Customer Shopping Behavior Analysis

Uncovering insights from 3,900 purchases to drive strategic business decisions

Dataset at a Glance

3,900

Total Purchases

Transactions analyzed

18

Data Points

Features per transaction

$59.76

Avg Purchase

Per customer transaction

3.75

Avg Rating

Customer satisfaction score

Data Preparation Journey

01

Data Loading & Exploration

Imported dataset, checked structure and summary statistics

02

Missing Data Handling

Imputed 37 missing review ratings using category medians

03

Feature Engineering
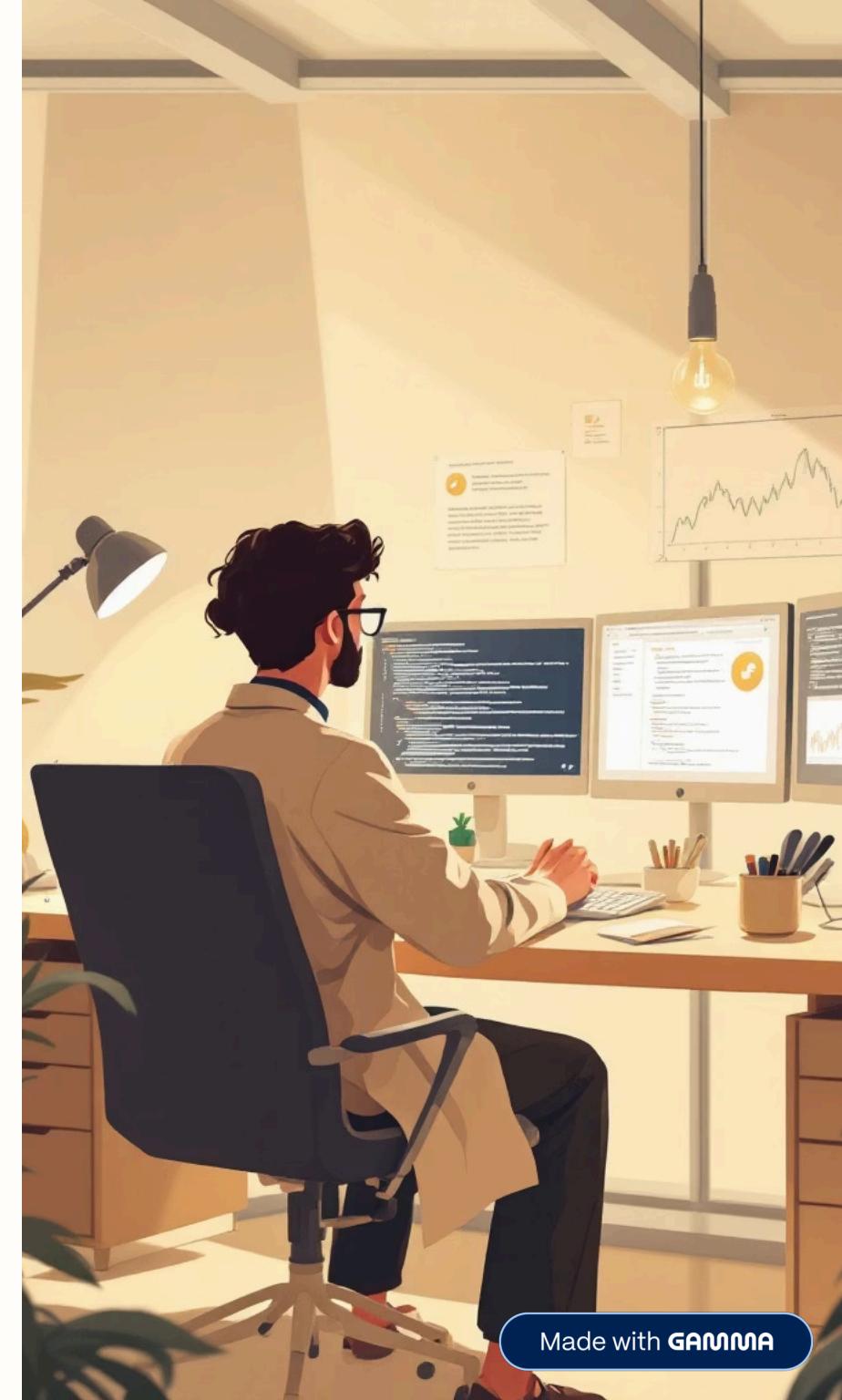
Created age groups and purchase frequency metrics

