Yasiru Fernando

+94 727 922 261 dyrfernando@gmail.com

Mechatronics Engineer (Reading) *Linkedin:* yasiru-fernando2004 *github:* github.com/YasiruRF

PERSONAL STATEMENT

Motivated and detail-oriented Mechatronics Engineering student seeking opportunities in robotics, automation, and embedded systems. Skilled in designing and prototyping mechanical systems, developing Arduino and AVR-based control solutions, and integrating sensors such as ultrasonic and ToF for navigation. Proficient in C/C++, Python, and circuit design with a strong grasp of problem-solving, iterative development, and cross-disciplinary engineering principles. Eager to contribute to innovative projects and grow within a collaborative team.

EDUCATION

- **Curtin University Colombo**: 2024 - Present
  Bachelor of Engineering (Hons.) in Mechatronics*: Reading - completed 2nd year 1st semester*
- **S. Thomas' College, Mount Lavinia**: 2015 - 2023

PROJECTS

- **Remote Controlled Navigation Robot**
  GitHub: YasiruRF/mxen2003-project
  Tech Stack: *Arduino (AVR), ESP32-CAM, C, Q-Learning, Epsilon-Greedy Exploration*
  Team size: *4*
  Developed a dual-mode robot with remote and autonomous navigation. Implemented sensor-based obstacle avoidance and a Q-learning algorithm with epsilon-greedy exploration. Included Bluetooth control and ESP32-CAM for real-time video streaming.

- **Digital Logic Design and FPGA Implementation**
  GitHub: YasiruRF/cmpe-assignment
  Tech Stack: *VHDL, Intel Quartus, FPGA (Cyclone series), Waveform Simulation*
  Team size: *4*
  Collaborated to design and simulate digital logic modules like adders and multiplexers using VHDL. Verified functionality with waveform simulation and synthesized designs with Intel Quartus.

- **Python Simulation Project**
  GitHub: YasiruRF/FOP-YasiruFernando
  Tech Stack: *Python, Matplotlib, Object-Oriented Programming, Git*
  Created a Python simulation modeling environmental heat variations. Strengthened coding, visualization, OOP, and version control skills.

- **MX2000 LED Mirror Project – University Engineering Club**
  Tech Stack: *Fusion360, LEDs, Circuit Design*
  Contributed to an LED mirror that lights up with human presence. Designed mechanical frame using Fusion360 and helped set up electronic circuitry including microcontrollers and sensors.

- **Team-Based Data Analysis Project**
  Tech Stack: *R, Microsoft Excel*
  Team size: *4*
  Designed and conducted a survey, then cleaned, analyzed, and reported data using statistics. Enhanced teamwork and data-driven decision-making.

- **Engineering Foundations: Design, Principles, and Communications – EWB Challenge**
  Skills: *Problem Solving, Technical Writing, Team Collaboration*
  Team size: *4*
  Worked in a multidisciplinary team to develop real-world solutions through Engineers Without Borders. Improved problem-solving, report writing, and teamwork skills.