

# Domain - E-commerce & Retail

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## 1.Sales Trend Analysis :

### Goal of the Project :

Understand how sales change over time which months perform best, which products sell the most, and what impacts profit. This helps in stock planning, promotions, and better business decisions.

### Main Columns in the Data :

- Date
- Product Name
- Category
- Quantity
- Price
- Sales
- Profit
- Discount
- Customer
- Region/City

### Insights :

- Which products or categories make the most money
- Best months/seasons for sales
- Top regions/cities by purchase volume
- Impact of discounts on profit
- High-spending customer groups

### Key Points :

- Are sales increasing or decreasing over time?
- Are we making profit or loss?
- Are discounts hurting profit?
- Which products or regions perform best?
- Are festivals boosting sales?

## 2. Customer Demographics and Behavior

### Goal of the Project :

Understand customer demographics and shopping behavior (age, gender, region, spending, frequency) to optimize targeting, products, and marketing strategies.

### Main Columns in the Data :

- Age
- Gender
- Location
- Income
- Product\_ID
- Product\_Category
- Purchase\_Amount
- Purchase\_Date
- Frequency
- Browsing\_Time
- Customer\_ID

### Insights :

- Which age/gender groups buy more
- Who are the high-value customers
- Region-wise customer distribution
- Frequency and value of shopping behavior

### Key Points :

- Most valuable customer segments
- Shopping behavior by age, gender, income
- Popular products by group
- Loyal vs one-time buyers
- Shopping style differences by income/gender

### 3. Flash Sales and Festival Season :

#### Goal of the Project :

Analyze sales during flash sales and festivals (e.g., Diwali, Christmas, Big Billion Days) to identify top-performing products, customer behavior, and profit impact.

#### Main Columns in the Data :

- Date
- Festival / Sale Name
- Product Name
- Category
- Quantity
- Price
- Sales
- Profit
- Discount
- Customer ID
- Region / City

#### Insights :

- Which festivals/flash sales have the highest sales
- Top-selling products during festivals
- Impact of discounts on profit
- Regional sales during promotions
- Peak shopping days/times

#### Key Points :

- Compare normal vs. festival days
- Identify festival bestsellers
- Analyze discount impact
- Understand festival shopping behavior
- Recognize top revenue-generating events

## 4. Product Rating vs Sales Relationship :

### Goal of the Project :

Understand the impact of product ratings (1–5 stars) on sales volume, customer preference, and review influence to guide promotions and product quality improvements.

### Main Columns in the Data :

- Product Name
- Product ID
- Category
- Rating
- Number of Reviews
- Price
- Sales
- Profit
- Discount
- Region / City
- Date

### Insights :

- Do higher-rated products sell more?
- Do low-rated products underperform?
- Best-rated categories
- Review count impact on sales
- Optimal rating for best performance

### Key Points :

- Sales pattern across different rating levels
- Review count vs sales trend
- Low-rated high-sellers (why?)
- Importance of rating vs discount
- Category-specific rating trends

## 5. Sales by Category and Sub-Category :

### Goal of the Project :

Analyze which categories and sub-categories drive the most sales and profit, helping businesses optimize inventory, marketing, and product focus.

### Main Columns in the Data :

- Product Name
- Category
- Sub-Category
- Quantity
- Price
- Sales
- Profit
- Discount
- Customer ID
- Region / City
- Date

### Insights :

- Top-selling categories
- Most profitable sub-categories
- Low-profit/high-sales categories
- Loss-generating sub-categories
- Discount impact by sub-category

### Key Points :

- Category-wise sales/profit trends
- Best and worst sub-categories
- Discount performance
- Product improvement needs
- Marketing/investment priorities