Mitchell Schauer

814-882-4068 | schauer.mitchell@gmail.com | https://www.linkedin.com/in/mitch-schauer/ | msaidev.com

PROFESSIONAL PROFILE

Systems Integration Architect specializing in the convergence of industrial hardware and modern secure infrastructure. Proven track record in defense and aerospace environments redesigning production workflows and managing complex production and lab enviroments. Bridging legacy systems with modern edge-intelligence and AI-driven automation.

EXPERIENCE

Lockheed Martin   Liverpool, NY
Manufacturing Systems Engineer   *Aug. 2024 – Present*
- Architected enterprise-level production ecosystems and secure VLAN/SubLAN network architectures expanding automation across production systems, ensuring data isolation, and low-latency cross-domain communication.
- Engineered flow-line for the TPY program, successfully **reducing lead time from 2 years to 2 months**.
- Designed PLC-to-IoT conversion projects to onboard legacy systems to modern IOT networks; piloted AI inspection systems, site-wide calibration monitoring systems and automated torque tool integrations.
- Led facility transformations across 6 programs and 3 buildings, redesigning production floors for mixed-product, high-velocity R&D and manufacturing, while providing insight helping to secure multi-billion-dollar contracts.

Collins Aerospace   Cedar Rapids, IA
Manufacturing Electrical Engineer   *Jan. 2023 – Jan. 2024*
- Directed manufacturing for a facility accommodating four programs and 100+ personnel. Hosted Lean Six Sigma events and integrated pick-and-place machines into production lines, achieving a **300% reduction in cycle time**
- Modernized legacy Excel reporting into real-time Tableau orchestration and networked visual management displays across the production floor, while spearheading expanding metrics from local servers to Azure Cloud.
- Engineered self-correcting, auto-calibration fluid systems utilizing regression analysis on 3-axis plotters.
- Increased test yield by identifying critical failures in circuit test systems, resulting in a **+90% first-pass yield.**

TECHNICAL PROJECTS

Local/Privacy-First, Self-sustaining Infrastructure | *Proxmox, Linux, Docker, GitLab, Samba*   2022 – Present
- Designed and built a mobile data center independent of the power grid, incorporating high-availability network stacks with multi-WAN bonding/failover, reverse proxies, and automated TLS for zero-trust, encrypted access, and developed a mobile homelab within it capable of offline AI inference and SBC IoT device monitoring.
- Developed a bacterial, natural-gas harvesting energy production system that digests food waste, converting the exothermic reaction and produced gas into usable energy generation.

Vision and Audtory Systems | SDR | Advanced Materials Research   2023 – Present
- Developed a proof-of-concept facial and vocal recognition and object-tracking overlay system for secure identification and interaction, linked to an LLM-based conversational RAG memory for personalized live assistance
- Built and programmed SDR-based FPV drones for low-latency telemetry and aerial mapping, integrating custom firmware and real-time video streaming on a stereoscopic augmented-vision system.
- Curated equipment management for multiple makerspaces and material research labs, purchasing and enhancing closed-source and custom machines through management software, hardware improvements, and custom G-code.
- Created prototype designs for chemical light lithography of opaque micro electronic, resistive heaters, wireless charging pads, and antennas optimized for specific applications.

TECHNICAL SKILLS

Networking: VLAN architecture, OPNsense, UniFi networking, Proxmox clustering, Azure, Zero-trust (SDN), SDR
CAD Skills: 3-D Meshing, Lattice Stress, Compliant mechanisms, Parametric formulas, Rendering, Technical drawings
Materials/Fabrication: CNC, Additive manufacturing, Prototype development, Material selection & Behavior analysis
Automation: PLC to IoT streams, REST API development, MCP Tools, Git-based operations, Containerization
AI/Intelligent Systems: Edge LLM Inference, Computer Vision, Smart Utility Monitoring, PyTorch Model Training
Data Analysis & Visualization: Pandas, NumPy, Matplotlib/Seaborn, SQL analytics, Tableau/Power BI
Security & DevOps: Zero-trust architecture, TLS encryption, Git pipelines, Vulnerability scanning, CT hardening
Languages: Python, SQL, C++, Java, Bash/Shell Scripting

EDUCATION

Rochester Institute of Technology (RIT)   Rochester, NY
Bachelor of Science in Biomedical Engineering