Jayendran Ravindran

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Experience

Industrial Engineer, JK Tyre & Industries – Chennai, India   Aug 2023 – Jun 2024
- Reduced downtime by 60% by installing a charging station through cross-functional execution & layout redesign
- Enabled $180K/year dispatch value by optimizing material flow in the warehouse through Spaghetti diagram
- Increased bottleneck machine capacity by 45% by conducting RCA and implementing tooling improvements
- Saved $25K (OpEx + CapEx)/year across truck tire line through value stream mapping and Kaizen bursts
- Reduced LHPU by 6.8 by reallocating daily headcount using time & motion studies and capacity planning
- Achieved $700K/year savings by optimizing daily labor deployment based on labor cycle time analysis

Manufacturing Engineer, JK Tyre & Industries – Chennai, India   Aug 2022 – Aug 2023
- Decreased manual processing time by 50% by building automated KPI dashboards in PowerBI and Excel VBA
- Boosted UPH by 16.67 by identifying & exploiting lead time reduction opportunities through root cause analysis
- Increased daily throughput of radial tire building machines by 2.3% by executing SMED and line balancing
- Eliminated forklift-related incidents by mentoring a 5-member team and installing safety features in the forklift
- Improved shop floor safety by conducting regular Gemba walks, 5S, and safety audits with frontline associates
- Minimized associate idle time by 10% by authoring MI, SOP, SIPOC, and one-point lesson (OPL) documents

Skills

- **Industrial Methodologies:** PDCA, DMAIC, PFMEA, Fishbone diagram, Pareto analysis, SPC, Kanban, TQM
- **Engineering software:** AutoCAD, FlexSim, Arena, SolidWorks, Fusion 360, Siemens NX, ANSYS, Visio
- **Data analysis tools:** JMP, Minitab, Python, R, SQL, VBA, Tableau, Microsoft PowerBI, SAP HANA
- **Certifications:** Lean Six Sigma, Google data analytics certificate, Certified SolidWorks Associate (CSWA)

Education

Purdue University, West Lafayette, IN   Aug 2024 – May 2026
- MS in Industrial Engineering (GPA: 3.90/4.0)

National Institute of Technology Tiruchirappalli, India   Jul 2018 – May 2024
- Bachelor's in Production Engineering; Minor in Management. (GPA: 3.78/4.0)

Projects

Seoul bike rental demand model
- Predicted hourly rental bike demand with 48.8% lower RMSE than linear ML models using Random Forest
- Reduced model overfitting by 66.67% by applying K-fold cross-validation and selecting optimal tree size

Convertible wheelchair with assist-free bed transfer
- Developed a TRL-2 proof-of-concept wheelchair by designing a CAD model and performing structural analysis
- Secured Innovation grant worth $1500 from Siemens CoE in manufacturing for TRL-3 prototype development

Numerical modeling and simulation of friction stir processing (FSP) in AA1100 plates
- Predicted corrosion defect rate in AA1100 plates during FSP with 97.7% accuracy in COMSOL multiphysics
- Simulated electrochemical modeling of FSP with <3% deviation from experimental data using linear regression

Awards

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