Muhammed Suleman Thaniana

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"Aspiring engineer aiming to play a part in the betterment of humanity"

Education

Massachusetts Institute of Technology **May 2023**

Bachelor of Arts in Electrical Engineering and Computer Science — GPA 5.0 *Cambridge, MA*

Relevant Coursework: Algorithms, Fundamentals of Programming, Pokerbots, Weblab, MicroComputer Lab, Computation Structures, Circuits, Autonomous Machines, Signals, Economics

Technical Skills

Programming Languages: Python, C/C++, HDL, RISC-V, HTML/CSS, Javascript, React, MATLAB, Swift
Frameworks/ Devloper Tools: Git, SQLite3, VS Code, Bash, Xcode, Arduino, SES, LaTeX
MicroProcessors: Intel 8051, Cypress PSoC, ESP32, Nordic nRF52

Experience

Summer Research Assistant **June 2021 – Present**

MIT Energy-Efficient Circuits and Systems Group *Cambridge, MA*

- Developing and analysing power consumption of a Bluetooth Low Energy(BLE) embedded system.
- Programming the Processor OS and BLE protocol in C.

Embedded Systems and Software Engineer **June 2021 – Present**

Mesh Incubator - Mass General Brigham *Cambridge, MA*

- Designing a system capable of using sensor readings to facilitate the correct placement of a Nasogastric Tube.
- The system and its algorithms are in C and Python.

Lab Assistant Interconnected Embedded Systems **Feb. – May 2021**

EECS Department, MIT *Cambridge, MA*

- Helped students 1 on 1 and in small groups during Lab and Office Hours with their labs and final project.
- Debugged hardware connections and software in C, Python, SQL, git and HTTP.

Undergraduate Research Assistant **June 2020 – April 2021**

Signal Kinetics Group, MIT Media Lab *Cambridge, MA*

- Collaborated with the Oceans team of 5 to build an underwater, wireless battery free camera system that harvests energy from back scatter of acoustic signals, whilst using the same signals for communication.
- Constructed an ideal Embedded System using various micro-controllers and image sensors.

Undergraduate Research Assistant **Sept. 2019 – Mar. 2020**

Doyle Lab, MIT *Cambridge, MA*

- Made and analysed micro-particles to remove organic pollutants from water.
- Collected size data of the particles using ImageJ alongside collecting performance data using an IR spectroscope. Compiled, analysed and evaluated the data collected using Python and Matlab.

STEM Tutor **Sept. 2018 – July. 2020**

Gopeer *online*

- Taught about 10 High School Students STEM subjects especially maths and chemistry on an online classroom.

Leadership

The Tech | *Sports Editor and Writer* **Sept. 2019 – Present**

- Cover weekly MIT sports on the Tech and manage the department as Editor.

Sigma Nu | *Risk Reduction Chair (Sept 2020 – Feb 2021) and member* **Sept. 2019 – Present**

- Responsible for the safety of the members and guests at fraternity events.

Awards and Activities

International Chemistry Olympiad: Bronze Medal in 2018.
MIT Cricket Team: play on the team as a wicket keeper batsman.
GM Blacktop Build 2021: Won third place in the competition that worked on finding autonomous driving solutions.
Pokerbots: Developed a bot that placed in the top ten at the final competition.