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Professional Summary

Automation & Transformation Leader with 8+ years of experience driving large-scale automation and operational transformation programs across warehouse, logistics, and manufacturing environments. Proven ability to lead cross-functional teams, define enterprise automation strategies, and deliver measurable operational improvements through technology integration. Skilled in aligning automation initiatives with business objectives, optimizing operational efficiency, and building high-performing engineering cultures. Recognized for translating complex technical systems into scalable solutions, driving change adoption, and enabling data-driven decision-making.

Core Competencies

- **Automation Strategy & Architecture:** Define and execute enterprise automation roadmaps, integrating WCS, WES, WMS, ASRS, and advanced robotics to improve throughput, efficiency, and scalability.
- **Controls Engineering Leadership:** Expert in PLC/SCADA/HMI development using different platforms; managing end-to-end system commissioning.
- **System Integration & Testing:** Leading system integration testing (SIT/UAT) across enterprise platforms ensuring operational continuity.
- **Operational Excellence & CI:** Drive Lean/Six Sigma initiatives, root cause analysis, and CI programs that improve system reliability, uptime, and ROI.
- **Cross-Functional Collaboration:** Managing cross-disciplinary teams and interfacing with stakeholders, vendors, and IT/OT convergence teams.
- **Data-Driven Decision Making:** Develop KPIs, dashboards, and real-time monitoring systems using Power BI, QuickSight, Grafana, and SCADA to optimize performance and inform strategy.
- **Agile & Collaboration Tools:** Proficient in Jira, Confluence, Asana for Agile delivery, sprint planning, and cross-team coordination.
- **Stakeholder Engagement & Change Management:** Partner with senior leadership to align automation investments with strategic objectives, ensuring smooth adoption and transformational impact.
- **Team Development & Coaching:** Mentoring engineers, standardizing automation best practices, and fostering knowledge-sharing cultures.

Professional Experience

Senior Software Controls Engineer

Fortna UK Ltd – July 2022 to Present

- Lead the design and delivery of high-performance automation programs across global distribution centres. Delivered end-to-end integration of: • WMS for inventory and order management coordination • WES for real-time warehouse execution control • WCS for low-level equipment orchestration and messaging.
- Integrated automation technologies including ASRS systems, high-speed sorters, GTP stations, conveyors, print-and-apply systems, and robotic palletizers, enabling scalable throughput and data-driven operations.
- Lead cross-functional engineering teams through complete project lifecycles, from discovery and stakeholder alignment to deployment, optimization, and knowledge transfer.
- Architect and executed full-scale system integration testing (SIT) between Fortna WES and customer WMS platforms, ensuring high availability, data fidelity, and seamless process orchestration.
- Provided hands-on development and enhancement of advanced PLC logic and SCADA/HMI interfaces using Beckhoff platforms.
- Designed and implemented custom data integration layers to bridge limitations in software platforms, using custom scripts to enable seamless communication between external data sources and PLC.

- Spearheaded root cause analysis and long-term countermeasures for chronic system failures, reducing unplanned downtime by 25% across critical processes.
- Designed system watchdogs and self-healing automation routines to detect stalled processes, trigger automated reset logic, and restore line functionality without operator intervention.
- Engineered PLC architectures using event-driven logic and state machines to manage complex conveyor behaviours, fault handling, and priority-based routing logic under high system load.
- Championed continuous improvement initiatives leveraging Six Sigma/DMAIC methodologies to increase throughput, line efficiency, and automation ROI.
- Utilized OEE data monitoring and analysis to identify performance bottlenecks and opportunities for system enhancements, enabling data-driven continuous improvement within WES integrations and refine deployment strategies for each customer site.
- Serving as a Primary Technical point of contact for customers during SIT, Go-Live, Stabilization & Ramp up phases, ensuring smooth handover and system readiness.
- Lead internal capability building through technical coaching sessions ("Automation Office Hours"), standardization of engineering practices, and team mentoring.

Control System Specialist

Amazon UK – Sept 2020 to July 2022

- Served as the technical lead for automation systems, responsible for developing and deploying complex PLC code to support custom material handling systems across multiple fulfilment centres.
- Engineered integrations of IoT sensors, Cognex/Keyence vision systems, RFID, and LiDAR into SCADA architectures, enabling real-time diagnostics, fault detection, and performance optimization.
- Designed and implemented robust SCADA and HMI solutions using Ignition and FactoryTalk for live monitoring of conveyor systems, sorter logic, and robotic arms.
- Led fault isolation and root cause analysis across multi-vendor systems using industrial communication protocols (MODBUS, Profinet, Ethernet/IP), reducing MTTR and system downtime.
- Developed automated reporting pipelines in Power BI and QuickSight by extracting telemetry data from SCADA and backend databases to visualize throughput, downtime, and error trends.
- Collaborated with operations teams to interpret OEE metrics and uncover system inefficiencies, driving targeted control logic improvements, operational optimizations and led operational improvement initiatives to optimize system performance and asset utilization.
- Initiated and led a predictive maintenance project by integrating LiDAR and vibration sensors into PLC systems for early detection of mechanical failures.
- Developed and tested carrier height monitoring logic with inline calibration routines, deployed globally to mitigate sorter wear and save $18M annually.
- Acted as change authority within formal Change Management frameworks, reviewing, approving, and deploying system updates with rollback protocols.
- Develop and roll out an Asana-based digital maintenance and project management framework, improving interdepartmental collaboration and visibility.
- Created standardized onboarding and training programs to upskill Controls Engineers in SCADA configuration, PLC programming, and system troubleshooting.
- Contributed to global engineering documentation by authoring Functional Design Specifications (FDS), Standard Operating Procedures (SOPs), and commissioning checklists.
- Collaborated with global Amazon Robotics teams to improve software reliability, communication protocols, and control architecture at ARS sites.

