**Business Requirement Document (BRD)**

**1. Introduction**

The purpose of this document is to outline the findings from a sales analysis conducted during the Diwali season. The analysis identifies key customer demographics, behavior patterns, and product preferences. These insights aim to guide targeted marketing strategies and inventory planning for future sales events.

**2. Objective**

To analyze Diwali sales data and identify:

* Key customer segments driving sales.
* Popular product categories.
* Behavioral trends and patterns to enhance sales strategies.

**3. Data Analysis Process**

The analysis was conducted in the following steps:

**3.1 Data Refinement**

* **Raw Data Cleaning:** Removed duplicate entries, handled missing values, and standardized data formats.
* **Categorization:** Segmented data by age group, gender, location, occupation, and product categories.
* **Filtering Irrelevant Data:** Excluded non-relevant data points to focus on meaningful insights.

**3.2 Data Visualization**

* **Countplots:** Analyzed distributions of customers by demographics (e.g., marital status, gender, occupation).
* **Barplots:** Evaluated relationships between demographics and purchase amounts across product categories.

**4. Insights**

The analysis revealed the following key findings:

* **Demographics:**
  + Married women aged 26-35 were the most active buyers.
  + Significant sales were observed from customers in Uttar Pradesh (UP), Maharashtra, and Karnataka.
* **Occupations:**
  + Customers working in the Healthcare, IT, and Aviation sectors were more likely to make purchases.
* **Product Preferences:**
  + The most popular product categories were Food, Clothing, and Electronics.

**5. Conclusion**

The analysis concluded that married women in the 26-35 age group, particularly from UP, Maharashtra, and Karnataka, working in the Healthcare, IT, and Aviation sectors, are a key demographic. These customers show a strong preference for products in the Food, Clothing, and Electronics categories.

**6. Recommendations**

Based on the findings, the following recommendations are proposed:

1. **Targeted Marketing Campaigns:**
   * Design campaigns tailored for married women aged 26-35.
   * Focus marketing efforts in Uttar Pradesh, Maharashtra, and Karnataka.
2. **Sector-Specific Promotions:**
   * Offer discounts or loyalty programs targeting Healthcare, IT, and Aviation professionals.
3. **Category-Specific Inventory Management:**
   * Ensure adequate stock of Food, Clothing, and Electronics products during sales events.
4. **Collaborations:**
   * Partner with organizations in the Healthcare, IT, and Aviation industries to offer exclusive deals.

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