

# Customer Shopping Behavior Analysis

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





# Dataset Overview



## Total Purchases

Transactions analyzed across all categories



## Data Points

Key features tracked per customer



## Avg Purchase

Mean transaction value



## Avg Rating

Customer satisfaction score

Comprehensive data spanning demographics, purchase details, and shopping behavior patterns

# Data Preparation & Cleaning

O1

## Data Loading

Imported dataset using pandas for analysis

O2

## Exploration

Summary statistics and structure verification

O3

## Missing Data

Imputed 37 missing review ratings by category median

O4

## Feature Engineering

Created age groups and purchase frequency metrics

O5

## Database Integration

Loaded cleaned data into PostgreSQL

# Revenue Insights

## Gender Revenue Split

Male customers drive **68%** of total revenue

- Male: \$157,890
- Female: \$75,191

## Shipping Preferences

Express shipping users spend **3.5% more** on average

- Express: \$60.48
- Standard: \$58.46

High-spending discount users above average purchase amount

# Top Performing Products



## Gloves

Highest rated: **3.86** stars



## Sandals

Second best: **3.84** stars



## Boots

Strong performer: **3.82** stars



## Hat

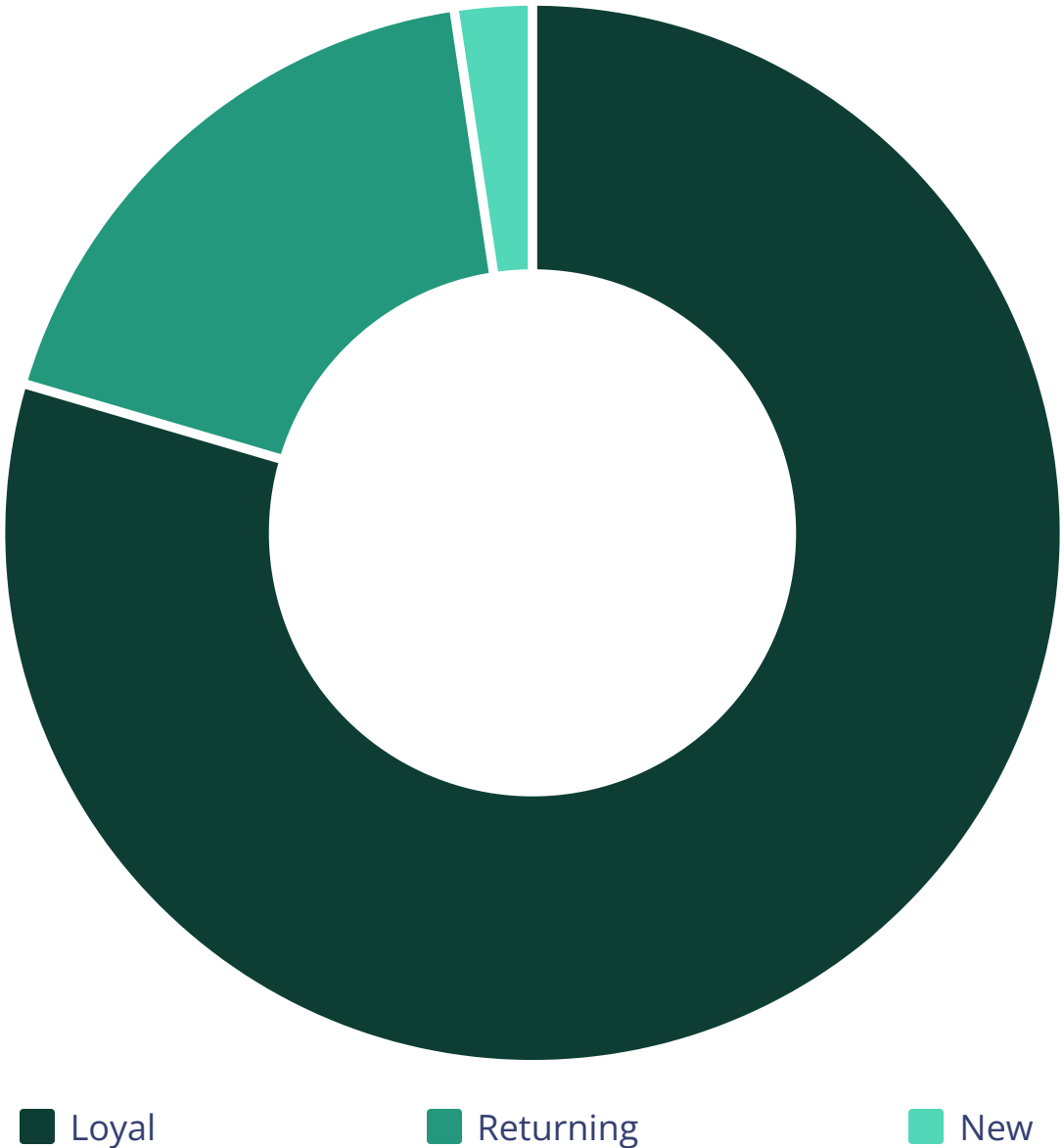
Popular choice: **3.80** stars



## Skirt

Top five: **3.78** stars

# Customer Segmentation



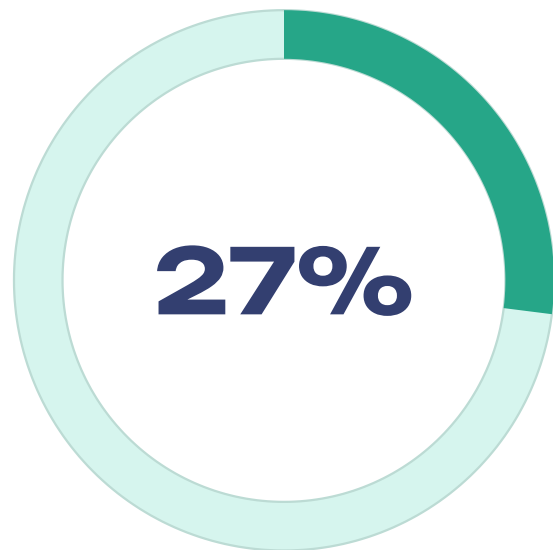
## Loyal Customers

80% of customer base shows strong repeat behavior

## Growth Opportunity

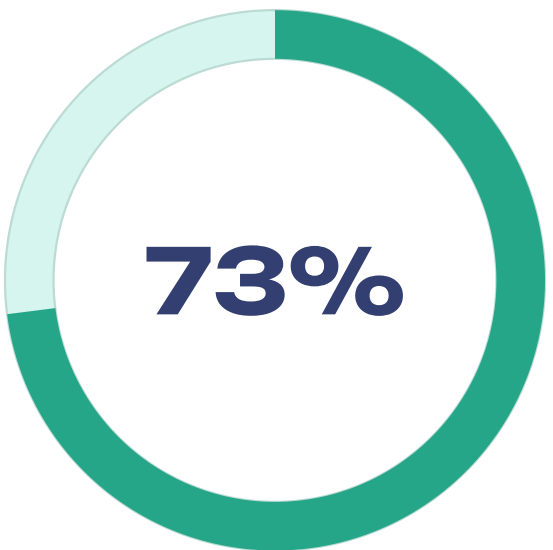
Convert returning customers into loyal segment through targeted programs

