

Jayendran Ravindran

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Professional Experience

Industrial Engineer, JK Tyre and Industries Ltd. - Chennai, India *Aug 2023 - Jun 2024*

- Streamlined warehouse operations, generating \$180K annual benefit, through material flow analysis and layout design.
- Led the installation of a forklift charging station, reducing downtime by 60% through cross-functional collaboration.
- Boosted line output for tire beads by 45% by conducting root cause analysis and implementing process optimizations.
- Optimized daily labor utilization by 14%, saving \$700K annually, through cycle time-based headcount allocation.
- Analyzed and prepared mixing line output for production ramp-up of 25 mT/day through capacity planning.

Manufacturing Engineer, JK Tyre and Industries Ltd. - Chennai, India *Aug 2022 - Aug 2023*

- Increased radial tire line efficiency by 4% through value stream mapping, bottleneck analysis, and line balancing.
- Expanded tire building capacity by 400 units/day, by carrying out time and motion studies and executing SMEDs.
- Built KPI dashboards on Power BI and Excel, decreasing manual processing time by 50% through VBA automation.
- Mentored a safety team of 5 trainees and associates on implementing pedestrian warning systems for forklifts.
- Eliminated operator idle time by 10% by authoring updated SOPs, SIPOC, and One Point Lesson (OPL) documents.

Skills

- **Industrial Methodologies:** 5S, 7QC Tools, PDCA, TQM, TPM, A3, PFMEA, DMAIC, GD&T, DOE, SPC.
- **Technical Skills:** Minitab, JMP, FlexSim, Arena, MS Excel, Power BI, Tableau, AutoCAD, SolidWorks, SAP ERP.
- **Certifications:** Lean Six Sigma, Data Analytics Certification (Google), Certified SolidWorks Associate.
- **Programming Languages:** Python, SQL, MATLAB, R, VBA, LaTeX.

Education

Purdue University, West Lafayette, IN, USA *Aug 2024 - May 2026*

- Master of Science, Major in Industrial Engineering. GPA: 3.9/4.0.

National Institute of Technology Tiruchirappalli (NIT-T), India *Jul 2018 - May 2022*

- Bachelor's in Production Engineering; Minor in Management. GPA: 3.74/4.0.

Projects

RFID implementation for medical inventory tracking *Jan 2025 - Apr 2025*

- Created a 62-day implementation plan, time-phased budget, and WBS for achieving a 30% reduction in medical waste.
- Recommended resource leveling plan in anticipation of 20% workforce layoff using the critical path method (CPM).

Seoul bike rental demand model *Aug 2024 - Dec 2024*

- Built a predictive ML model to forecast hourly rental bike demand by analyzing 8,760 comprehensive records.
- Achieved a 50% reduction in RMSE using the Random Forest technique compared to linear regression models.

Convertible wheelchair with assist-free bed transfer *Jan 2022 - May 2022*

- Engineered a TRL-2 proof-of-concept and validated through manufacturing feasibility studies and cost analysis.
- Secured Innovation Grant worth \$1500 from Siemens CoE in Manufacturing for TRL-3 prototype development.

Retractable berth accessibility mechanism *Aug 2019 - Dec 2019*

- Developed a novel berth accessibility mechanism in Indian railway coaches, lowering material consumption by 22%.
- Performed an ergonomic simulation analysis of prototype, bringing down user stress levels by 13% on the NASA scale.

Leadership Experience

Communications Chair, NIT-T Student-alumni cell *Jul 2021 - Jun 2022*

- Spearheaded a 25-member team on 5 student-alumni networking events, garnering over 100+ participants.

Assistant Area Director, Toastmasters NIT Trichy *Jul 2021 - Jun 2022*

- Chaired the area-level International Speech and Table Topics Contest in hybrid mode with 70+ attendees.

Awards

- **Best Graduate Engineer Award:** Awarded by JK Tyre & Industries Ltd. among 30+ campus recruits.
- **Siemens Innovation Grant:** Awarded by Siemens CoE in Manufacturing, NIT-T for bachelor's thesis.