

# ■ Sales Data Analysis Report

## 1. Project Overview

This project focuses on analyzing sales data to identify key business insights such as: - Total and monthly sales performance - Top-selling products - Regional revenue comparison - Sales trends over time The analysis is done using Python and MySQL, along with popular Python libraries like Pandas, Matplotlib, and Seaborn.

## 2. Tools & Technologies Used

Python, Pandas, NumPy, Matplotlib, Seaborn, MySQL, SQLAlchemy

## 3. Data Description

The dataset contains the following columns: - sale\_id → Unique Sale ID - product\_id → Product Identifier - product\_name → Product Name - category → Product Category - price → Unit Price - quantity → Number of items sold - region → Sales region - sale\_date → Date of sale

## 4. Analysis Performed

1. Total Revenue Calculation – Total sales amount generated from all regions. 2. Top Selling Products – Products generating the highest total revenue. 3. Monthly Sales Trend – How sales vary month to month. 4. Region-wise Sales – Which region contributes the most revenue.

## 5. Key Insights

- North Region recorded the highest total revenue. - Top 3 Products contribute around 60% of total sales. - Festive Season (Oct–Dec) shows a major spike in sales. - Least performing region requires promotional focus.

## 6. Conclusion

This project demonstrates the use of Python for Data Analytics and SQL for data storage and querying. It can help businesses make data-driven decisions such as identifying: - Which regions to focus marketing on - Which products to stock more frequently - When to plan promotional offers

## 7. Author

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