# Subscription Analysis



**Subscribers**

1,053 customers with active subscriptions



**Non-Subscribers**

2,847 customers without subscriptions

## Avg Spend

Subscribers: **\$59.49**

Non-subscribers: **\$59.87**

## Total Revenue

Subscribers: **\$62,645**

Non-subscribers: **\$170,436**

## Repeat Buyers

**958** subscribers with 5+ purchases

# Discount Strategy Insights

1

**Hat**

50% discount rate

2

**Sneakers**

49.66% discount rate

3

**Coat**

49.07% discount rate

4

**Sweater**

48.17% discount rate

5

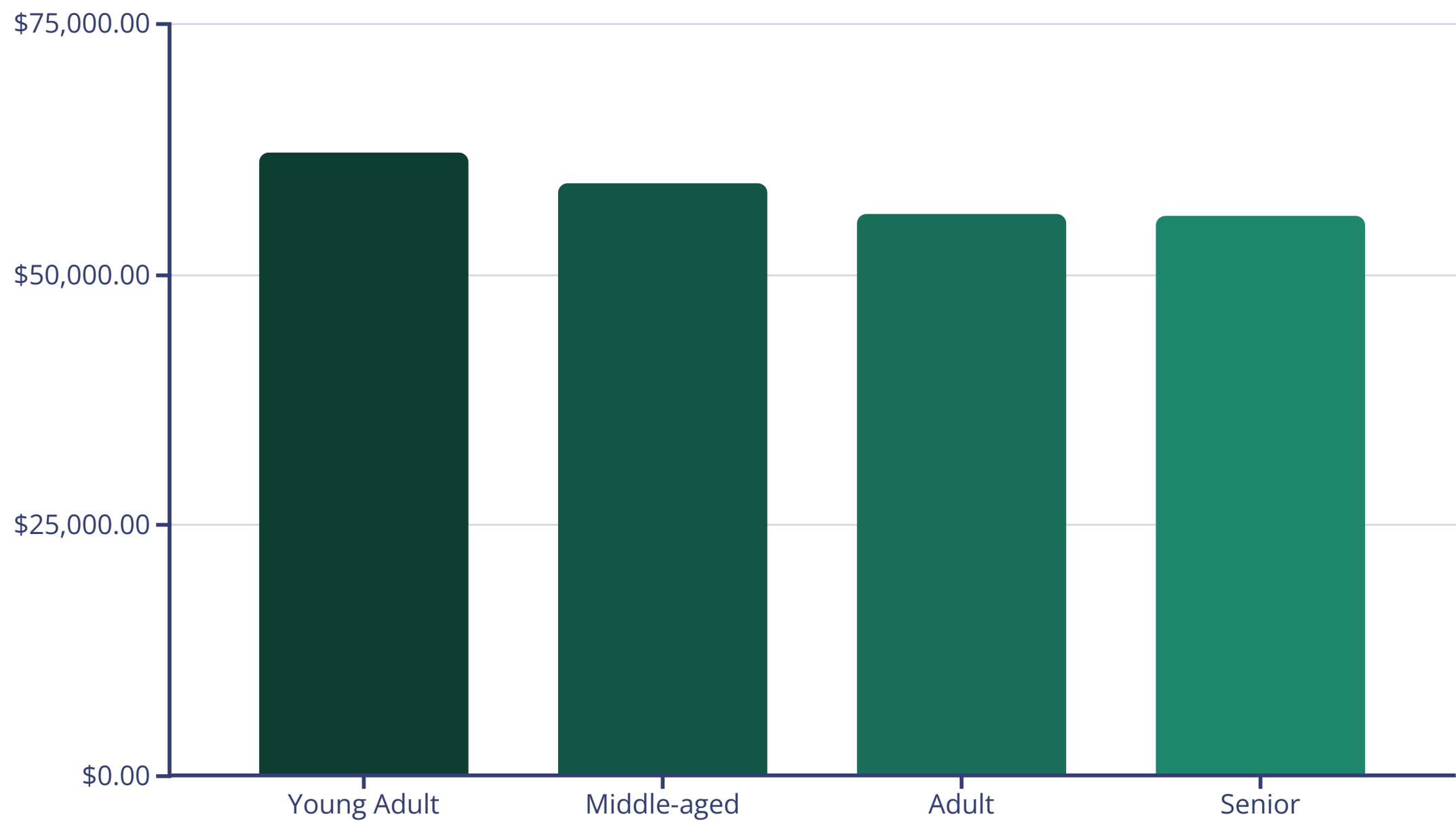
**Pants**

47.37% discount rate

Products with highest discount dependency require margin review and strategic pricing adjustments



# Revenue by Age Group



Young adults generate highest revenue at **\$62,143**, followed closely by middle-aged customers

# Strategic Recommendations

## Boost Subscriptions

Promote exclusive benefits to increase 27% subscription rate

## Loyalty Programs

Reward repeat buyers to grow loyal customer segment

## Discount Policy

Balance sales boosts with margin control on high-discount products

## Product Positioning

Highlight top-rated items in marketing campaigns

## Targeted Marketing

Focus on high-revenue age groups and express shipping users