MAR LAR AUNG

Industrial Automation Engineer | PLC, SCADA, Electrical Design

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PROFESSIONAL SUMMARY

Experienced Industrial Automation Engineer with over 15 years in PLC programming, SCADA systems, and electrical design for manufacturing and semiconductor industries across Singapore, Japan, APAC, and Southeast Asia. Skilled in electrical concept design, component sourcing, and full system integration including motion control, robotics, and machine vision. Proven ability to optimize cycle time and yield through efficient automation solutions. Proficient in C#, .NET, SQL Server, and industrial protocols such as SECS-GEM, TCP/IP, and Modbus/TCP. Known for delivering reliable automation projects from planning through final handover.

SKILLS

| PROFESSIONAL

Attention to Detail

Critical Thinking

Structured Thinking

Analytical Skills

Creative Problem Solving

Decision Making

Interpersonal Skills

Stakeholder Communication

Team Collaboration

Process Improvement

| TECHNICAL

PLC Programming (Allen-Bradley, Keyence, Omron, Mitsubishi, Inovance, etc.)

C#, C++, Python

Structured Text, Pascal

Motion Control Systems

Industrial Robotics (ABB, KUKA, Epson, etc.)

Binary Logic and Data Structures

Machine Vision Systems and Setup

Industrial Communication Protocols (TCP/IP, Serial COM, ModbusTCP, EtherCAT, Ethernet)

WORK EXPERIENCE

SENIOR SOFTWARE DEVELOPMENT ENGINEER
Ascendze Pte.Ltd, Singapore | 2022 October – 2025 July

- Independently developed and deployed web and desktop applications using .NET, alongside PLC programming for complete manufacturing line automation, from system design to final integration.
- Created Windows Forms applications for robotics and automation systems using C#, C++, and Python.
- Designed and implemented manufacturing control systems using ASP.NET Core and SQL Server, enabling real-time production tracking and reducing operator errors by 30%.
- Integrated SECS-GEM communication protocol for host and equipment applications.
- Developed a communication algorithm for PLC-to-cloud integration over TCP/IP, enabling secure remote data access.
- Provided technical guidance and mentorship to associate engineers and interns on control systems and software development.

MANAGER (TECHNOLOGICAL DIVISION)
Angel Singapore (Asia) Pte.Ltd, Singapore | 2019 November – 2021 January

- Analysed customer data using SQL to identify procedural inefficiencies, improving the accuracy and performance of real-time surveillance algorithms.
- Developed internal applications and forms using Java for R&D, including database schema design for API integration.
- Enhanced authentication and authorization in the server web application by implementing password hashing, user credential management, and role-based access control.
- Built monitoring tools for DevOps environments, enabling load balancing diagnostics, data accuracy validation, and latency troubleshooting.

EPLAN, SolidWorks,
AutoCAD
Microcontrollers (Arduino,
Raspberry Pi)
Technical Documentation and
User Manual Writing

SYSTEMS AND CONTROL SOFTWARE ENGINEER
YAC Systems Singapore Pte.Ltd, Singapore | 2018 December – 2019 September

- Developed control systems and HMIs for fully automated stockers and wafer handling equipment using C++, C#, and multiple PLC platforms.
- Implemented wireless handshaking and communication protocols with AGVs, enabling seamless integration between robots, servo motors, AGVs, and the main production line with a focus on operational efficiency and safety compliance.

SYSTEMS AND CONTROL ENGINEER
Casem (Asia) Pte.Ltd (Subsidiary of Manufacturing Integration Technology, MIT, Singapore | 2013 May – 2018 November

- Designed and managed end-to-end factory automation systems, including machines and production lines, to meet performance and delivery criteria.
- Optimized and enhanced PLC codebase, reducing machine downtime by 20% and enabling smooth production ramp-up.
- Performed yield analysis and quality control to align with international manufacturing standards and reduce product rejects.

ELECTRICAL DESIGN ENGINEER
Panasonic Industrial Design Singapore Pte Ltd, Singapore | 2013 January – 2013 May

- Designed and programmed automated machines for micro-electronic device manufacturing, consistently meeting tight delivery timelines.
- Created detailed operation manuals to support production managers, supervisors, and operators in efficient machine use, troubleshooting, and maintenance.
- Managed electrical component selection and hardware procurement, ensuring on-time project delivery within budget constraints.

SYSTEMS PROGRAMMER
Fujicon Engineering Pte.Ltd, Singapore | 2011 April – 2013 January

- Designed automated machines with feeders and pick-and-place systems for various manufacturers, consistently meeting tight delivery schedules.
- Developed control systems and user interfaces using RSLogix 5000, Keyence PLCs, Mitsubishi PLCs, Omron PLCs, and HMI platforms.

TECHNICAL SPECIALIST
Podoyo Plastics Industry (M) Sdn Bhd (For Celestica Singapore), Malaysia | 2009 September – 2011 March

- Monitored and troubleshot fully automated production lines for printer cartridge manufacturing to ensure continuous operation and minimal downtime.

ASSISTANT ENGINEER
TSM Consultancy Pte.Ltd, Singapore | 2008 Aug – 2009 May

- Conducted traffic surveys, performed data entry and analysis, and drafted road design proposals for LTA infrastructure projects, including technical report writing and documentation.