JAMES WILLCOX

MANUFACTURING SYSTEMS | ERP INTEGRATION | DATA & PROCESS AUTOMATION

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PROFESSIONAL SUMMARY

Manufacturing systems and data professional with 21 years of experience at MCAM including 5+ years supporting ERP, master data, product configuration, and cross-site manufacturing initiatives. Combines hands-on plant knowledge with a Bachelor's degree in Computer Science and practical development experience in multiple programming languages. Brings deep expertise in Infor M3 and manufacturing data structures which can be applied to a growing focus on MES integration, smart manufacturing, industrial analytics, and emerging AI assisted automation initiatives across North America.

TARGETED QUALIFICATIONS

- MES concepts; ISA-95 awareness; production, labor, scheduling, machine-performance and manufacturing-data fundamentals; Industry 4.0 principles; OEE-style analytics; emerging Ignition/Sepasoft learning focus
- Infor M3; item masters; product structures / BOMs; routings; work centers; costing; production data; cross-plant migrations
- Python; SQL; VBA; JavaScript; HTML5; CSS3; XML; PHP; RESTful API concepts; data import/export
- Database design; SQL queries; data quality; dashboards; reporting; process automation; root-cause analysis; manufacturing KPIs; AI applications
- Cross-functional requirements; multi-site support; process documentation; data governance; stakeholder communication; project coordination

PROFESSIONAL EXPERIENCE

DATA SPECIALIST, MCAM G2 | Mitsubishi Chemical Advanced Materials - Delmont, PA

Enterprise ERP, manufacturing master data, product configuration, analytics, and cross-site operational support

- Support enterprise manufacturing data and ERP configuration in Infor M3, including item masters, product structures, routings, work centers, costing data, and production requirements.
- Translate operational needs into accurate, traceable system data through cross-functional collaboration with manufacturing, engineering, quality, supply chain, customer service, and digital teams.
- Coordinate cross-site data readiness, part-number creation, validation, and issue resolution for multiple North American sites.
- Build Excel-based tools and calculators to reduce manual work, improve visibility, and strengthen data quality.
- Troubleshoot product structures, routing logic, scheduling inputs, material requirements, and operational data issues.
- Promote standardized master-data processes, documentation, naming conventions, and governance to improve accuracy and long-term maintainability.

EARLIER MANUFACTURING EXPERIENCE | Mitsubishi Chemical Advanced Materials - Delmont, PA

- Machinist and manufacturing systems roles providing hands-on process knowledge that informs current data and configuration work.

TECHNICAL PORTFOLIO & SELECTED PROJECTS

AI-ENHANCED MANUFACTURING ANALYTICS PLATFORM (MES LITE) - Independent Project | In Development

- Compact MES-style application demonstrating production tracking, SQL data modeling, Python analytics, web dashboards, and AI-assisted insights.

MANUFACTURING WEB APPLICATIONS & AUTOMATION TOOLS - Portfolio Projects

- Browser-based calculators, layout visualization tools, single-file data viewers, and automation utilities built with HTML/CSS/JS, VBA, and Excel. Includes CAD-like visualization concepts and data-handling tools supporting manufacturing workflows.

TECHNICAL SKILLS

Languages: Python, SQL, JavaScript, HTML5, CSS3, XML, PHP, VBA
Systems & Data: Infor M3 (item masters, product structures/BOMs, routings, work centers, costing), master data governance, SQL data modeling, validation, API concepts
Manufacturing: Product structures, BOMs, routings, work centers, item masters, production data, process improvement
MES / Automation Knowledge: MES architecture concepts, tags, OPC/OPC UA concepts, ISA-95 awareness, Ignition and Sepasoft learning focus, PLC and industrial-controls fundamentals
Development & Analytics: Web application development, dashboards, scripting, automation, data visualization, AI-assisted development, root-cause analysis, requirements translation, technical documentation

EDUCATION

BACHELOR'S DEGREE IN COMPUTER SCIENCE - GPA: 3.9

POSITION ALIGNMENT

Direct strengths: 21 years of industrial manufacturing experience; ERP and master-data expertise; product structures and routings; SQL/Python foundation; scripting and web development; cross-site collaboration; data quality and process improvement; strong interest in digital transformation and smart manufacturing.

Current development focus: Hands-on practice with Ignition and Sepasoft modules, OPC UA, tag structures and UDTs, historian concepts, PLC fundamentals, SQL administration, and ISA-95 application.

Location & travel: Based in Delmont, PA; open to supporting North American facilities with approximately 25% travel.