Rahul Ashok Jeyalakshmi

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Seasoned **Industrial Engineering professional** with **3+ years of experience** in process improvement, data-driven analysis, and operational optimization across manufacturing and service environments. Skilled in using **Lean/Six Sigma methods**, **root cause analysis**, and tools such as **Excel, Minitab, SQL/Power BI** to improve workflows, reduce variation, and enhance productivity and quality. Adept at translating complex data into actionable insights to support stakeholders, drive continuous improvement, and deliver business results in fast-paced operations.

EXPERIENCE

Validation Engineer I, KSP Consulting, Princeton, United States — Jan 2026 – Present

- Collaborate with **Engineers, Manufacturing/Maintenance, Quality, and vendors** to clarify test requirements, meet timelines, and ensure smooth **test turnover/hand-off**.
- Support **test protocol development and execution** (test procedures/checklists), **document results**, capture **test deviations/anomalies**, and maintain **data integrity** across all records.
- Consistently follow **site safety requirements**, controlled-area rules, and maintain **clean, organized workspaces** while working in lab/controlled environments.
- Diagnose and troubleshoot **test bench/unit issues** using root-cause thinking; support **preventive maintenance** and readiness of multiple benches to meet daily test schedules.

Research Intern, University at Buffalo, NY, United States — Feb 2025 – Feb 2026

- Developed a **manufacturer benchmark report** ranking top brands by average range, battery capacity, and price, helping highlight competitive positioning in the EV market.
- Collected, cleaned, and organized EV performance and pricing attributes across **26 model years (1995–2025)** and **45 manufacturers**, standardizing key fields into an analysis-ready dataset that enabled large-scale trend and benchmarking analysis**, improved KPI reporting accuracy**, and supported **dashboard-ready analytics** in **Power BI** for executive-level decision-making.
- Prepared a final dataset with 100% completeness on critial analysis fields to support predictive modeling and Visualization.
- Implemented **SQL-based data extraction** and transformation workflows to refresh **datasets efficiently**, improving data refresh speed by **35%** and supporting timely business insights.
- Identified that **80%** of urban freight originates or ends in metropolitan areas, emphasizing the need for **emission-focused strategies**.
- Assessed logistics influencer's impact on vehicle procurement policies, pushing the adoption of **low-emission vehicle fleets**.
- Investigated truck companies shift to alternative fuels, linking it to **long-term cost savings and lower environmental penalties**.
- Evaluated barriers and enablers for electric vehicle (EV) adoption in Turkey's urban freight sector, **emphasizing stakeholder collaboration for decarbonization.**

Industrial Service Engineer, MABS Associates,Trichy, India — Jun 2022 – Mar 2023

- Achieved **25% reduction in equipment downtime** by utilizing **root cause analysis** to optimize pump maintenance and enhance overall **operational productivity**.
- Improved first-time fix performance by **20% by using RCA** to identify common fault patterns (seal leakage, misalignment, bearing wear), updating troubleshooting procedures, and standardizing repair and verification tests.
- Conducted on-site installations, maintenance, and repairs of industrial pumps and motors, reducing time by **10%** through **standard operating procedures for the production line.**
- Collaborated with a team of three members to optimize the maintenance process, **cutting repair time by 30% and saving up to $50,000**.
- Implemented **preventive maintenance schedules**, increasing the lifespan of industrial equipment and lowering operating costs, resulting in improved **equipment reliability and reduced unexpected breakdowns**.

EDUCATION

Master of Science	Industrial Engineering	University at Buffalo	(3.46/4)	January 2025
Bachelor of Engineering	Mechanical Engineering	Anna Universiy	(8.4/10)	May 2022

ACADEMIC PROJECTS

Analyzing the Environmental and Social Impact of Sustainable Practices — Sep 2023 - Dec 2023

Tool Used: Excel, Python, Power Bi

- Developed data-driven models using linear regression analysis to forecast environmental benefits and cost savings from implementing green technologies in **E-commerce operations**.
- Analyzed emerging green supply chain technologies**, resulting in a 20% projected reduction** in carbon emissions for the proposed E-commerce strategies.
- Evaluated carbon footprint reduction formulas and logistics strategies, including CO2 emissions comparisons across air, road, and sea transport.
- Assessed sustainable packaging opportunities using recyclability rate and packaging efficiency metrics to reduce material usage and waste.

Optimization of Retail Store Layout Using Market Basket Analysis and A-Score Efficiency — Sep 2023 - Dec 2023

Tool Used: A-Score Efficiency, REL Chart, Market Basket Analysis

- Conducted a **Facility Layout Optimization** for Saideep Superstore, enhancing product visibility and **operational efficiency**.
- Applied **Market Basket Analysis** to uncover hidden product associations and improve customer flow.
- Utilized **A-Score efficiency** method to evaluate layout effectiveness, improving layout efficiency from **61.5% to 81.4%.**
- Implemented layout changes by reallocating aisles and rack positions based on customer preferences, improving shopping and product accessibility.

SKILLS

Programming and Design: Python, SQL,C,C++, AutoCAD Mechancial , Solidworks, Fusion 360, Onshape.
Data Analytics Tool: Power BI, Tableau, MS Excel, Minitab, Data Validation, Data Visualization.
Process Improvement: Lean Manufacturing, 5S, Six Sigma, Process Optimization.