Sansika Suhan Waduge

Colombo, Sri Lanka | +94 74 122 4726 | sansikawaduge@gmail.com | github.com/Platinum-Saber | LinkedIn

PERSONAL STATEMENT

Computer Science Engineering undergraduate specializing in Integrated Computer Engineering, passionate about **Embedded Systems**, **Robotics**, and **IoT**. Enthusiastic about developing innovative solutions and collaborating in dynamic teams to address real-world challenges.

TECHNICAL SKILLS

Languages:	C++, Python, JavaScript, Java, Dart, Rust, SQL, VHDL
Frameworks & Tools:	Flutter, Node.js, React, Spring Boot, ROS2 Jazzy, Gazebo, RViz, Node-RED
Databases:	Firebase, MySQL, PostgreSQL, Redis
Software:	Microsoft Office Suite, EasyEDA, Figma, Arduino IDE, Vivado
Hardware:	ESP32, Raspberry Pi 4/5, Arduino, ZigBee Modules, RPLidar, LDLidar
DevOps:	GitHub Actions, Docker, GitLab, Apache Kafka, WebSocket, AWS S3, Cloudflare
Soft Skills:	Leadership, Communication, Teamwork

EDUCATION

University of Moratuwa, Sri Lanka *Aug 2022 – Present*
BSc. Eng. in Computer Science and Engineering
CGPA (up to semester 5): **3.52/4.0**

Royal College, Colombo 7 *2019 – 2022*
G.C.E. Advanced Level Examination (Mathematics Stream)
Z-Score: 2.662, District Rank: 34, Island Rank: 63
Subjects: Combined Mathematics – A, Physics – A, Chemistry – A, General English – A

Nalanda College, Colombo 10 *2008 – 2019*
G.C.E. Ordinary Level Examination: 9A's
Junior Science Olympiad Sri Lanka (2018): Gold Medal

WORK EXPERIENCE

Intern Software Engineer – GTN Technologies (Pvt) Ltd *Nov 2025 – May 2026*
Market Backend Team, Colombo, Sri Lanka (6-month internship)

- Built **Horus**, a full-stack market data validation tool used by QA engineers to test real-time trading APIs.
- Designed a shared validation library for real-time market data and integrated it into two internal monitoring tools.
- Developed a high-performance VWAP (Volume-Weighted Average Price) calculation service, benchmarked across 1,000+ traded symbols and integrated with GTN's core market data system.

PROJECT EXPERIENCE

Autonomous Collaborative Terrain Mapping - Completed

Repository

Multi-robot system using LiDAR and odometry for 2D mapping, with data fusion on a coordinator robot over UDP/Wi-Fi.

- Developed using **ROS2 Foxy**, integrating **LiDAR** sensors and **Raspberry Pi** for real-time terrain mapping with **UDP** communication.

Autonomous Goalkeeper Robot - Completed

Repository

Servo-actuated football goalkeeper robot built for the IESL Techno 2025 exhibition.

- Developed using **ROS2 Jazzy** with a perception-transform-motion control node pipeline, an **Orbbec Astra Pro** depth camera, and a **YOLO** model for real-time ball detection and interception.

Kobuki Robot Implementation - Completed

Repository

Control system for Kobuki mobile robot with Kinect vision integration.

- Implemented using **Raspberry Pi**, **OpenCV**, and **Kinect** for vision-based navigation and control.

MediBox – Smart Medicine Box - Completed

Repository

IoT-enabled pillbox with alarms, OLED display, and web dashboard.

- Designed firmware for **ESP32** using **Arduino** framework and a **Node-RED** dashboard with **MQTT** for real-time monitoring.

Music-Reactive LED System - Completed

Repository

Real-time LED control based on audio beat detection.

- Developed using **ESP32** and **Python UDP Server** for audio-responsive LED control.

Nano Processor - Completed

Repository

Simple instruction set processor using VHDL.

- Designed and implemented in **VHDL** using **Vivado** for simulation and synthesis.

Webots Simulation – Virtual Maze Solver - Completed

Repository

Maze-solving robot simulation using camera and IR sensors.

- Developed using **Webots** and **Python** for simulated robotic navigation.

SLRMUN – Registration Portal - Completed

Repository

Event registration and payment portal with Google Drive integration.

- Built using **Flutter**, **Firebase**, **Google Cloud Console**, and **Digital Ocean** for robust event management.

ACHIEVEMENTS

- IEEE Xtreme 2024: Participated in the global 24-hour competitive programming event.
- Technovation Finalist: Reached finals with the Aththatu mobile app for empowering home entrepreneurs.
- IESL RoboGames Finalist: Qualified for finals with Webots simulation and Kobuki robot programming.
- Brainstorm Finalist: Recognized for the NutriMithu mobile app and smart meal box system.

VOLUNTEERING EXPERIENCE

HR Pillar Lead – Enigma 2024 *2024*
University-level tech competition, University of Moratuwa
Led human resources coordination for the event.

General Secretary of IT – SLRMUN 2025 *2025*
Sri Lanka Model United Nations, University of Moratuwa
Oversaw IT operations and digital infrastructure.

IoT Workshop Volunteer *2025*
Visakha Vidyalaya and St. Bridget's College
Assisted and mentored students during hands-on IoT workshops.

REFERENCES

Dr. Sulochana Sooriyaarachchi
Department of Computer Science and Engineering, University of Moratuwa
Email: sulochanas@cse.mrt.ac.lk
Phone: +94 77 669 1011

Prof. Dulani Meedeniya
Department of Computer Science and Engineering, University of Moratuwa
Email: dulani@cse.mrt.ac.lk
Phone: +94 71 393 5801

I hereby declare that all the information provided in this curriculum vitae is true and correct to the best of my knowledge and belief.