

# Diwali Sales Data Analysis Report

## Problem Statement

The objective of this project is to analyze Diwali sales data to identify customer purchasing behavior, sales trends, and key contributing factors affecting sales performance. This analysis helps businesses make data-driven decisions and improve festive season marketing strategies.

## Objective of Analysis

- Perform data cleaning and preprocessing
- Analyze customer demographics
- Identify high-value customer segments
- Identify top performing states and product categories
- Provide actionable business insights

## Dataset Overview

The dataset contains customer purchase information such as Gender, Age Group, State, Occupation, Product Category, Orders, and Purchase Amount during Diwali festival sales.

## Key Findings

- Females contributed more to total sales compared to males.
- Age group 26–35 years generated the highest revenue.
- Married women were the most valuable customers.
- Top states included Uttar Pradesh, Maharashtra, and Karnataka.
- IT, Healthcare, and Aviation professionals contributed most.
- Clothing and Electronics were top-selling categories.

## Business Recommendations

- Focus marketing campaigns on females aged 26–35.
- Target married women customers with special festive offers.
- Increase product inventory in high-demand categories.
- Focus marketing in top-performing states.
- Provide personalized offers for working professionals.

## Conclusion

The analysis shows that females, especially married women aged 26–35 years working in professional sectors, are the primary contributors to Diwali sales. Businesses can maximize revenue by targeting these customer segments and optimizing marketing strategies accordingly.