Abie Thattamparambil

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EDUCATION

Toronto Metropolitan University (Fomerly Ryerson) Toronto, ON
Bachelor of Applied Science and Engineering - Biomedical Engineering Expected May 2027

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

WORK EXPERIENCE

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

- Researched over 100 companies and key contacts, creating a comprehensive datasheet to facilitate outreach and business development efforts.
- Initiated discussions on potential partnerships and deals through cold calls, leveraging the compiled data for targeted outreach.
- Collaborated with the business development team, developing client presentations and supporting negotiations during client meetings.

PROJECTS

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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.
- Integrated EMG sensors to detect muscle contractions and used Arduino to control a stepper motor, enabling finger flexion.
- Worked with a team of four using communication strategies resulting in an A+ on the project

Machine Learning Model for Kidney Cancer Detection August – September 2024

- Developed a machine learning model that identified kidney cancer from a dataset containing over 10,000 CT and PET scans with a 92% accuracy.
- 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

- Implemented an analog-to-digital converter (ADC) to read temperature data from the TMP36 sensor and transmitted results via UART to a virtual terminal.
- Developed C code to monitor temperature, control a DC fan's rotation, and display temperature data, improving microcontroller interfacing skills.
- Designed and simulated the project using Proteus, demonstrating real-time temperature reading and fan control based on set temperature thresholds

C Code Project: Temperature Analysis of Lake Ontario January – April 2024

- 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.
- Compared temperature data between years, providing insights into climate patterns affecting lake conditions

SKILLS

Programming: Arduino, C/C++, Python, CSS, HTML, MATLAB
Software: MPLAB X IDE, Proteus, Multisim, Netbeans, Microssoft Office, SolidWorks,
Languages: Native Proficiency in English, Limited Working Proficiency in Hindi, Urdu, and Malyalam