Yash A. Bhavsar

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Education

McMaster University | Hamilton, ON *September 2020 – Present*
B.Eng. in Electrical Engineering, cGPA 3.4/4.0 Expected Graduation, May 2024

Skills

Programming Languages: C++, C, Python, JavaScript, HTML, CSS, Verilog, MATLAB
Platforms: VSCode, Eclipse IDE, Github, Jupyter Notebook
Hardware: Raspberry Pi, Analog Discovery 2, TI MSP432E401Y microcontroller
Software: Microsoft Office, Altera Quartus II, Keil uVision 5, LTspice, Waveforms, Realterm

Experience

Grey-Bruce Telecoms | Owen Sound, ON *July – September 2022*
Technical Representative

- Identified and solved variety of client issues involving hardware (router, PoE, CPE, towers) and cable misuse/faultiness
- Initialized wireless and fibre connections on administrative side by accessing IP addresses and connecting to local towers
- Utilized geographical data to test feasibility of secure wi-fi connections to remote locations/properties and relayed information to clients

TJX Canada | Brampton, ON *May – July 2022*
Data Entry Clerk

- Created, organized, and transferred information from paper documents onto database systems
- Routinely created excel-based reports quantifying production and quality of barcodes

Projects

Calculator Application *December 2022*
Individual, Personal Project

- Created a react-based calculator app using HTML, CSS, and JavaScript
- Implemented various math functions using the mathjs library and utilized state management with the useState hook
- Applied OOP principles and Bootstrap styles to organize and structure the code and enhance the user interface

Lidar-Based 3D Hallway Mapper *March – April 2022*
Individual, Microprocessor Project Course (2DX3)

- Created a C program in Keil that activated and rotated a LiDAR sensor to capture segments of a hallway
- Used Python(matplotlib) and I2C/UART protocols to process and visualize data from the LiDAR sensor, creating a 3D map
- Developed circuitry and user controls for starting/stopping the program and providing feedback

Automated System for Sterilizing Surgical Tools *Winter 2021*
Coordinator, Integrated Engineering Projects Course (1P13A)

- Applied Python using a Raspberry Pi to design and develop a program that can move and manipulate the features of a robotic arm in Quanser Interactive environment
- Planned weekly meetings with the group and presented developments to the rest of the class

Activities

McMaster University | Hamilton, ON *September 2022– Present*
Maction Club Member, Software Team

- Applied the Python tkinter library to create a GUI capable of tracking nicotine levels sent through an Arduino
- Executed C code compiled into an Arduino to control an injection needle at varying intervals

Relevant Coursework

OOP and DSA: C++ used to create and implement data structures such as SLL/DLL, arrays, stacks, binary search trees, queues, and hashing algorithms, as well as various sorting algorithms, all of which were assessed for time/space complexity

Circuit Testing: Design of complex circuits through breadboards and LTspice; Analysis done through Waveforms, utilizing oscilloscope, and manipulating input voltages