Srivardhan Rajappa Muralidhar

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Professional Summary

ASU Master's specializing in **Distribution & Healthcare Systems**. Focused on **28% productivity gains** via **Lean Six Sigma**, **Discrete-Event Simulation**, and data-driven optimization.

Education

Arizona State University — Tempe, AZ
Master of Science in Industrial Engineering — *Aug 2024 – May 2026*
- **GPA: 3.27 / 4.00** | Relevant Coursework: Supply Chain Modeling, Engineering Project Management.

National Institute of Technology Tiruchirappalli — Tamil Nadu, India
Bachelor of Technology in Production Engineering — *Jul 2020 – May 2024*
- **GPA: 7.79 / 10.00** | Relevant Coursework: Facilities Planning, Quality Assurance, Logistics.

Experience

Supply Chain Research Intern — Jun 2023 – Aug 2023
National Institute of Technology Tiruchirappalli | Mentor: Dr. P. Parthiban — *Trichy, India*
- Led a **Distribution Center Operations** improvement project using **SWMS** to track material flow, achieving a **28% productivity increase** and **20% reduction** in cycle-time by building cost-benefit models.
- Validated the cost-effectiveness of **AGVs** and **AMRs** through statistical modeling in **MATLAB**, projecting an **ROI > 25%** and presenting findings to stakeholders.

Industrial Trainee — Jul 2023
Steel Authority of India Limited — *Salem, India*
- Piloted a **5S** initiative in the inventory bay by conducting a **red-tag audit** and introducing **shadow boards**, reducing tool search time by **∼15%**.
- Analyzed **distribution workflows** and material handling to identify traceability gaps, reducing transit delays by **∼12%**.

Projects

Urgent Care Throughput & Layout Optimization — Jan 2026 – Present
Arizona State University | *Engineering Project Management* — *Dr. Daniel McCarville*
- Optimizing facility layout and operational workflows using **Visio** to enhance patient flow, targeting a **15% throughput increase** through room arrangement and sequencing.
- Coordinating cross-functional workflows across **7 clinical departments** by developing a project plan and **WBS** in **Microsoft Project**.

Semiconductor Yield Improvement: Six Sigma Green Belt — Dec 2025 – Jan 2026
Kennesaw State University | *Capstone Project*
- Led a Six Sigma Green Belt project to reduce semiconductor cleanroom contamination incidents by **70%** (from 6.4 to <2 per week) using the **DMAIC** methodology.
- Validated process improvements via **Two-sample T-test (p=0.018)**, achieving a **36% particle reduction** and preventing rework costs of **$8,000–$12,000 per batch**.

Wafer Defect Reduction & Throughput Optimization — Jan 2025 – Apr 2025
Arizona State University | *Systems Engineering* — *Dr. Ali Kucukozyigit*
- Pinpointed contamination sources causing **10+ hours** of rework per shift and a **15% rise** in wafer defects by applying **DMAIC** and root-cause analysis to refine filtration and material flow.
- Projected **+3–4 wafers/hour** throughput under stable conditions by proposing automation and predictive monitoring strategies to stabilize operations.

Service Capacity & Wait-Time Optimization (SimPy) — Nov 2024 – Dec 2024
Arizona State University | *Advanced Simulating Stochastic Systems* — *Dr. Paul Grogan*
- Slashed wait times from 11.3 to **4.9 minutes** by building a **SimPy**-based model for **Starbucks** to optimize **Restaurant Services** capacity and staffing.
- Optimized capacity planning by evaluating queue dynamics, bottlenecks, server utilization, and customer loss rate to inform scheduling decisions.

WAAM Precision & Thermal Stress Optimization — Jan 2024 – May 2024
National Institute of Technology Tiruchirappalli | *Capstone Project* — *Dr. V. Senthilkumar*
- Minimized distortion to **0.0187 mm** and residual stress to **218 MPa** by building regression models and applying **Grey Wolf Optimization**.
- Optimized deposition and thermal control strategies by running 27 full-scale simulations in **Simufact Welding**, improving dimensional accuracy.

Technical Skills

Methodologies: Six Sigma (Green Belt), DMAIC, SPC, 5S (Red-tagging), SLP, Kaizen, Queueing Theory, Discrete-Event Simulation, Root Cause Analysis, Inventory Management, Process Capability Analysis.
Software & Tools: Power BI (Certified), Tableau, SimPy, MS Project, Visio, AnyLogic, Arena, Simufact, SolidCAM, Fusion 360, Witness Arena, SimQuick, MS Excel.
Languages: Python, Java, C++, MATLAB, R, JavaScript, SQL, Visual Basic.