# SAHAYANATHAN DENIOLO(

# 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)

# Al & Computer Vision (Developing)

- Libraries: OpenCV
- Hardware: NVIDIA Jetson Nano
- Robotics: ROS (Basic)

# Education

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

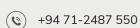
Dept of Electrical and Telecommunication Engineering South Eastern University of Sri Lanka (2022 - 2027)

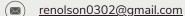
# Language

English

Tamil

Sinhala





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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 humanrobot interaction (object recognition, voice commands).

Python | OpenCV | Gemini API | ROS | Jetson Nano

# **REFERENCE**

#### Dr W.G.C.W Kumara

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