

ETL & Dashboard Layout Overview

The ETL (Extract, Transform, Load) process:

1. Data Extraction:

- The raw sales data is extracted from the provided CSV file ('raw_sales_data.csv').

2. Data Transformation:

- Missing values and duplicates are handled.
- Data types are corrected, especially for dates and numeric fields.
- Additional columns are created, such as Total Revenue, Total Cost, and Total Profit.
- A star schema is created with dimension tables (Date, Product, Region) and a fact table (Sales).

3. Data Loading: The transformed data is saved into CSV files ready for analysis in Looker Studio.

Dashboard Layout Overview:

Goal: The Sales Performance Dashboard provides a quick and comprehensive view of sales metrics, trends, and regional performance to support informed decision-making.

- Filters: Optional filters by product type or region.

1. Key Performance Indicators (KPIs)

- Total Revenue: Shows overall revenue with comparisons to previous periods.
- Total Profit: Displays total profit with similar period comparisons.
- Profit Margin: Percentage of revenue converted to profit.
- Units Sold: Total number of units sold.

2. Trend Analysis (Middle)

- Sales Over Time: Line chart showing revenue and profit trends by year/quarter.
- Units Sold Over Time: Line chart tracking sales volume over time.

3. Top 5 Region by Sales and Sales by Country (map chart) (Lower Left & Right)

- Sales by Region: Bar chart displaying revenue by region with profit margin color-coding.
- Sales by Country: Map chart or map showing revenue by country.

4. Product Performance (Lower Right)

- **Sales by Product:** Pie chart showing revenue, units sold, or profit by product type.