

# Sales Dashboard in Google Looker Studio

## 1. Introduction

This report documents the development of a **Sales Analytics Dashboard** in **Google Looker Studio** to provide insights into sales performance, customer segmentation, and discount strategies. The dashboard integrates multiple tasks, including **product ranking**, **sales forecasting**, and **trend analysis**, to support data-driven decision-making.

## 2. Project Objectives

- Develop an **interactive dashboard** for real-time sales monitoring.
- Implement **predictive modeling** for sales forecasting.
- Segment customers based on **net profit contribution**.
- Analyze **monthly sales trends** and **discount impacts**.

## 3. Tasks & Implementation

### 3.1 Top 5 Best-Selling Products (Mobiles & Tablets, 2022)

📌 **Objective:** Identify the **top 5 products** based on sales volume.

📌 **Implementation:**

- Filtered 2022 sales data (**category = Mobiles & Tablets, is\_valid = 1**).
- Aggregated & Ranked sales using **SUM(qty\_ordered)**.
- Visualized via **horizontal bar chart + scorecards**.  
📌 **Insight:** Key products identified for **inventory planning & marketing focus**.

### 3.2 Sales Forecast for Q2 2023

📌 **Objective:** Predict Q2 2023 sales using historical data.

📌 **Implementation:**

- Aggregated monthly sales data (2022).
- Built a **Linear Regression model** in Google Colab.
- Visualized predictions with a **line chart** in Looker Studio.  
📌 **Insight:** Enabled **demand forecasting & data-driven decision-making**.

### 3.3 Customer Segmentation (Net Profit-Based)

📌 Objective: Classify customers as Low, Medium, or High profit.

📌 Implementation:

- Calculated Net Profit:  $\text{SUM}(\text{after\_discount}) - \text{SUM}(\text{cogs})$ .
  - Segmented Customers: Using CASE statement.
  - Visualized with pie chart + detailed table.
- 📌 Insight: Identified high-value customers for personalized marketing.

### 3.4 Monthly Sales Growth vs. Discount Rate Analysis

📌 Objective: Track sales growth trends vs. discount impact.

📌 Implementation:

- Calculated Sales Growth (%):  $(\text{Current Month Sales} - \text{Previous Month Sales}) / \text{Previous Month Sales}$ .
  - Calculated Discount Rate:  $\text{SUM}(\text{discount\_amount}) / \text{SUM}(\text{before\_discount})$ .
  - Visualized via combo chart (bars for sales growth, line for discount rate).
- 📌 Insight: Helped optimize pricing & promotional strategies.

## 4. Key Learnings & Takeaways

- **Advanced Data Visualization:** Created interactive dashboards using Google Looker Studio with calculated fields, filters, and scorecards.
- **Predictive Analytics:** Developed machine learning models in Google Colab to forecast future sales trends.
- **Data-Driven Decision Making:** Gained insights into customer segmentation, sales trends, and discount effectiveness.
- **Business Intelligence Skills:** Strengthened data analysis, reporting, and visualization techniques to support strategic planning.

## 5. Project Links

- Google Looker Studio Dashboard: [Check Here](#)
- Google Colab Notebook: [Check Here](#)

## 6. Conclusion

The Sales Analytics Dashboard successfully integrates real-time monitoring, predictive insights, and strategic recommendations into a single, interactive platform. This project enhanced technical expertise in data analytics while delivering valuable insights for business growth.

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