YOUSIF FADHEL

ELECTRICAL AND BIOMEDICAL ENGINEER
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TECHNICAL SKILLS

LANGUAGES: JavaScript, Python, C, C++, HTML/CSS, MATLAB, Latex, Verilog
DATA STRUCTURES & ALGORITHMS: Stacks**,** Queues, Bubble & Sort, Inheritance, Singly & Doubly Linked Lists
TECHNICAL SKILLS: Circuit design, Oscilloscope understanding, PCB layout, 3D printing, FPGA Design, Mechanisms understanding
TOOLS: Git, Adobe Photoshop, Autodesk Inventor (AutoCAD), Microsoft Excel, Microsoft Word, Microsoft PowerPoint, AD3, PSpice, Quartus, Keil

EXPERIENCE

Technical Advisor *McMaster Medical Engineering Design Team* Hamilton, Canada, October 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

Team Lead *Sky Zone* Mississauga, Canada, 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.

PROJECTS

Personal Website (CSS/HTML/JavaScript) - Website

- Built a website using **HTML** and **CSS** from scratch utilizing bootstrap elements and hosted on GitHub
- Created a dynamic Projects section that features academic and independently developed projects
- Incorporated problem-solving skills to ensure intuitive user interaction with the website

Snake (C/C++) GitHub

- 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

Automated Inhaler (Python) – Viewer

- Built a prototype of a wrist attached inhaler using a cam and follower mechanism on **Autodesk Inventor** and a **Raspberry Pie** programmed in **Python** as the brains of the machine
- Created a complex moving assembly .IAM file that incorporated several different individual parts that are accurately constrained

Hip Implant Prosthetic (Python)

- 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**

Battery Voltage Monitor (IOT, Arduino, C++)

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

EDUCATION

McMaster University Sept. 2022 - April 2027
(iBioMed) Bachelor of Electrical Engineering – Biomedical Engineering CO-OP ,
Relevant Course Work: AI-Innovative Technologies (A+), Statistical Methods BME (A-), Mechanics (A-), Signals and Systems (A), Electromagnetics II (A-)