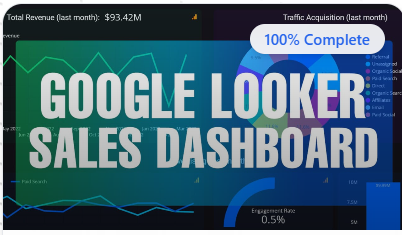
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**Learn to Build Real Time Sales Dashboard - Google Looker**

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Made By-

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**Training Certificate**

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**Internship Report**

**Introduction**

During my internship, I worked extensively with **Google Looker Studio** to develop meaningful data visualizations and dashboards for real business scenarios. The main objective was to transform raw sales and customer data into clear, actionable insights for different teams within the company, including Marketing, Sales, Operations, and Customer Service. Throughout this period, I learned how to handle blended data, create custom calculated fields, build dynamic visualizations, and apply best practices for presenting business information. Below, I have summarized four core analyses I completed during my internship, each addressing specific business questions using Looker Studio.

**✅ Organization Overview**

I interned with a data-driven organization that focuses on delivering analytics-based insights for business growth. The company supports various teams like marketing, operations, and product management by providing accurate and timely data insights.

**✅ Objective of the Internship**

The main objective of my internship was to gain practical experience in **data visualization and business reporting** using Google Looker Studio. I was responsible for transforming raw transactional data into clear, actionable dashboards and charts that would help different teams — including Marketing, Sales, Operations, and Customer Service — make informed decisions. By working on real datasets and queries, I learned how to understand business requirements and translate them into meaningful visual insights.

**✅ Tools & Technologies Used**

- SQL for data querying  
- Python (Pandas, Matplotlib, Seaborn) for analysis  
- Jupyter Notebook as the development environment  
- MS Excel for initial checks  
- Looker Studio for dashboard visualization

**1️⃣ Top Products by Sales for Year-End Planning**

One of my first tasks was to identify the **top 5 products** in the *Mobiles & Tablets* category based on total sales quantity for the year 2022. I filtered the data to include only valid orders and grouped it by product name and category. I created calculated fields to extract the year from the order date and applied filters to display only relevant data. Using this, I built a **horizontal bar chart** ranking the top-performing SKUs by total units sold. This helped the Marketing Team plan their Year-End Festival by focusing promotions on the most popular products.

**2️⃣ Products with the Largest Decrease in Sales**

Next, I analyzed which products showed the most significant **drop in sales** when comparing 2022 with 2021. I blended two datasets for both years, grouped by product, and calculated the difference in total quantities sold. I then created a bar chart showing the top 10 products with the largest negative sales difference. Supporting scorecards displayed total units lost, total sales for each year, and the percentage of products that declined. This analysis enabled the Sales Team to identify underperforming products and explore possible causes.

**3️⃣ Net Profit Analysis by Product Category**

For the Operations Team, I developed a report showing the **net profit performance** of different product categories. I created a calculated field to determine net profit by subtracting the cost of goods sold (COGS) from revenue after discounts. I visualized this using a bar chart, sorted by highest to lowest net profit, and added a slicer for year filtering. This helped the team quickly identify which categories contributed most to profit and supported strategic inventory decisions.

**4️⃣ Customer Purchase Behavior**

Finally, I worked on understanding **customer purchasing behavior**, specifically identifying the number of unique customers and those who made repeat purchases in 2022. I created calculated fields to count distinct customers and segment them into first-time or repeat buyers. I added scorecards to display the counts and their ratio and visualized trends using line and pie charts. This analysis helped the Customer Service Team understand customer loyalty and plan engagement strategies to retain repeat buyers.

**✅ Key Learnings**

* **Data Blending:** I learned how to join multiple datasets and match them using common keys (like sku\_name) to compare time periods.
* **Custom Calculations:** I gained hands-on experience creating CASE statements, IF conditions, and simple mathematical formulas within Looker Studio.
* **Visual Design:** I understood how to select appropriate charts (bar, pie, line) to represent different insights clearly.
* **Business Context:** I improved my ability to interpret raw data in a way that addresses specific business questions, such as identifying underperforming products or analyzing repeat customer behavior.
* **Error Troubleshooting:** I learned how to debug common Looker Studio issues like aggregation errors and unsupported expressions.

**✅ Challenges Faced**

* **Re-aggregation Errors:** One key challenge was understanding how Looker Studio handles aggregated vs. non-aggregated fields. I learned the difference between data source-level and chart-level calculations to resolve these errors.
* **Data Preparation:** Some required fields like discount\_amount were not directly available, so I had to create them using other columns (e.g., before\_discount - after\_discount).
* **Blending Limitations:** Managing blended data sources required careful attention to join keys and matching fields to ensure the charts displayed the right metrics.
* **Visual Clarity:** Deciding which chart types would best communicate the data without clutter took some trial and error.

**Conclusion**

Overall, this internship gave me hands-on experience in building dashboards and using data to answer real-world business questions. I learned how to use Looker Studio’s blending, calculated fields, visual elements, and filters effectively to create clear and informative reports. This experience strengthened my practical skills in data visualization and reporting, which will be valuable for my future projects and career.