SAHAYANATHAN
RENOLSON

Electrical And Electronic Engineer(UG)
B.Sc. Eng.(Hons)(Reading)

About Me

I am an electronics and automation enthusiast with hands-on experience in embedded systems, industrial control, and IoT. My current focus is on integrating AI/ML into automation projects—exploring predictive maintenance, computer vision, and smart control algorithms. Skilled in microcontroller programming (Arduino, ESP32), PLCs, and Python for automation, I thrive at the intersection of hardware and intelligent software. Always learning, I'm passionate about bridging traditional electronics with cutting-edge AI to build smarter, more adaptive systems.

Skills

Embedded Systems & IoT
- Microcontrollers: Arduino, NodeMCU , Ras Pi
- Embedded Programming: C++, Python (MicroPython)

Industrial Automation
- PLC Circuit Design: EasyEDA (Schematic & PCB)
- CAD: SolidWorks | Auto CAD (Basic 3D modeling)

Cloud & Data
- AWS: IoT Core, EC2, S3
- Visualization: Grafana
- Data base : Pg4 admin | dynamo DB | Mango DB (Mysql)

AI & Computer Vision (Developing)
- Libraries: OpenCV
- Hardware: NVIDIA Jetson Nano
- Robotics: ROS (Basic)

Education

Engineering Undergraduate
B.Sc. Eng.(Hons)(reading)

Dept of Electrical and Telecommunication Engineering
South Eastern University of Sri Lanka
(2022 - 2027)

Language

English | Tamil | Sinhala

FOR CONTACT

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My Portfolio

Professional Experience

SLT Digital Lab- Sri Lanka Telecom Research And Development Section

Electrical & Electronic Engineer Trainee
(From June 2024 to September 2024)

Projects

PILL PAL- AUTOMATED PILL DISPENSER

- Developed a smart pill dispenser using IoT to automate medication schedules, improving adherence for patients.
- Integrated sensors and microcontrollers to dispense pills at preset times with alert notifications.

Nodemcu | C++ | Ardino | Actuators | 3D Printing

SMART AGRO PROJECT

- **Designed and prototyped a smart irrigation system using AWS IoT Core for real-time sensor data and remote monitoringNodeMCU and sensors, enabling farmers to monitor fields via a mobile/web interface.**
- **Monitor fields via a mobile/web interface.**

AWS IoT Core | EC2 | S3 | Grafana | MQTT | Python

JR-25 REAL TIME ROBOT (On Going)

- Developing a multimodal AI robot using NVIDIA Jetson Nano for real-time video/voice processing, integrating Gemini API for advanced NLP/vision tasks.
- Implementing autonomous decision-making for human-robot interaction (object recognition, voice commands).

Python | OpenCV | Gemini API | ROS | Jetson Nano

REFERENCE

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