



Customer Purchase Behavior Analysis

Exploring 3,900 customer transactions to uncover purchasing patterns, demographics, and key insights for strategic decision-making.

DATASET OVERVIEW

Understanding Our Data

3,900

Total Customers

Complete transaction
records analyzed

18

Data Columns

Comprehensive customer
attributes tracked

50

Unique Locations

Geographic distribution
across US states

25

Product Types

Diverse item categories
purchased

Customer Demographics



Gender Distribution

Male customers represent 68% of the dataset (2,652), while female customers account for 32% (1,248). This gender skew provides important context for product preferences and marketing strategies.

Average customer age: 44 years
(range: 18-70)



PURCHASE PATTERNS

Key Purchase Metrics

Average Purchase

\$60 USD

Median spend
per transaction

Price Range

\$20 - \$100

Min to max
purchase
amounts

Previous Purchases

25 average

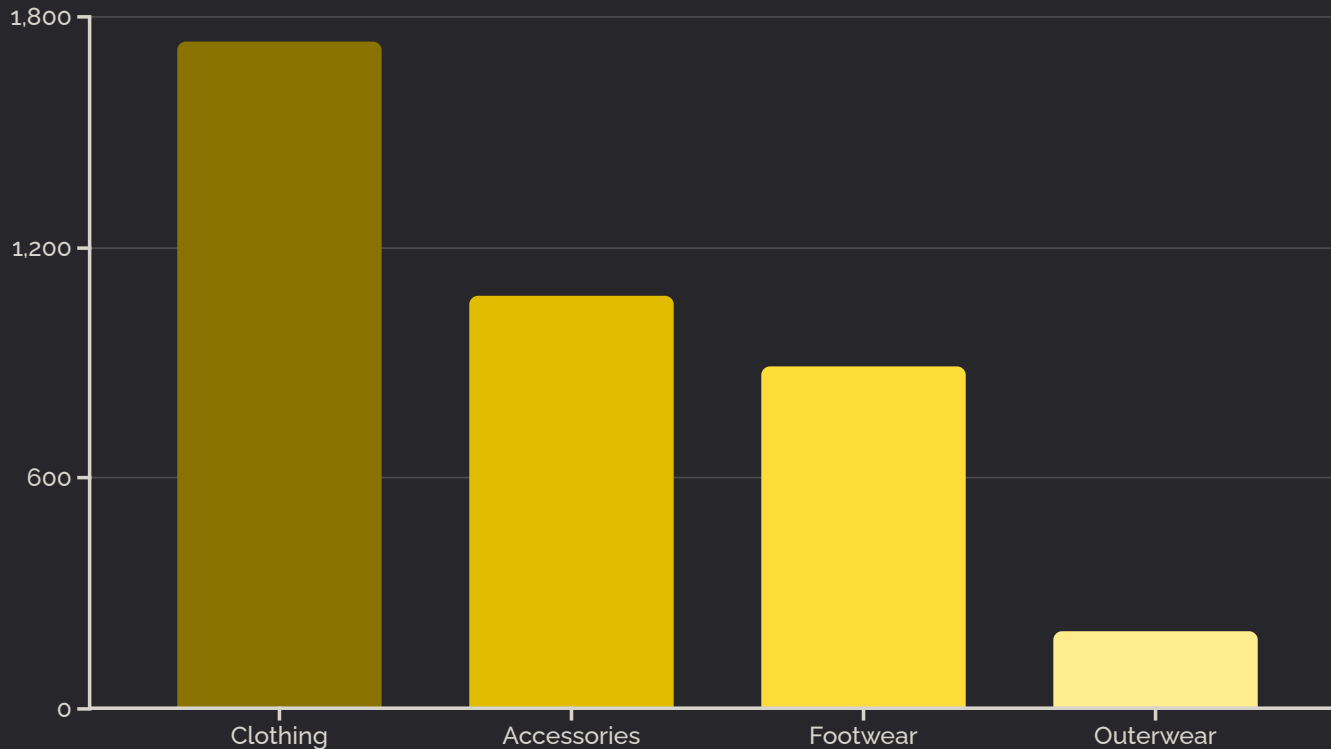
Strong
customer
loyalty
indicated

Review Rating

3.75 / 5.0

Overall customer satisfaction

Product Category Breakdown



Clothing Dominates

Clothing leads with 1,737 purchases (45% of total), followed by Accessories at 1,072 (27%) and Footwear at 891 (23%).

The most purchased item is **Blouse** with 171 transactions, indicating strong demand for versatile wardrobe staples.

Customer Segmentation by Age



Young Adult

Ages 18-31: Early career shoppers exploring personal style



Adult

Ages 31-44: Established professionals with purchasing power



Middle-aged

Ages 44-57: Quality-focused buyers with brand loyalty



Senior

Ages 57-70: Experienced shoppers valuing comfort and reliability

Purchase Frequency Patterns

Weekly

7 days between purchases

Fortnightly

14 days between purchases

Monthly

30 days between purchases

Quarterly

90 days between purchases

Annually

365 days between purchases

Diverse Shopping Habits

Customers exhibit varied purchase frequencies, from weekly shoppers to annual buyers. This diversity enables targeted retention strategies.

Understanding frequency patterns helps optimize inventory, promotions, and customer engagement campaigns for each segment.

Promotional Engagement



100%

Discount Applied

All transactions included discounts



100%

Promo Code Used

Universal promo code adoption



100%

Subscription Status

High subscription engagement rate

The dataset reveals universal promotional engagement, with every customer utilizing discounts and promo codes. This suggests a highly price-conscious customer base that actively seeks value.

Data Preparation Workflow



Load CSV



Fill Missing



Transform Columns



Export MySQL

Missing review ratings (37 records) were filled using category-based median values. Column names were standardized, and engineered features like age groups and purchase frequency days were created for enhanced analysis.



Key Takeaways



Strong Male Skew

68% male customers
present targeting
opportunities



Clothing Leads

45% of purchases in
clothing category



Price Sensitive

100% promotional
engagement
indicates value focus



High Loyalty

Average 25 previous
purchases shows
retention