

# Strategic Business Insights from Exploratory Data Analysis (EDA)

## 1. Customer Distribution Across Regions

The geographical distribution of customers across regions is a critical indicator of market reach and engagement. By analyzing the data, we can observe that certain regions have a significantly higher concentration of customers, indicating well-established markets with high demand. These regions can be leveraged for upselling, cross-selling, and product diversification strategies. On the other hand, regions with lower customer densities represent untapped potential. For these areas, targeted marketing ca...

## 2. High-Impact Products: A Closer Look at Best-Sellers

The identification of top-selling products is crucial for understanding customer preferences and driving future business decisions. Products that consistently perform well in terms of sales volume represent a high demand within the market. These best-sellers can be considered as pillars of the product portfolio and should be prioritized in terms of marketing, inventory management, and promotional strategies. Understanding why these products are performing well--whether due to their unique features, pricin...

## 3. Revenue Dynamics: Tracking Monthly Trends

Revenue trends over time offer valuable insights into business performance, seasonality, and the effectiveness of marketing strategies. By tracking monthly revenue fluctuations, we can identify periods of high growth and understand the underlying factors contributing to this success, such as seasonal demand or successful campaigns. Conversely, identifying months with lower sales figures allows businesses to pinpoint areas where performance may have dipped, providing opportunities to implement corrective ...

#### 4. Price Sensitivity: The Price vs. Quantity Relationship

Understanding the relationship between product price and quantity sold is essential for determining optimal pricing strategies. A scatter plot analysis reveals how different price points influence customer purchasing behavior. Products with higher prices that still see strong sales suggest that customers are willing to pay a premium for certain items, possibly due to perceived value or product uniqueness. These products could be positioned as premium offerings in the market, allowing for higher profit ma...

#### 5. Product Revenue Contribution: Maximizing Profitability

An analysis of the revenue contribution by product provides a deeper understanding of which items are the most profitable. High-revenue products should be prioritized in terms of restocking, marketing, and promotional efforts to ensure that they continue to drive profitability. These products may also benefit from enhanced visibility in marketing campaigns or feature placements on the website or in stores. On the other hand, underperforming products may need to be reassessed. Factors such as pricing, mar...