



# SAHAN MALINDU

## Trainee Mechatronic Engineer



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## SUMMARY

Higher Diploma holder in Mechatronic Engineering and NVQ-certified Automobile Technician. Skilled in bridging the gap between mechanical systems, electronic control units (ECUs), and embedded programming. Proven experience in vehicle diagnostics, PLC automation, and IoT-based system design. Seeking to leverage multidisciplinary skills in automotive engineering or industrial automation.

## EDUCATION

<b>Bachelor of Engineering in Mechatronics &amp; Autonomous Systems</b>	(Expected Completion: 2027)
• ICBT Campus (Offered by Liverpool John Moores University, UK)	
<b>HD in Mechatronic Engineering</b>	(2024 - 2026)
• ICBT Campus (Offered by Liverpool John Moores University, UK)	
<b>PLC programing &amp; Automation</b>	(December 2025 - Current)
• Sri Lanka Institute of Robotics	
<b>Automobile NVQ L3</b>	(Sep 2019 - Oct 2020)
• Wayamba Technical college	
<b>Auto electrical NVQ L3</b>	(2022 - 2024)
• Wayamba Technical college	
<b>Automobile Technician L4</b>	(2022 - 2024)
• Wayamba Technical college	
<b>English diploma</b>	(2019 - 2020)
• British way English academy	
<b>Successfully completed Advanced Level (ALs) &amp; Ordinary Levels (O/L)</b>	(2018 - 2022)
• Poramadulla Central College	

## PROJECTS

- **Predictive Motor Health Monitoring and Protection System ( Raspberry Pi )**  
Developed a Raspberry Pi-based system that monitors motor vibrations and temperature to predict failures and trigger protective shutdowns.
- **Home automation (Fully automated, Arduino-based home automation system )**  
Engineered a fully automated, Arduino-based system for integrated control of household appliances, lighting, and energy usage.
- **Street light system (Microcontroller-based street lighting system featuring solar integration)**  
Designed a microcontroller-controlled street lighting system featuring solar power integration and smart sensors for energy-efficient operation.
- **Smart Component Organizer (Arduino Mega-based smart component organizer)**  
Built an Arduino Mega-powered automated storage system for the efficient tracking, sorting, and retrieval of electronic components.

## WORK EXPERIENCE

### Trainee Technician - N.S. Auto Engineers

Battery repairs, brake/pad repairs, suspension repairs, oil and filter changes, fluid flushes, spark plug replacements, ignition coil replacements, bulb and fuse replacements, serpentine belt replacements, radiator hose replacements, tire puncture repairs, wheel mounting and balancing.

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## TECHNICAL SKILLS

- **Design & Modeling:** SolidWork, MATLAB, Machine Elements, Mechanical Design (Gears, Shafts, Linkages).
  - **Automation & Control:** PLC Programming (Siemens, Allen-Bradley, Ladder Logic), SCADA Systems, Industrial Automation, PID Controllers, Control Theory.
  - **Embedded Systems & Programming:** C, C++, Python, Arduino, Raspberry Pi, ESP32, PIC Microcontrollers, IoT, Real-time Systems, Machine Learning.
  - **Automotive Systems & Diagnostics:** OBD-II Scanning, ECU Analysis, EFI & Common Rail Diesel Systems, Vehicle Wiring & Circuits, HVAC, ABS/EBD Safety Systems.
  - **Electronics & Robotics:** Sensors & Actuators, Motor Control (Servo, Stepper, AC/DC), Power Electronics, Robot Kinematics, Machine Vision, Autonomous Systems.
  - **Maintenance & Troubleshooting:** System Integration, Fault Diagnosis, Predictive Maintenance, Signal Analysis, Pneumatic & Hydraulic Systems, Condition Monitoring.
  - **General Tools:** SPSS, Workshop Equipment, Alignment & Tuning Tools, Multi-meter & Oscilloscope Diagnostics, PLC Systems (Siemens LOGO!, S7-200, S7-300, S7-400, Step7).
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## SOFT SKILLS

Teamwork & Collaboration, Time Management, Leadership & Project Coordination, Effective Technical Communication, Critical Thinking & Complex Problem Solving, Adaptability, Attention to Detail.

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## REFERENCES

**Name:** Mr G.N.S Karunarathna

**Vice President :** Wayamba Technical College

**Phone:** 0703556535

**Name:** Mr. Rukmal

**Section Head :** Wayamba Technical College

**Phone:** 0710655004

**Name:** Mr. Ramal Beenu

**Lecturer :** ICBT Campus

**Phone:** 0776116272