.Eng.) - Electrical and Biomedical Engineering (Co-op) — **Sept. 2022 - Apr. 2027**

Relevant Coursework:

- AI-Innovative Technologies (A+)
- Signals and Systems (A)
- Statistical Methods in Biomedical Engineering (A-)
- Electromagnetics II (A-)
- Mechanics (A-)

EXPERIENCE

Technical Advisor - McMaster Medical Engineering Design Team - Hamilton, ON K2K 2V6 — **Oct. 2024 - Present**

- Facilitated technical guidance, support, and training to 20+ students, ensuring successful implementation of engineering projects.
- Taught engineering students the fundamentals of Soldering, 3D Modelling, 3D Printing, and GitHub Navigation
- Conducted technical reviews and troubleshooting to identify and resolve engineering challenges in prototyping and design.
- Improved team efficiency by 15% through the implementation of streamlined project management tools

Team Lead - Sky Zone - Mississauga, ON L5C 2V2 — **Feb. 2021 - Aug. 2024**

- In charge of coordinating park rotations, assuring park attractions are safely monitored, assigning closing tasks to coworkers
- Developed excellent leadership, communication and customer service skills ensuring satisfaction of all customer visits
- Operated the cashier and achieved a 30 % increase in membership sales while ensuring periodic sales goals were consistently met
- Trained 10+ new employees, improving team performance and reducing onboarding time by 20 %

PROJECTS

Battery Voltage Monitor (IOT, Arduino, C++) - GitHub — **Feb. 2025**

- Created a circuit using a Microcontroller, Resistors, and a Lithium-Ion Battery to monitor remaining battery voltage
- Integrated IOT by developing an Arduino **C++** program that uploaded data to the Arduino **Cloud**
- Implemented a charging module to protect the battery from Overvoltage, Overcurrent, and Short Circuiting

Snake (C/C++) - GitHub — **Jan. 2024**

- Programmed a unique version of the popular Snake game from scratch using high level **OOD** through **C++**
- Learned how to optimize code time complexity through **asymptotic analysis** and appropriate algorithm application
- Learned how to work cooperatively on code at a high level of efficiency

Personal Website (HTML/CSS/JavaScript) - GitHub — **April. 2022**

- Built a website using **HTML** and **CSS** from scratch utilizing bootstrap elements and hosted on GitHub at https://yousiffadhel.github.io/
- Created a dynamic Projects section listing featured academic and independently developed projects
- Incorporated problem-solving skills to ensure intuitive user interaction with the website

Automated Inhaler (Python/Inventor) - Viewer — **March. 2023**

- Built a high fidelity prototype of a wrist-attached automated inhaler
- Designed a cam and follower mechanism modeled on **Autodesk Inventor**
- Created a complex assembly file that incorporated several different individual parts accurately constrained
- Used a Raspberry Pi to implement a **Python** program to control the device

Hip Implant Prosthetic (Python) - Web Page — **Dec. 2022**

- Created a prototype of a hip implant with a shape that was designed to specifically accommodate for aseptic loosening
- Uses a **Python** program that would suggest dimension parameters based on calibration questions
- Further enhanced my skills with CAD, Autodesk Inventor and 3D-printing

HONORS & AWARDS

Engineering Award of Excellence — **Sept. 2022**

- Offered a $3000 scholarship in recognition of academic success from my enrollment into McMaster University