Arji Ahamed Thaiyib

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SUMMARY

A diligent Computer Engineering student with a strong foundation in software development, system integration, and problem-solving. **Proficient in Python, Java, C, and hardware interfacing** with hands-on experience in developing **real-time systems and spatial mapping solutions**. Eager to apply my technical skills and collaborative spirit in a dynamic co-op position.

EDUCATION

McMaster University Sept 2020 – April 2025

Bachelor of Computer Engineering (Co-op)

- **GPA: 3.7/4.0**
- **McMaster Honour Award (2020) & Dean's Honour Role (2020-2024)**

PROJECTS

Pacemaker | *Python, PyQt5, MATLAB Simulink* November - December 2022

Code

- Collaborated in a team of five, serving as the lead programmer to engineer an **adaptive pacemaker system**, improving development efficiency by **20%**.
- Developed a **Python-based GUI** for **real-time heart rate adjustments**, tested with a **95%** success rate under varying conditions.
- Designed eight unique **rate-adaptive pacing modes**, enhancing device responsiveness by **30%**.

Spatial Mapping System | *Python, C, Keil, MSP 430 Microcontroller* March - April 2022

Project Demo

- Invented a **spatial mapping system**, integrating **time-of-flight sensors** and **stepper motors**, resulting in a **20%** reduction in mapping time.
- Programmed **data collection algorithms** in C, overcoming signal noise to achieve a **90% accuracy rate** in environmental reconstruction.
- Utilized Python to process and **visualize spatial data in 3D**, improving visualization accuracy by **15%** and reducing processing time by **25%**.

System for Sorting & Recycling Containers | *Python, Raspberry Pi, Quanser* January – March 2021

Project Demo

- Programmed a **sorting system** capable of classifying and distributing recyclables with **95%** efficiency.
- Engineered a **Python-based algorithm** for material identification, achieving a **90%** accuracy rate in **virtual simulations** for sorting contaminants.
- Demonstrated advanced **Python programming and algorithm development** skills, successfully applying them to environmental technology projects.

EXPERIENCE & LEADERSHIP

Google Developer Student Club Hamilton, ON

Workshop and Team Member *Sept 2022 - Present*

- Led the **recruitment** of **50+** members and **coordinated 10+** events alongside other Google Developer Student Clubs in North America.
- Assisted in running **Coding and Web Development seminars** for **Java, HTML, and CSS** to **20+** beginner students, resulting in a **90%** satisfaction rate.
- Co-hosted workshops teaching the basics of **Git and GitHub** to **100+** students, enhancing their version control skills by **40%** as measured by feedback surveys.

TECHNICAL SKILLS

Programming Languages: Java, Python, C, C++, MATLAB, HTML/CSS
Technologies & Tools: Git, GitHub, Visual Studio, LTSpice, Waveforms, Simulink, Raspberry Pi
Engineering Tools: Autodesk Inventor, Analog Discovery 2, Keil µVision 5, Quartus II, MSP 430 Microcontroller
Methodologies: Agile Work Methodology, Scrum Framework