**PROJECT REPORT: ECOMMERCE SALES DASHBOARD**

**Project Overview**

This project involved analysing eCommerce sales data using Power BI to create an interactive dashboard that tracks key performance indicators (KPIs) such as total revenue, profit, quantity sold, and average order value (AOV). The dashboard visualizes sales performance by geography, customer segmentation, product categories, and payment methods, delivering actionable insights for optimizing sales strategy and improving business decisions.

**Objectives**

1. Develop an interactive dashboard to analyse and visualize eCommerce sales data, providing insights into:

- Sales and profit trends.

- Customer behaviour and preferences.

- Product performance by category and sub-category.

- Geographical sales distribution.

- Payment method preferences.

1. Generate actionable insights for improving product sales, customer retention, and optimizing regional sales strategies.

**Methodology**

- Data Extraction: The data was sourced from the eCommerce platform's database, focusing on key metrics such as sales amount, profit, and quantity sold across various dimensions.

- SQL Querying: SQL was used to clean and transform the data, calculate KPIs such as total sales, profit, and average order value, and set the requirements for the Power BI dashboard.

- Data Visualization: Power BI was employed to create interactive charts and visuals, allowing for real-time filtering by key variables such as state, quarter, and payment method.

**Key Insights**

1. **Over-all Sales & Profitability:**

* Total sales amounted to 438K, with a 37K profit and 5615 units sold.
* The average order value (AOV) was 121K, showing strong customer spending habits.

2. **Geographical Performance:**

* Maharashtra led in sales contribution, followed by Madhya Pradesh and Uttar Pradesh. Delhi showed lower engagement, presenting an opportunity for growth.

*Recommendation*: Increase marketing efforts in Delhi to boost sales and customer acquisition in underperforming regions.

**3. Profit Trends by Month:**

* January and December were the most profitable months, likely due to holiday promotions, while June and July experienced negative profits.

*Recommendation:* Explore cost-cutting measures or launch mid-year promotions to mitigate losses during slow months.

**4. Category & Sub-Category Performance:**

* Clothing led the quantity of sales, with 63% of total items sold.
* Printers and Bookcases generated the highest profit in the sub-category analysis.

*Recommendation:* Focus on expanding product offerings in Printers and Bookcases to maximize profitability, while improving marketing strategies for low-performing items like Tables.

**5. Customer Insights:**

* Top customers included Harivansh, Madhav, and Madan Mohan, showing strong individual buyer activity.

*Recommendation:* Implement personalized marketing strategies or loyalty programs for these high-value customers to drive repeat purchases.

**6. Payment Mode Preferences:**

* Cash on Delivery (COD) was the preferred payment method, making up 44% of transactions. Digital payments such as UPI, debit, and credit cards accounted for the rest.

*Recommendation:* Encourage digital payments through incentives like discounts or cashback offers, reducing reliance on COD and streamlining payment processes.

**CONCLUSION**

This project successfully delivered a comprehensive sales dashboard that provides critical insights into customer behaviour, geographical performance, and product sales. The dashboard's interactive features allow stakeholders to track trends and make data-driven decisions to improve sales strategies, optimize product offerings, and enhance customer engagement.

**Key Achievements:**

* Data-Driven Decision Making: The project provided actionable insights that can help inform strategies for increasing profitability and market penetration.
* Enhanced Customer Focus: Understanding customer preferences and behaviour can lead to targeted campaigns and improved customer retention.
* Optimized Product Strategy: Identification of top-selling categories and sub-categories enables better inventory management and product promotions.

**Technical Summary:**

* Tools Used: SQL for data extraction and KPI calculation, Power BI for visualization.
* KPIs: Total Sales (438K), Total Profit (37K), Quantity Sold (5615), Average Order Value (121K).
* Key Metrics: Sales by State, Sales by Customer, Profit by Sub-Category, Payment Methods.
* Data Filters: Quarter, State, and Payment Method filters for real-time analysis.