



Operational Efficiency and Quality Control Report

Machine_ID All

Shift All

Product_Type All

Raw_Material_... All

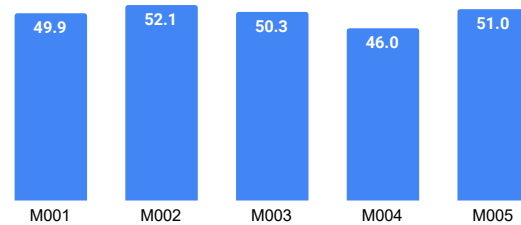
Units produced

68735

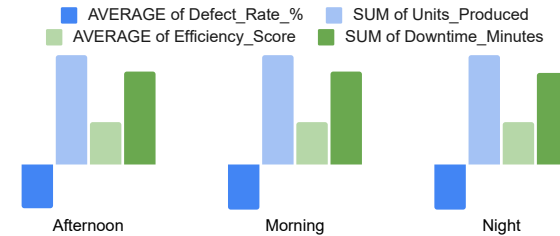
Units defective

997

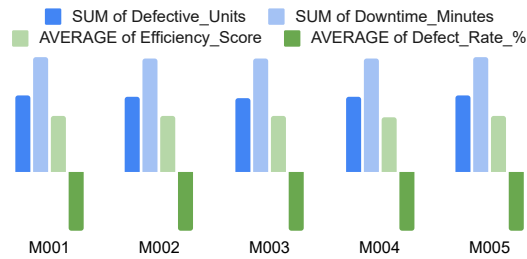
Average Efficiency Score per Machine ID



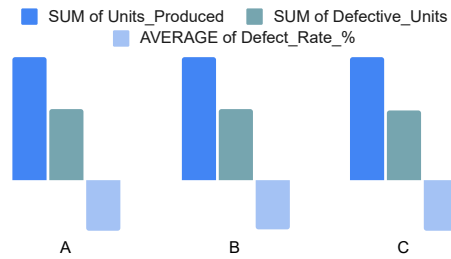
Patterns in shift productivity



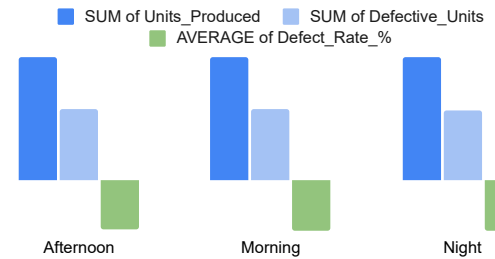
Machine performance



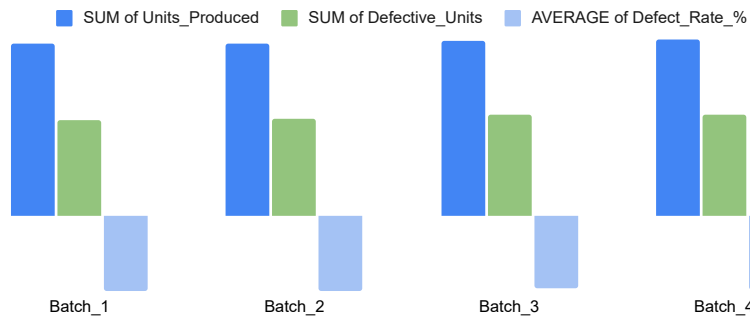
Defects by Raw material batches



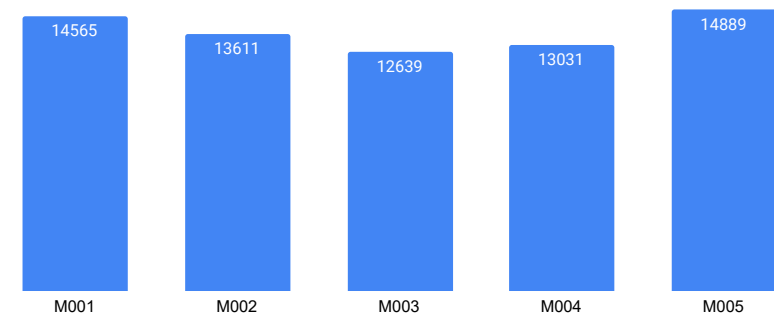
Defects by Shift



Defects by Batch



Units Produced per Machine_ID



Machine Performance Analysis

Key Findings

- Machine 005 recorded the highest downtime at 3,153 minutes, signaling potential operational or maintenance issues that need immediate attention.
- In contrast, Machine 002 had the lowest downtime of 2,770 minutes, suggesting more stable performance.
- Machine 005 also had the highest defective units produced (218 units), while Machine 003 had the lowest number of defects, showcasing more consistent quality control.
- Strikingly, Machine 004 had the lowest average efficiency score of 46.0, while Machine 002 again stood out with the highest score of 52.1. further emphasizing its overall better performance.

Shift Productivity Patterns

Key Findings

- The Morning Shift was the most productive in terms of volume, producing 23,413 units.
- The Night Shift had the lowest unit output at 22,436 units, but surprisingly had the highest average efficiency score of 51.9.
- The Afternoon Shift lagged behind with an average efficiency of 47.6 and the highest total downtime of 5,168 minutes.
- Night Shift reported the least downtime with 4,695 minutes, showing potential for performance modeling.