Project Engineer

Core Control Solutions, Ilkeston – Mar 2018 to July 2020

- Engineered end-to-end automation systems, including advanced PLC logic, SCADA visualisation, and HMI design, tailored for industrial environments.
- Integrated industrial IoT (IIoT) solutions to connect legacy systems with modern data platforms, enabling predictive maintenance and remote diagnostics.
- Designed and developed electrical panels, P&IDs, and schematics using AutoCAD Electrical for high-spec industrial automation projects.
- Programmed and commissioned SCADA systems (Ignition, Iconics) to provide real-time process visibility and control.
- Created custom dashboards and data reporting tools in Power BI to facilitate actionable insights for engineering and operations.
- Developed and implemented smart Andon systems using IO-Link and integrated them with plant-wide control networks to monitor machine status and availability.
- Led CI initiatives based on the DMAIC methodology, driving measurable improvements in process uptime, efficiency, and quality.

Controls Engineer

Butler Group of Hotels, Sheffield – Sept 2016 to Mar 2018

- Designed and implemented smart building automation systems integrating IoT sensors for light, temperature, humidity, motion, and CO_2 levels.
- Developed PLC and SCADA logic to dynamically adjust lighting, HVAC, and ventilation based on real-time environmental data.
- Optimized energy usage and enhanced guest comfort through predictive and adaptive control systems.
- Created dashboards for energy and environment monitoring and provided training for hotel engineering teams.
- Documented system architecture and operational procedures for scalable deployments across hotel properties.

Education & Certifications

HNC in Electrical & Electronics Engineering – Sheffield Hallam University
AISSCE (A-Levels equivalent) – Salwan Public School, Gurgaon
AISCE (GCSE equivalent) – Delhi Public School, Gurgaon

Certifications:

- Ignition SCADA | Iconics Genesis64 SCADA
- Rockwell Automation PLC Maintenance (EAL Certified)
- IPAF 3a & 3b MEWP | Profinet Installation & Maintenance| Weber Print & Apply Systems

Certifications in progress:

- PRINCE 2 Practitioner
- MSP Practitioner
- Six Sigma Black Belt Certification

Technical Skills

PLC & Automation Platforms: Expert in Rockwell (RSLogix, Studio 5000), Beckhoff (TwinCAT3), Mitsubishi, and Schneider Electric PLCs. Proficient in creating modular, scalable, and fault-tolerant automation code.

SCADA & HMI Systems: Design, deployment, and optimization of real-time control and monitoring solutions using Ignition, Wonderware, and Iconics. Skilled in HMI interface development for intuitive operator workflows.

Industrial Integration & IoT: Integration of complex systems including WMS, WES, WCS platforms. Hands-on experience with industrial IoT devices, smart sensors, barcode/RFID systems, and vision inspection technologies.

Data Analytics & Visualization: Advanced use of Power BI, Amazon QuickSight, and Databases (PostgreSQL, Oracle, MS-SQL) for real-time reporting, OEE dashboards, downtime analytics, and performance tracking.

Electrical & Design Tools: AutoCAD Electrical, EPLAN, electrical schematics development, and creation of P&IDs and control cabinet layouts. Documentation expertise in FDS, SDS, SAT, and user manuals.

Communication Protocols: Deep understanding of industrial networking and protocols including MODBUS, Profibus, Profinet, AS-i, Ethernet/IP, MQTT, LoRa/LoRaWAN, OPC UA and EtherCAT.

Software & IT Systems: Proficient in HTML, CSS, JavaScript & Python for internal tooling and dashboard development. Strong knowledge of IT/OT networking, cloud architecture and cybersecurity basics for automation systems.

Project & Collaboration Tools: Jira, Confluence, Asana for Agile project tracking, documentation, and team coordination across cross-functional environments.

Leadership & Strategic Highlights

- Spearheaded high-impact automation programs across Europe, integrating WCS/WES/WMS systems that delivered measurable increases in operational throughput and multi-million-pound annual OPEX savings.
- Built, scaled, and led high-performing engineering teams and vendor partners, including cross-functional groups totalling 25+ personnel across sites.
- Partnered with C-level executives and senior stakeholders to translate operational challenges into scalable automation strategies aligned with business goals.
- Established standardized onboarding, H&S compliance training, and capability-building frameworks, significantly reducing ramp-up time for new engineers and raising technical maturity.
- Enabled data-driven operational strategy by designing real-time visibility systems through SCADA and business intelligence tools, ensuring performance measurement and improvement aligned with OEE, ROI, and ISO/FEM compliance metrics.
- Led root cause analysis and continuous improvement (CI) programs that reduced downtime by 25% and improved system reliability across multiple sites.
- Developed business cases for key automation upgrades and led investment justification aligned to operational KPIs and budget strategy.
- Delivered a 38% increase in operational throughput by implementing targeted custom automation enhancements, leveraging data-driven insights to optimize workflows and system performance.
- Drove the adoption of Agile methodologies and collaborative tools (Jira, Confluence, Asana) across engineering and operations, enhancing delivery cadence and stakeholder communication.
- Committed to ongoing professional development and keeping automation strategies aligned with the latest industry and technology advancements.