Allen Saji

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Education

Bachelor of Engineering (Honours): Computer and Software Systems, Expected in 02/2027
Queensland University of Technology - Brisbane, QLD

- Minoring in Advanced Electrical Engineering and Robotics & Embedded Systems
- Dean's List, [Semester 1]

High School Diploma: 06/2022
Indian School Al Ghubra - Muscat, Oman

- 7.0 GPA
- Executive, Robotics Club, 2018 to 2020

Professional Experience

Team Member (Service and Online), 05/2024 to Current
Coles – Brisbane, QLD

- Enhanced customer satisfaction by promptly addressing inquiries and providing accurate information
- Operated POS systems to process transactions quickly and accurately, ensuring smooth checkout experiences for customers
- Trained and onboarded new team members, delivering clear guidance on procedures and safety standards to improve team efficiency

Warehouse Dispatcher, 10/2023 to 02/2024
Wildfire Sports & Trek – Brisbane, QLD

- Reduced order processing times with streamlined picking, packing, and shipping procedures
- Participated in continuous improvement initiatives to streamline workflows and optimize productivity levels
- Prepared shipments for safe transportation by securely wrapping parcels and labeling packages according to company and shipping guidelines

Volunteer, 10/2019 to 11/2019
Indian School Al Ghubra – Muscat

- Led group discussions and activities to meet different community needs
- Supported engaging, fun, and smooth-running events by helping with organization and planning
- Tracked service activities and outcomes against outlined plans and goals
- Provided IT support by setting up and maintaining computers and other necessary technology
- Assisted with special events and programs

Projects

Power Electronics System Analysis – Reverse Engineering Solar Inverter (02/2025 to 06/2025)
Worked in a team to reverse-engineer the internal architecture of a grid-connected Solar PV inverter.

- Analyzed and simulated the MPPT DC-DC boost converter using LTspice and MATLAB. Evaluated efficiency and ripple performance
- Investigated the DC-AC single-phase full-bridge inverter, exploring switching strategies, harmonics, and control techniques
- Developed a comprehensive report evaluating converter topologies for power factor correction, efficiency, and EMI compliance

Elevator System Simulation (08/2024 to 10/2024)
Designed and implemented a multi-component elevator system in C for Linux, using POSIX shared memory, multithreading, and TCP/IP sockets to simulate real-world operations. Built modules for car control, scheduling, safety, and user interaction, with emphasis on inter-process communication, real-time responsiveness, and safety-critical standards (MISRA C). Developed a floor scheduling algorithm and integrated all components through a custom build system.

C# Text-Based Mission Planner (08/2023 to 12/2023)
Developed a C# (.NET 6.0) text-based application that simulates an agent planning a mission. The program features a menu-driven interface allowing users to define obstacles and objectives, and request safe paths to targets. Implemented pathfinding using an algorithm to determine the shortest and safest route through a grid-based map.

Bridge Design and Build Project (02/2023 to 06/2023)
Worked in a team of five to design, prototype, and construct a model bridge structure as part of a semester-long engineering project.

- Conducted community research and stakeholder analysis to define user needs and generate a detailed design specification
- Calibrated and integrated electric motors into the bridge system for automated lifting functionality
- Contributed to power delivery design, including wiring layout and voltage control for motor operation
- Assisted in laser-cutting and mechanical fabrication, and led stress testing of the final structure
- Delivered a comprehensive report including a scoping study on proposed real-world implementation

Technical Skills

- Experience with LTspice, MATLAB for power electronics simulation
- Familiar with DC-DC converters, inverter design, and switch-mode power supplies
- Skilled in PCB layout, multimeter and oscilloscope use, and circuit debugging
- Proficient in Python, C and C#
- Strong understanding of programming fundamentals
- Knowledge of data structures and algorithms

Soft Skills

- Quick Learner
- Adaptability
- Analytical Thinking
- Team Collaboration
- Leadership
- Problem Solving
- Technical Documentation

Languages

- English (Native or Bilingual Proficiency)
- Malayalam (Native or Bilingual Proficiency)
- Hindi (Elementary Proficiency)

Interests

- Gym
- Reading
- Cooking