



Customer Segmentation & Sales Analysis Project

1. Project Objective

The objective of this project was to analyze customer purchasing behavior and sales performance using Excel and to present key patterns through an interactive dashboard.

2. Dataset Overview

Type: Structured dataset (single sheet)

Total Records: 3,900 customers

Key Columns Used

- CustomerID
- Gender
- Age
- Category
- Purchase Amount (USD)
- Location
- Shipping Type
- Payment Method
- Annual Income
- Profession
- Work Experience
- Family Size
- Frequency of Purchases
- Membership Type

3. Tools & Techniques

- **Excel**
 - Pivot Tables
 - Pivot Charts
 - KPI calculations
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- **Dashboard Design**

- Interactive slicers (Gender, Category, Location)
- Aggregated KPIs
- Category-wise, gender-wise, and location-wise visuals

4. Analysis Approach

1. Created pivot tables to aggregate sales and customer metrics across:
 - Category
 - Gender
 - Location
 - Profession
 - Membership Type
2. Converted pivot tables into pivot charts to visualize trends and comparisons.
3. Designed an **interactive dashboard** by combining:
 - KPIs
 - Category and segment-level charts
 - Slicers for dynamic filtering and drill-down analysis

5. Dashboard KPIs

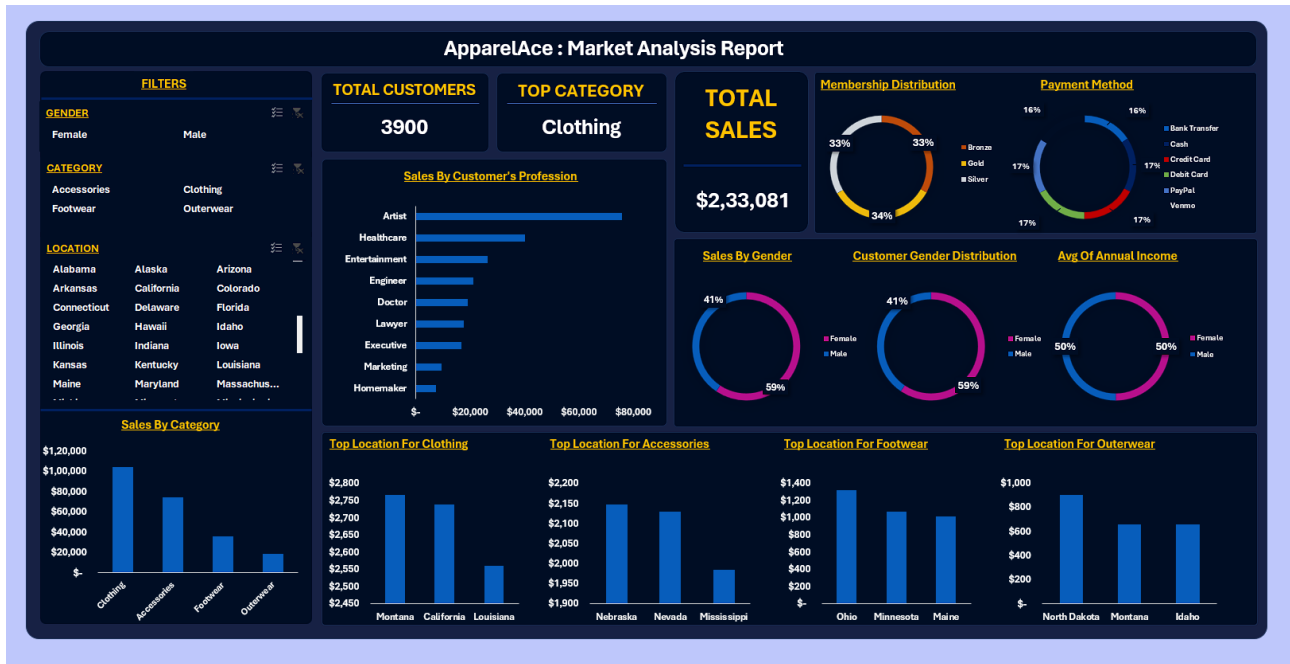
- **Total Customers:** 3,900
- **Total Sales:** ~\$233K
- **Top Category (by sales):** Clothing

6. Dashboard Components

- Sales by Category
 - Sales by Gender
 - Customer Distribution by Gender
 - Membership Type Distribution
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- Payment Method Distribution
- Category-wise Sales by Location

7. Key Dashboard Observations



- **Clothing** appears as the leading category by sales value and customer participation.
- Total sales of approximately **\$233K** across 3,900 customers provide a strong base for customer-level analysis.
- Sales contribution varies across **profession groups**, with certain professions contributing higher aggregated sales.
- The **gender distribution** shows a moderate skew toward female customers, while male customers remain a significant segment.
- **Membership tiers (Bronze, Silver, Gold)** are relatively evenly distributed, enabling comparison across loyalty levels.
- **Payment methods** are broadly distributed, with no single dominant option.
- **Category performance differs by location**, and top-performing locations change depending on the selected product category.
- Interactive slicers allow deeper drill-down to explore segment-specific patterns dynamically.

8. Outcome

This project demonstrates:

- Effective use of **pivot tables and pivot charts** for aggregation
- Ability to design **interactive Excel dashboards**
- Clear understanding of **exploratory analysis through visualization**

The dashboard is intended to support **business users and stakeholders** in exploring customer and sales data interactively.
