

ISIWARA MALLAWAARACHCHI

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PROFILE

Second year Computer Science and Engineering undergraduate at University of Moratuwa with a strong interest in embedded systems and robotics. Secured 2nd place at ROBOFEST 2026 and SLRC 2026, contributing mainly to low level C/C++ firmware, sensor integration, sensor fusion and PID control. Currently learning the fundamentals of SLAM and hoping to apply them on real robots. Approaches every assigned task with dedication and aims to deliver it to a high standard.

EXPERIENCE

Software Engineering Intern

Roboticgen

Full-stack development

2026 – Present

- Developing web applications with Python (FastAPI) and React while learning the full development cycle.
- Assigned to an upcoming project building a robotics simulation environment for children.

Technical Committee Member

RoboGames

University category challenge

2026 – Present

- Designing the university category drone challenge, focusing on GPS navigation and real-time processing.

Drone Workshop Project

Department of CSE

University of Moratuwa

Starting Nov 2026

- Will work with flight controllers running ArduPilot or PX4 to achieve GPS guided flight controlled from a ground station.

PROJECTS AND COMPETITIONS

Full-Size Micromouse

2nd Place

ROBOFEST 2026, SLIIT, University Category

Sep 2026

🐙 [Botato-M2](#)

- Built the complete circuit on a hand soldered dot board and led firmware development in C/C++ on an STM32.
- Wrote low level drivers for ToF, IMU and encoder sensors and developed sensor fusion for localization.
- Implemented PID control and a floodfill algorithm.
- Currently designing a custom PCB for the next version.

SLRC 2026

2nd Place

Electronic Club, University of Moratuwa

Mar 2026 – Apr 2026

🐙 [Botato-SLRC2026](#)

- Wrote the sensor reading and low level control code on which the team's high level task logic was built.
- Worked actively on the Gazebo simulation tasks alongside the physical robot.
- Contributed to the overall design of the robot.

Xbotix 2025

5th Place

University of Ruhuna

Oct 2025 – Nov 2025

🐙 [Botato-Xbotix2025](#)

- Assembled and wired the robot's electronics and helped design the hardware.
- Wrote reusable Arduino functions for line following and wall navigation.

Other Projects

Banking database system with a web dashboard

 [Database](#) | [Backend](#) | [Frontend](#)

Smart Scheduler, full-stack scheduling web application

 [Smart-Scheduler-Team-LINKK](#)

EDUCATION

University of Moratuwa

B.Sc. Engineering (Hons.) in Computer Science and Engineering

Moratuwa, Sri Lanka

2024 – 2029 (*expected*)

Isipathana College

G.C.E. Advanced Level, Physical Science Stream

Colombo 05, Sri Lanka

Feb 2015 – Jan 2024

- Z-score 2.4373, Island Rank 261, Colombo District Rank 85.
- Assistant Steward of the Prefects' Guild, Co-Editor of the Leo Club and Assistant Treasurer of the Astronomical Society (2022/23).

TECHNICAL SKILLS

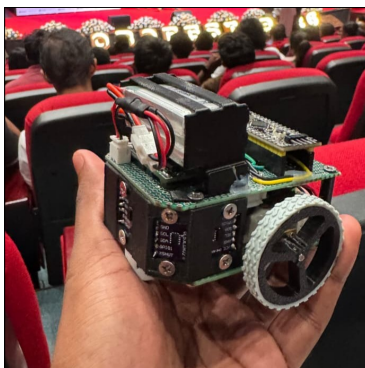
Programming	C, C++, Python, Java, JavaScript, TypeScript, SQL
Embedded Systems	STM32, Arduino, ESP32, timers, PWM, interrupts, UART, I ² C and SPI communication
Electronics	Circuit prototyping and soldering, PCB design
Robotics	Control systems, sensor fusion, path planning, computer vision, Gazebo and Webot simulations
Web and Tools	FastAPI, React, Spring Boot, MySQL, Git, Linux, UI/UX design
Currently Learning	SLAM, FreeRTOS, ArduPilot and PX4

CERTIFICATIONS AND LEADERSHIP

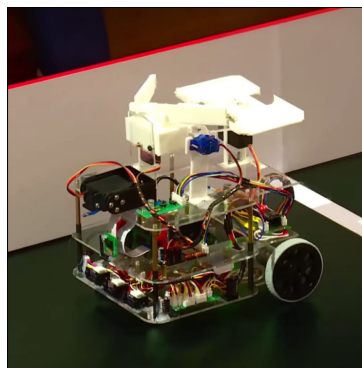
- Workshop Practice 1 (WP1), Ceylon German Technical Training Institute.
- Batch Representative, Computer Science and Engineering, University of Moratuwa (Semesters 2 and 3).
- Organised a four-day development bootcamp for junior students in CSE.

PORTFOLIO

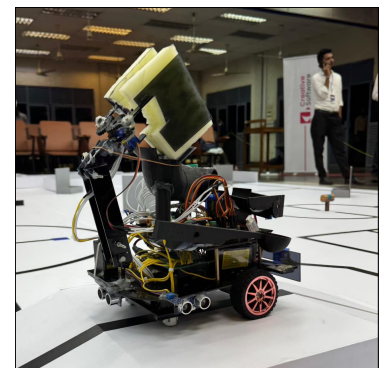
More projects and photos at  isiwaraexe.vercel.app.



Full-Size Micromouse



SLRC 2026



Xbotix 2025