04

Database Integration

Connected to MySQL Workbench

 for advanced SQL analysis

Revenue Insights

Gender Revenue Split

Male customers drive 68% of total revenue

- Male: $157,890
- Female: $75,191
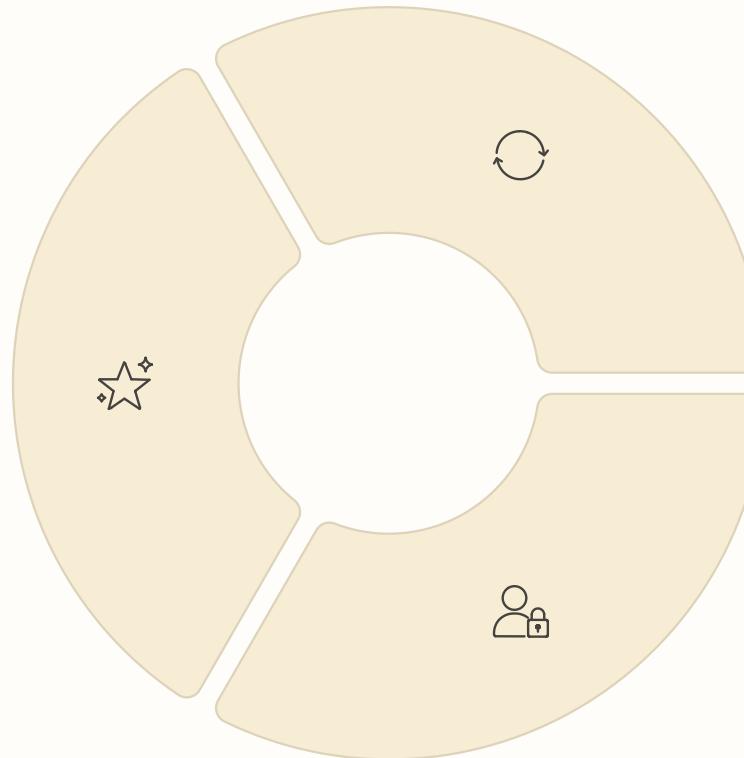
Category Performance

Clothing dominates sales

- Clothing: $100K
- Accessories: $50K
- Footwear: $10K

Customer Segmentation

Returning

701 customers (18%)

Growing engagement potential
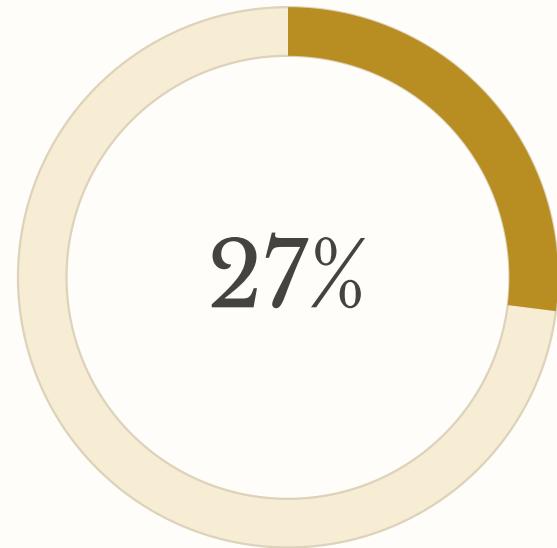
Loyal

3,116 customers (80%)

