

## Final Insights and Outcomes — Diwali Sales Analysis

### 1. Project Objective

The main aim of this project was to analyze Diwali festival sales data to understand:

- Which gender, age group, and occupation bought the most
- Which states and zones generated the highest revenue
- Which product categories were the most popular and profitable
- Who are the most valuable customers

This analysis helps businesses plan targeted marketing, inventory management, and profit optimization strategies.

### 2. Data Understanding & Cleaning

The dataset has 11,251 records and 15 features including customer details, sales details, and product information.

#### Cleaning Steps:

1. Removed unnecessary columns
2. Removed missing values from Amount
3. Converted data types
4. Removed duplicate entries
5. Filtered relevant columns for analysis

### 3. Key Insights

#### A. Gender-Based Insights:

- Females purchased more both in quantity and total spending.

Recommendation: Focus on fashion, lifestyle, and home décor promotions.

#### B. Age Group Insights:

- Age group 26–35 has the highest sales, followed by 36–45.

Recommendation: Target working professionals with attractive offers.

#### C. Marital Status:

- Married customers spend more due to gifting and family purchases.

Recommendation: Promote family bundles and festive gift packs.

#### D. Occupation Insights:

- IT and Management professionals contribute the highest sales.

Recommendation: Premium product marketing to working professionals.

#### **E. State & Zone-Based Analysis:**

- Maharashtra, Uttar Pradesh, Karnataka, and Delhi have the highest sales.
- North and West zones perform best.

Recommendation: Increase marketing and delivery in these areas.

#### **F. Product Category Insights:**

- Clothing has the highest number of orders.
- Electronics generates the highest revenue.
- Gift items, décor, and home furnishing are strong festival demand.

Recommendation: Stock more festive and electronic products.

#### **G. Order & Amount Analysis:**

- Average Orders: 2.48
- Average Purchase Value: ₹9453
- Max Purchase Value: ₹23952

### **4. Final Recommendations:**

- Focus on females and age group 26–45
- Promote electronics, clothing, gift items, and home décor
- Target North & West India for expansion
- Introduce festival bundles and loyalty rewards

### **5. Outcome:**

The analysis provided valuable insights into customer behavior, product trends, and geographical sales. These insights help improve marketing, inventory planning, and profit optimization.