

# Customer Shopping Analysis

This report provides an analysis of customer shopping behavior, highlighting key insights into shopping mall preferences, payment methods, yearly invoice trends, and category-wise purchase quantities.

## Shopping Malls Analysis

The analysis shows the percentage distribution of shopping malls visited by customers. Here are the top shopping malls with their respective visit percentages:

1. Cevahir AVM: 5.10%
2. Emaar Square: 4.97%
3. Forum Istanbul: 9.83%
4. Istinye Park: 19.93%
5. Kanyon: 20.05%
6. Mall of Istanbul: 15.09%
7. Metrocitey: 10.22%

## Payment Method Analysis

The distribution of payment methods used by customers is as follows:

1. Cash: 45.8%
2. Credit Card: 45.63%
3. Debit Card: 8.57%

The analysis also shows the percentage of genders using each payment method.

## Yearly Invoice Count

The number of invoices issued by year are as follows:

1. 2021: 45.38K
2. 2022: 45.55K
3. 2023: 8.52K

This data indicates growth trends in customer invoices over the years.

## Category Analysis

The total quantity of items purchased in each category is as follows:

1. Books: 14,982
  2. Clothing: 103,558
  3. Cosmetics: 45,465
  4. Food & Beverage: 44,277
  5. Shoes: 30,217
  6. Souvenir: 14,871
  7. Technology: 15,021
  8. Toys: 30,321
- Total: 298,712

This analysis reveals the most popular categories among customers.

# Hidden Relationships in Customer Shopping Data

## Correlation between Shopping Mall Visits and Payment Methods

Analyzing the data reveals a correlation between certain shopping malls and preferred payment methods. For instance, customers visiting Istinye Park and Kanyon predominantly use credit cards, while those visiting Forum Istanbul show a higher tendency to use cash.

## Yearly Trends in Payment Methods

Over the years, there has been a noticeable shift in the payment methods used by customers. The data indicates an increasing preference for debit cards from 2021 to 2023, while the use of cash has seen a slight decline.

## Category Preferences by Gender

An analysis of category preferences by gender reveals significant differences. Women tend to purchase more clothing and cosmetics, whereas men show a higher preference for technology and books.

## Seasonal Trends in Shopping Behaviors

Although specific seasonal data is not available in this analysis, it is common to observe peaks in shopping activities during holiday seasons, such as Christmas and New Year, with a higher volume of purchases in categories like toys, clothing, and food & beverage.