Repeat purchasers driving consistent revenue

New

83 customers (2%)

Fresh acquisition opportunities
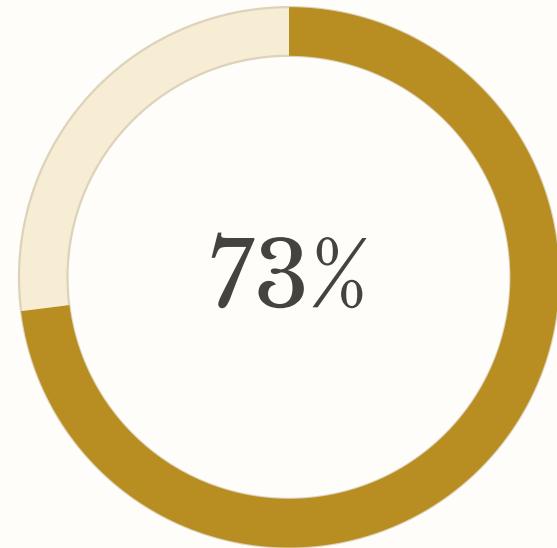
Subscription Behavior

27%

Subscribers

1,053 customers with active subscriptions

73%

Non-Subscribers

2,847 customers – untapped potential

Repeat buyers (>5 purchases): 958 subscribers vs 2,518 non–subscribers

Made with GAMMA

Discount Strategy Analysis

Smart Spenders

839 customers used discounts but spent above average ($60+)

Discount-Dependent Products

1. Hat: 50% discount rate
2. Sneakers: 49.66%
3. Coat: 49.07%
4. Sweater: 48.17%
5. Pants: 47.37%

Top Performers

Gloves

Highest rated: 3.86 stars

Sandals

Top footwear: 3.84 stars

Boots

Strong performer: 3.82 stars
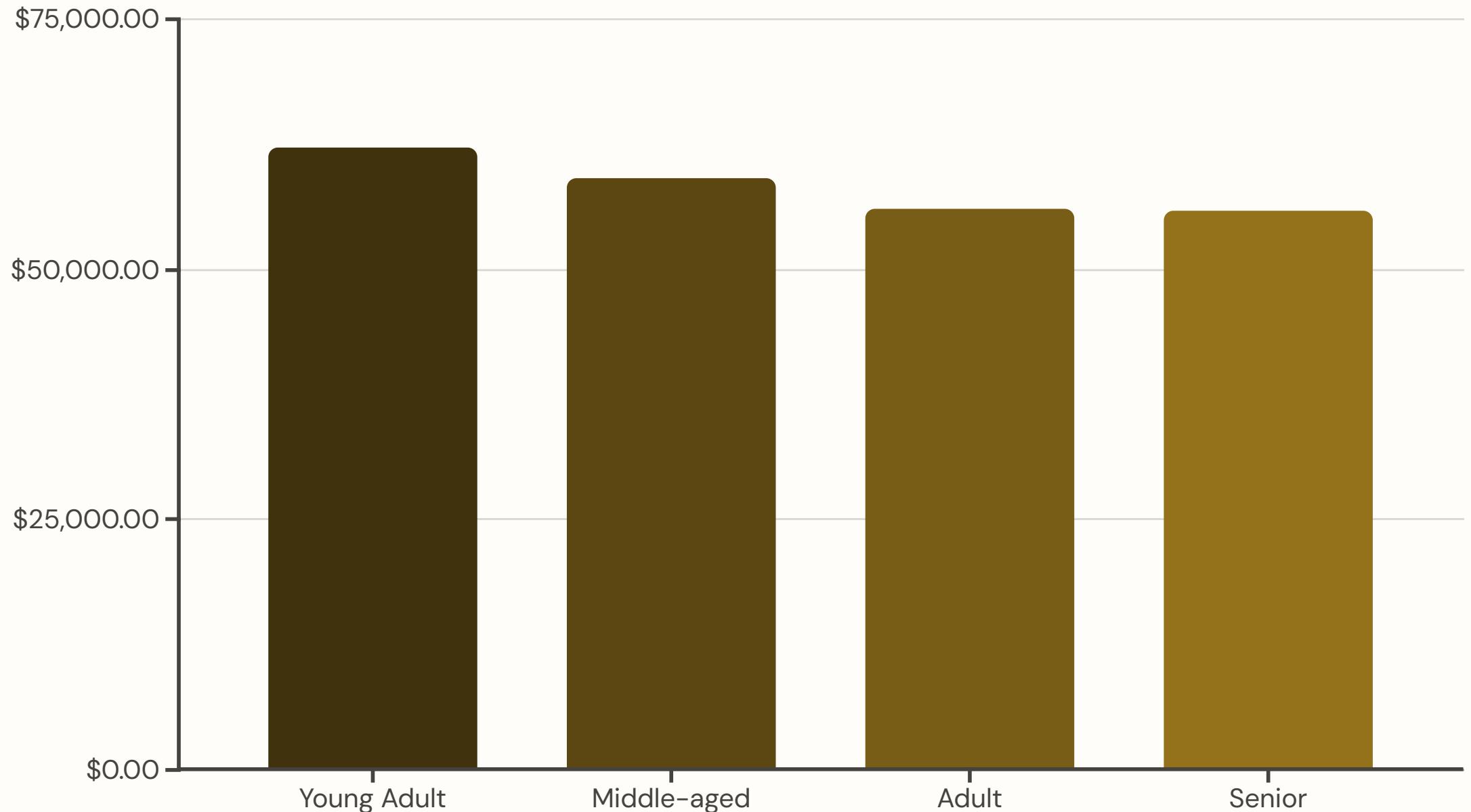
Express Shipping

