Abie Thattamparambil

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EDUCATION

Toronto Metropolitan University (Formerly Ryerson) Toronto, ON
Department of Electrical, Computer, and Biomedical Engineering - Biomedical Engineering Expected May 2027

- **Relevant Coursework:** Programing Fundamentals (C++), Digital System, Circuits Devices and Sensors, Signals and Systems, Microprocessor Systems, Control Systems and Bio-robotics, Electrical Machines and Actuators

WORK EXPERIENCE

MBG Corporate Services Abu Dhabi, UAE
Marketing and Business Development Internship May – August 2022

- Created a detailed **data tracking system** using **Excel** to manage information for over 100 companies. Applied **data visualization** techniques to track progress and inform management decisions.
- Initiated discussions on potential partnerships and deals through cold calls, leveraging the compiled data for targeted outreach.
- Collaborated with the business development team, creating technical presentations and supporting negotiations, emphasizing clear communication of complex technical concepts.

Biomedical Engineering Society (BMES) Toronto, Canada
Website Manager and Operations September 2024 – Present

- Spearheaded the management and regular updates of the BMES chapter's website, ensuring the timely dissemination of key information on initiatives, and professional development events, contributing to an increase in member engagement.
- Collaborated closely with chapter leaders to optimize website functionality, streamlining the registration process for major events and increased attendance for key events by 62 %

PROJECTS

Click here to view my portfolio

Machine Learning Model for Kidney Cancer Detection August – September 2024

- Developed a machine learning model with 92% accuracy for identifying kidney cancer from over 10,000 CT and PET scans, applying high-speed data processing skills that are critical in AI and data networking applications..
- Employed generative AI techniques and data augmentation to enhance dataset diversity, improving the model's accuracy in distinguishing between cancerous and non-cancerous scans.

Interfacing Analog Temperature Sensor with PIC24 Microcontroller January – April 2023

- Designed and implemented a system to interface an analog temperature sensor (TMP26) with a PIC24 microcontroller, handling ADC, UART transmission, and real-time data monitoring—skills vital for integrated circuit layout and data transmission efficiency.
- Developed embedded firmware to monitor temperature, control a DC fan's speed, and display real-time temperature data, improving microcontroller interfacing skills. Designed and simulated the project using Proteus.

Motorized 3D Printed Orthosis for Hand Rehabilitation January – April 2022

- Designed and developed a low-cost, 3D-printed exoskeleton to assist patients with hand immobility due to neuromuscular diseases.
- Collaborated with a team of 4 to design and integrate EMG sensors to detect muscle contractions and control motor functions through an Arduino, showcasing sensor layout skills relevant to mixed-signal layout design and connectivity resulting in an A+ on the project.

C Code Project: Temperature Analysis of Lake Ontario January – April 2021

- Analyzed weather data from 2019 and 2020 to compute and compare average temperatures, swimmable days, and freezing days.
- Implemented C code to calculate the warmest and coldest days and identified trends in lake temperatures using array processing and sorting algorithms.

SKILLS

Programming: Arduino, C/C++, Python, CSS, HTML, MATLAB, Tensorflow, PyTorch
Software: MPLAB X IDE, Proteus, Multisim, Netbeans, Microsoft Office, SolidWorks