

# TASK 1

## EDA and Business Insights

### 1. Customer Region Distribution

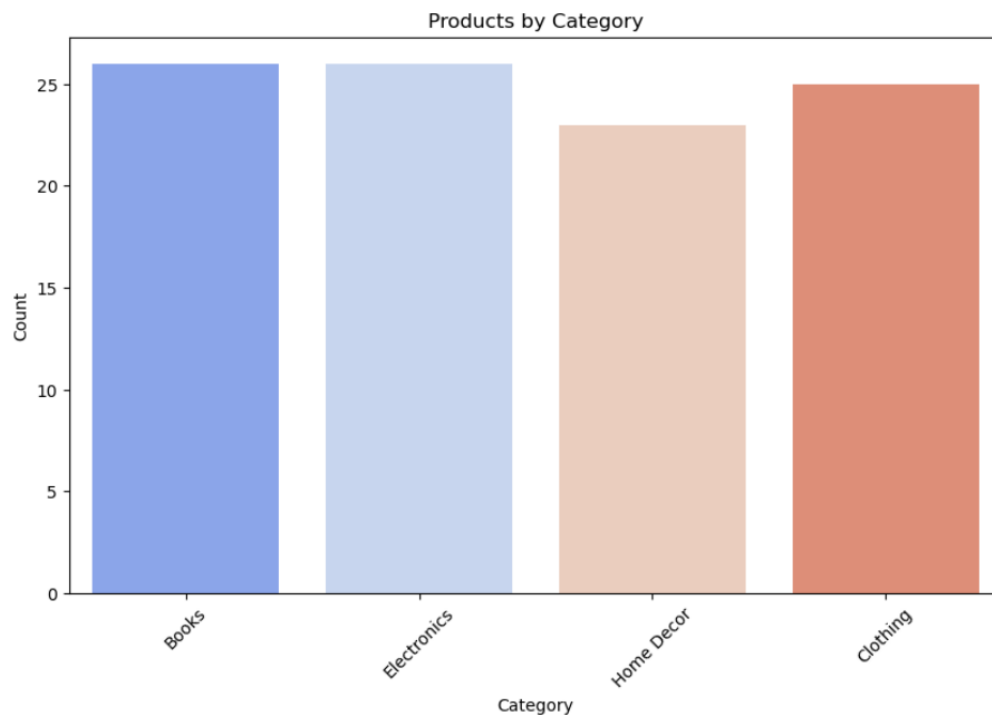
Analyzing customer distribution by region helps identify the geographic areas contributing most to sales. This allows the company to focus its marketing and expansion efforts in high-performing regions while devising strategies to increase market share in underperforming regions. For example, if a specific region has a low customer count, targeted promotions or partnerships with local businesses could improve visibility and engagement. Understanding regional customer trends is crucial for optimizing resource allocation and improving overall business performance.



### 2. Product Category Analysis

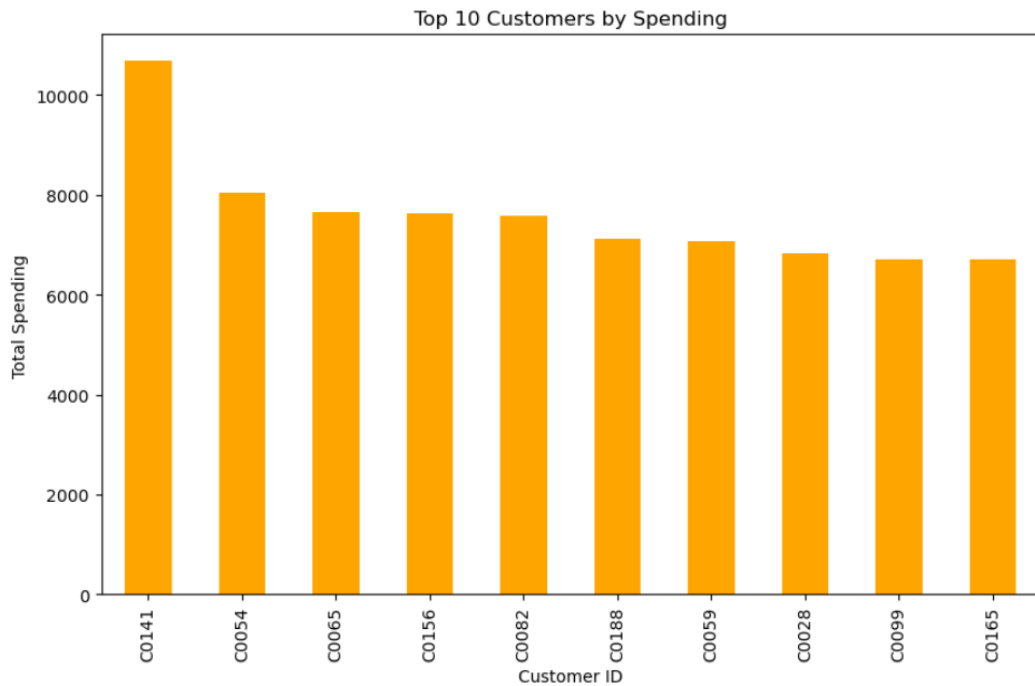
By categorizing products, the company can determine which product categories are most popular among customers. This insight is valuable for inventory management, helping ensure that high-demand products are always in stock. It also aids in developing targeted marketing campaigns, such as promoting seasonal or trending categories. Furthermore,

