



# NIPUN KAVINDA

## Mechanical & Automation Engineer

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Location: Dubai, UAE LinkedIn: linkedin.com/in/nipun-kavinda-780515125

Nationality: Sri Lankan Visa Status: UAE Student Visa (Transferable / Open to Employment Visa)

### PROFESSIONAL SUMMARY

Results-driven Mechanical & Automation Engineer with 8+ years of hands-on experience designing, programming, and maintaining industrial automation systems across high-volume manufacturing environments. Knowledge in PLC/SCADA programming, VFD, robotic process integration, AI-driven predictive maintenance, and mechanical system design using SolidWorks. Demonstrated ability to reduce machine downtime by 28% and increase production throughput by 35% through intelligent automation and process optimisation. Currently advancing expertise in AI and Machine Learning (MSc AI, De Montfort University, Dubai). Actively seeking a Mechanical Automation Engineer role in the UAE to deliver smart, efficient, and scalable industrial solutions.

### CORE COMPETENCIES

Mechanical System Design	AI-Driven Predictive Maintenance	Industrial Automation & Control Systems
SolidWorks Mechanical Design	PLC & SCADA Systems	Machine Learning for Industry 4.0
Embedded Systems (Arduino / NodeMCU)	CAD/CAM System Integration	Robotic Process Automation (RPA)
Fuzzy Control Systems	OEE / MTTR / MTBF Analysis	Electrical Troubleshooting & Fault Finding
P&ID & Wiring Diagram Interpretation	LOTO & Industrial HSE Compliance	Python for Data Analytics
Root Cause Analysis (RCA)	Power BI & Production Dashboards	Microsoft Power Platform (Power Apps)

### WORK EXPERIENCE

#### Assistant Engineer – Maintenance & AI Automation

Mar 2020 – Sep 2025

##### Apparel Technologies | Sri Lanka

- Engineered and deployed AI-driven automation workflows, increasing production throughput by 35% and eliminating manual work hours annually.
- Developed and integrated predictive maintenance ML models using Python, monitoring real-time machine health data and cutting unplanned downtime by 28% across manufacturing facilities.
- Integrated AI and automation modules into CAD/CAM systems, reducing prototyping errors and accelerating product development cycles.
- Built and maintained Power BI production dashboards for real-time KPI tracking, reducing management reporting time by 60%.
- Applied LOTO procedures and HSE compliance protocols for all maintenance and installation activities across plant facilities.

#### Trainee Engineer – Automation & Projects

Oct 2019 – Feb 2020

##### Trelleborg Group | Sri Lanka

- Programmed and tested PLCs for improving control reliability and fault tolerance.
- Designed and validated mechanical components using SolidWorks, improving simulation accuracy and design validation speed.
- Executed mechanical and electrical installation projects, completing system deployments ahead of schedule while maintaining full HSE compliance.
- Performed QA inspections and preventive maintenance, contributing to improvement in overall equipment uptime.

#### Assistant Engineer – Embedded Automation & Design

Sep 2018 – Mar 2019

##### Epic Engineering (Pvt) Ltd. | Sri Lanka

- Designed mechanical systems in SolidWorks, reducing prototyping rework frequency through precision modelling and simulation.
- Developed embedded automation systems using Arduino and C++, enhancing system control precision and response speed.
- Built mobile control applications and Excel-VBA automation macros, cutting manual setup and reporting time by 50%.

## **Trainee Mechanical Engineer – Fabrication & Testing**

*Mar 2018 – Sep 2018*

**Variosystems (Pvt) Ltd. | Sri Lanka**

- Performed fabrication testing and mechanical design validation, reducing production rework by 18% through precision improvements.
- Programmed microcontrollers for process automation, boosting system responsiveness and cutting process waste by 20-30% using Kaizen principles.

## **Trainee Mechanical Engineer – Preventive Maintenance**

*Aug 2016 – Jul 2017*

**Trelleborg Group | Sri Lanka**

- Executed preventive maintenance programs and root cause analysis on critical production equipment, improving reliability and reducing breakdowns.
- Tracked OEE, MTTR, and MTBF performance metrics to identify failure patterns and drive data-driven maintenance improvement strategies.

## **EDUCATION**

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### **Master of Science in Artificial Intelligence (MSc AI)**

*Sep 2025 – Present*

**De Montfort University | Dubai, UAE**

### **Postgraduate Diploma in Computing Technologies (AI)**

*Jan 2024 – Sep 2024*

**Kensley Graduate School | Sri Lanka**

### **Professional Diploma – Business Analysis & Power BI**

*Jul 2022 – Nov 2022*

**Starliks Campus | Sri Lanka**

### **National Diploma in Engineering Science – Mechanical Engineering**

*Feb 2016 – Feb 2020*

**Institute of Engineering Technology (IET) | Sri Lanka**

## **CERTIFICATIONS & TRAINING**

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- LinkedIn Learning – PLC: Industrial Sensors (Jan 2023)
- EPIC Campus – Certificate in Industrial Automation (Jun – Oct 2016)
- UiPath – Robotic Process Automation Specialization (Dec 2024)
- Coursera – Deep Learning with Keras (Aug 2024)
- Coursera – Machine Learning with Python (Jul 2024)
- IBM – Generative AI and LLMs: Architecture and Data Preparation (Jul 2025)
- LinkedIn Learning – Reverse Engineering Foundations (Jan 2023)
- QBlitz – Power Apps Essentials (Jun 2024)
- American Institute of Innovations – Certificate in AI (May – Oct 2023)

## **KEY ACHIEVEMENTS**

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- Reduced the process time of finding the production cost of a piece of the machine by developing Python-based software for calculating it.
- Reduced unplanned machine downtime by 28% across manufacturing sites through AI-powered predictive maintenance and structured preventive maintenance scheduling.
- Increased production throughput by 35% by engineering and deploying AI-driven automation workflows, saving 500+ manual work hours annually.
- Successfully joined 5+ PLC automation projects, improving control system reliability and fault tolerance across multiple production lines.
- Cut management reporting time by 60% by building real-time Power BI KPI dashboards integrated with live production data.
- Trained 30+ maintenance and operations staff on machinery and control systems, operations, maintenance and safety procedures.

## **LANGUAGES**

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**English** – Professional Working Proficiency    **Sinhala** – Native