Labour Productivity Dashboard using Power BI

Project Overview

This dashboard visualizes labour productivity, efficiency, and cost performance. It was created using **Power BI**.

The dashboard provides interactive visuals for:

- Tracking worker performance
- Comparing worker types
- Monitoring weekly productivity trends
- Identifying low- and high-performing workers
- Analyzing labour cost efficiency

Business Objectives

- Measure overall labour productivity
- Compare productivity across worker types
- Identify workers needing training or intervention
- Track weekly performance trends
- Optimize labour allocation and costs

Dataset

The dashboard uses a processed dataset (`labour_data_with_metrics.csv`) containing:

- **Worker_Type** — Job role (Welder, Technician, Electrician, etc.)
- **Hours_Worked** — Hours worked

- **Output_Units** — Units produced
- **Total_Cost** — Total labour cost
- **Productivity** — Output per hour
- **Cost_Per_Unit** — Cost efficiency metric
- **Efficiency_Score** — Performance score
- **Week** — Week number

Dashboard Layout

Section 1: KPI Summary (Top Row)

- Total Cost
- Total Output
- Total Hours
- Average Productivity

Section 2: Productivity by Worker Type

- Clustered column chart showing average productivity for each worker type

Section 3: Cost by Worker Type

- Column chart showing total labour cost per worker type

Section 4: Weekly Productivity Trend

- Line chart showing productivity over time

Section 5: Efficiency Score Distribution

- Bar chart showing average efficiency score by worker type

Section 6: Detailed Worker Table

- Table of workers with key metrics and filters for low/high performance

Section 7: Filters / Slicers

- Interactive slicers for **Worker Type**

Key Insights

- **Top-performing worker type:** e.g., Electricians
- **Lowest-performing worker type:** e.g., Welders
- **Low performers:** X workers with efficiency score < 70
- **High performers:** X workers with efficiency score > 120
- Productivity trend shows improvements or declines over time
- Labour cost efficiency varies by worker type

Recommendations:

- Provide training to low performers
- Reward top performers
- Optimize worker allocation to improve productivity and reduce costs

Tools & Technologies

- **Power BI Desktop** — Dashboard creation and visualization

How to Use

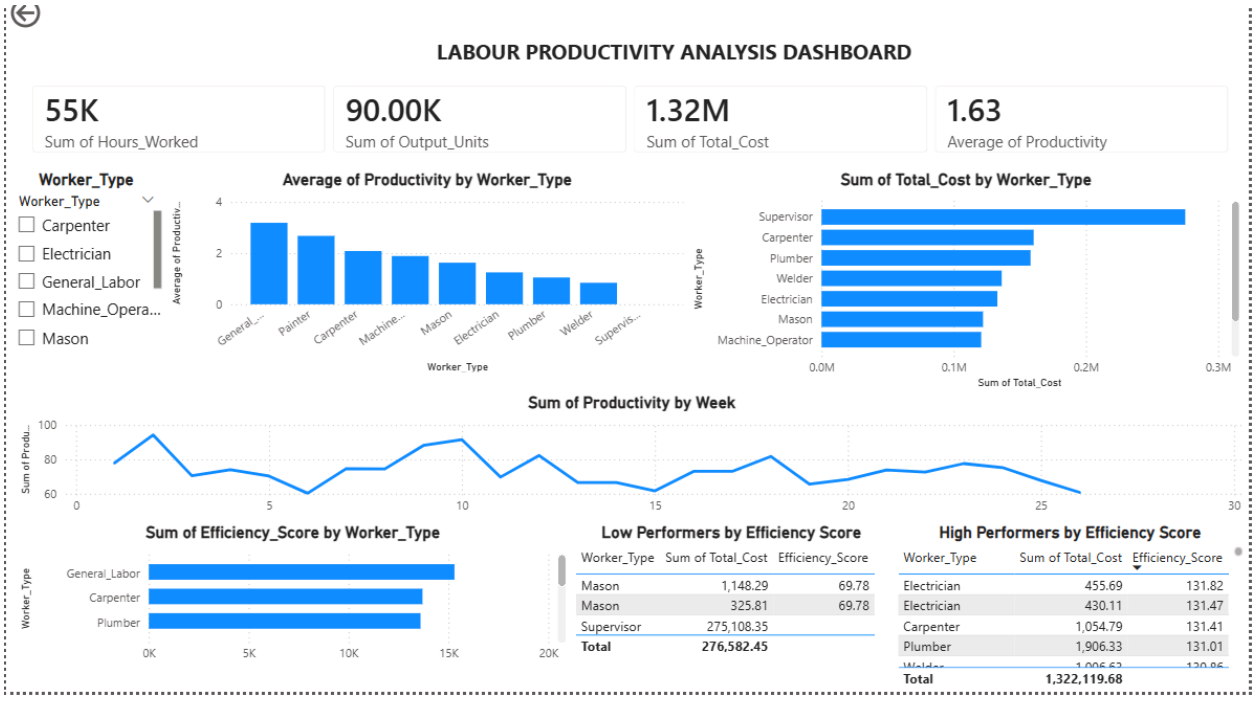
1. Open **Power BI Desktop**

2. Load the processed dataset: `labour_data_with_metrics.csv`

3. Open the dashboard
4. Refresh the dataset to update visuals with the latest data

5. Use slicers to filter by worker type

Screenshot of the Dashboard



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