

INGENIERÍA EN SISTEMAS Y GRÁFICAS COMPUTACIONALES

**Class:** Simulation and visualization

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**Project:** Dashboard

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Deciding on chart types

1. Pie Chart: Production Results

For this chart we wanted to make a comparison on products that were successfully made and products that were faulty, we wanted to give a quick overview of the production outcome to assess the quality control process's effectiveness.

2. Column Chart: Production Outcome Comparison

Here the goal was to compare the final production, faulty products, and successful products, we wanted to provide a detailed breakdown of production outcomes. Our goal with this chart was to make it easier to understand the relative quantities of different types of products produced, in a real-life situation this could help to facilitate decision-making and process improvement.

3. Line Chart: Downtime per Station vs. Average Fixing Time

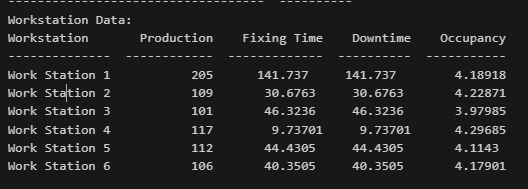
We thought it would be easier to analyze workstation downtime and average fixing time with a line chart since this chart helps identify patterns in workstation downtime and compares it to the average fixing time. With the results we got we are not sure that this was the best chart to use but since it shows the efficiency of maintenance and repair processes across workstations clearly, we decided to use it anyways.

4. Stacked Bar Chart: Workstation Metrics

Lastly, we wanted a detailed comparison of workstation metrics within the manufacturing facility, we decided to use a stacked bar chart and compare occupancy and downtime metrics for each workstation so it would be easier to see each workstation's performance and areas for improvement.

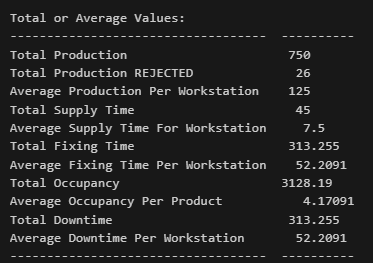
Workstation Information:

We thought it would be relative for the owner to know which machines work best and which ones could be replaced.



Workstation 1 seems to be doing most of the work and that is why it constantly shuts down and needs repairs. While Workstation 4 is the least likely to need fixing even though its production is somewhat acceptable and better than others (2,3)

Total Values:



We also think the average, total and values per product or workstation can be used to know the efficiency of the system as well as if the owner would be able to keep up with demand of the product.

We can also get information like how likely the machine or system is to fail, and which is the probability of a product being rejected which in this case would be 3.4666%

We can try to improve the efficiency by looking at the downtime of the workstations and maybe changing them, so they are more productive.