$60.48 avg purchase

Standard Shipping

$58.46 avg purchase

Age Group Revenue Distribution

Young adults lead revenue generation, followed closely by middle-aged customers

Strategic Recommendations

1

Boost Subscriptions

Promote exclusive benefits to convert 73% non-subscribers

2

Loyalty Programs

Reward repeat buyers to strengthen 80% loyal segment

3

Optimize Discounts

Balance sales boosts with margin control on high-discount items

4

Product Positioning

Highlight top-rated products in marketing campaigns

5

Targeted Marketing

Focus on young adults and express-shipping users

Customer Behavior Dashboard

Subscription Status

| No | Yes |

3.9K	**$59.76**	**3.75**
Number of Customers	Average Purchase Amount	Average Review Rating

Gender

| Female | Male |

Category
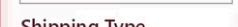
- Accessories
- Clothing
- Footwear
- Outerwear

Shipping Type

- 2-Day Shipping
- Express
- Free Shipping
- Next Day Air
- Standard
- Store Pickup
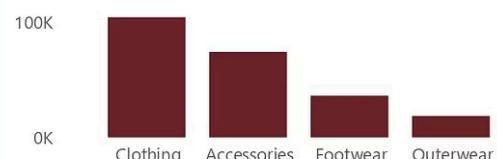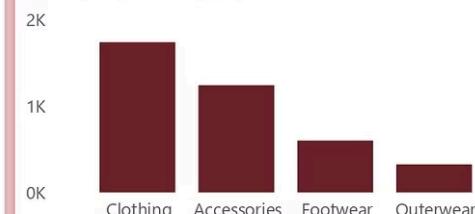
% of Customers by Subscription Status

Yes 7.3%

No 92.7%

Revenue by Category

100K

0K

Clothing Accessories Footwear Outerwear

Sales by Category

2K

1K

0K

Clothing Accessories Footwear Outerwear

Revenue by Age Group

Young Adult
Middle-aged
Adult
Senior

0K 20K 40K 60K

Sales by Age Group

Young Adult
Middle-aged
Senior
Adult

0 500 1,000