understanding product category trends can guide product development efforts, enabling the company to innovate in areas with strong customer demand.



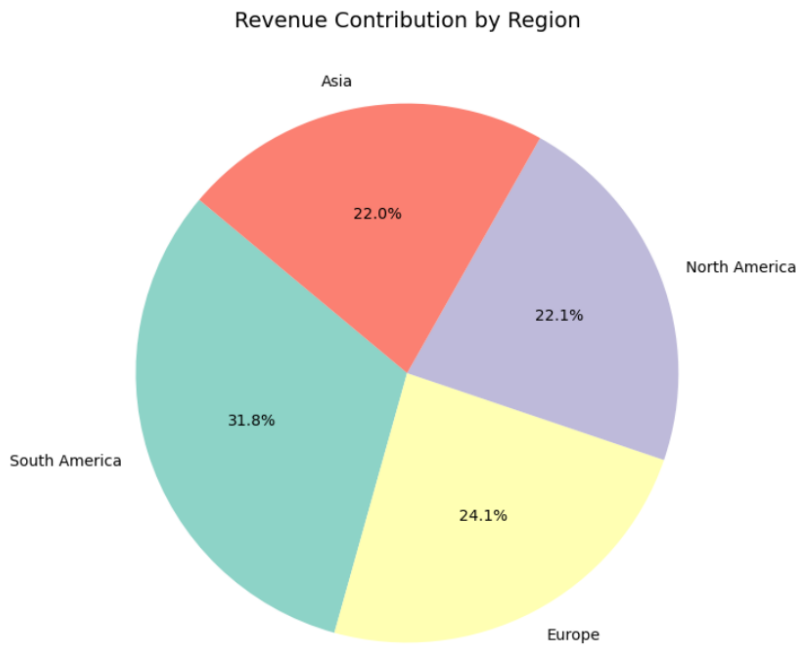
### 3. Top Customers by Spending

Identifying the top customers by spending highlights the company's most valuable clientele. These high-value customers can be prioritized for loyalty programs, exclusive discounts, or personalized offers to ensure retention and satisfaction. Additionally, understanding their purchasing patterns can guide the company in crafting premium services or upselling opportunities. Building strong relationships with these customers not only drives revenue but also fosters brand advocacy and trust.



#### 4. Calculate Total Revenue by Region

Analyzing revenue contribution by region provides a clear picture of where the company is generating the most income. Regions with higher revenue can be the focus of further investment, such as new stores, expanded product lines, or regional promotions. Conversely, for regions contributing less revenue, the company can explore reasons for the underperformance and design corrective strategies. This insight ensures that resources are allocated effectively to maximize profitability.



## 5. Calculate average spending per customer.

The average spending per customer is a key metric for understanding customer behaviour. Customers with higher average spending can be targeted with premium products or exclusive deals, maximizing profitability. This analysis can also highlight opportunities to increase average spending among low-value customers through upselling, bundling, or tailored promotions. By segmenting customers based on spending, the company can deliver more personalized marketing strategies, leading to increased customer loyalty and sales.

