Customer Shopping Behavior Analysis

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

Dataset Overview

3,900

Total Purchases

Transactions analyzed across all categories

18

Data Points

Columns tracking customer behavior

50

Locations

Geographic coverage across regions

25

Products

Items tracked across 4 categories

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Data Preparation Journey

01

Data Loading

Imported dataset using pandas for analysis

02

Exploration

Summary statistics and structure validation

03

Cleaning

Imputed missing review ratings by category median

04

Feature Engineering

Created age groups and purchase frequency metrics

05

Database Integration

Loaded cleaned data into PostgreSQL

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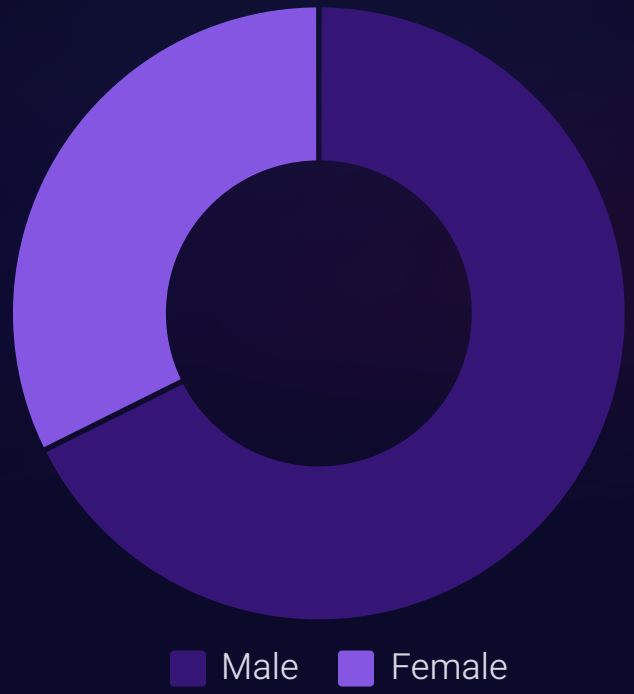
Revenue by Gender



Male Customers Drive Revenue

Male shoppers generate 68% of total revenue, more than double female contribution

Strategic opportunity for targeted campaigns

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Top-Rated Products

Gloves

3.86 rating

Sandals

3.84 rating

Boots

3.82 rating

Hat

3.80 rating

Skirt

3.78 rating

Highest customer satisfaction scores guide product positioning strategy

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Shipping Insights

Standard Shipping

$58.46 average purchase

Most common choice among customers

Express Shipping

$60.48 average purchase

Higher spenders prefer faster delivery

Express shipping users spend 3.5% more on average

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Subscription Analysis

Subscription Rate

1,053 of 3,900 customers subscribed

Subscriber Spend

Average purchase by subscribers

Non-Subscriber Spend

Similar spending patterns observed

Non-subscribers generate 73% of total revenue despite similar average spend

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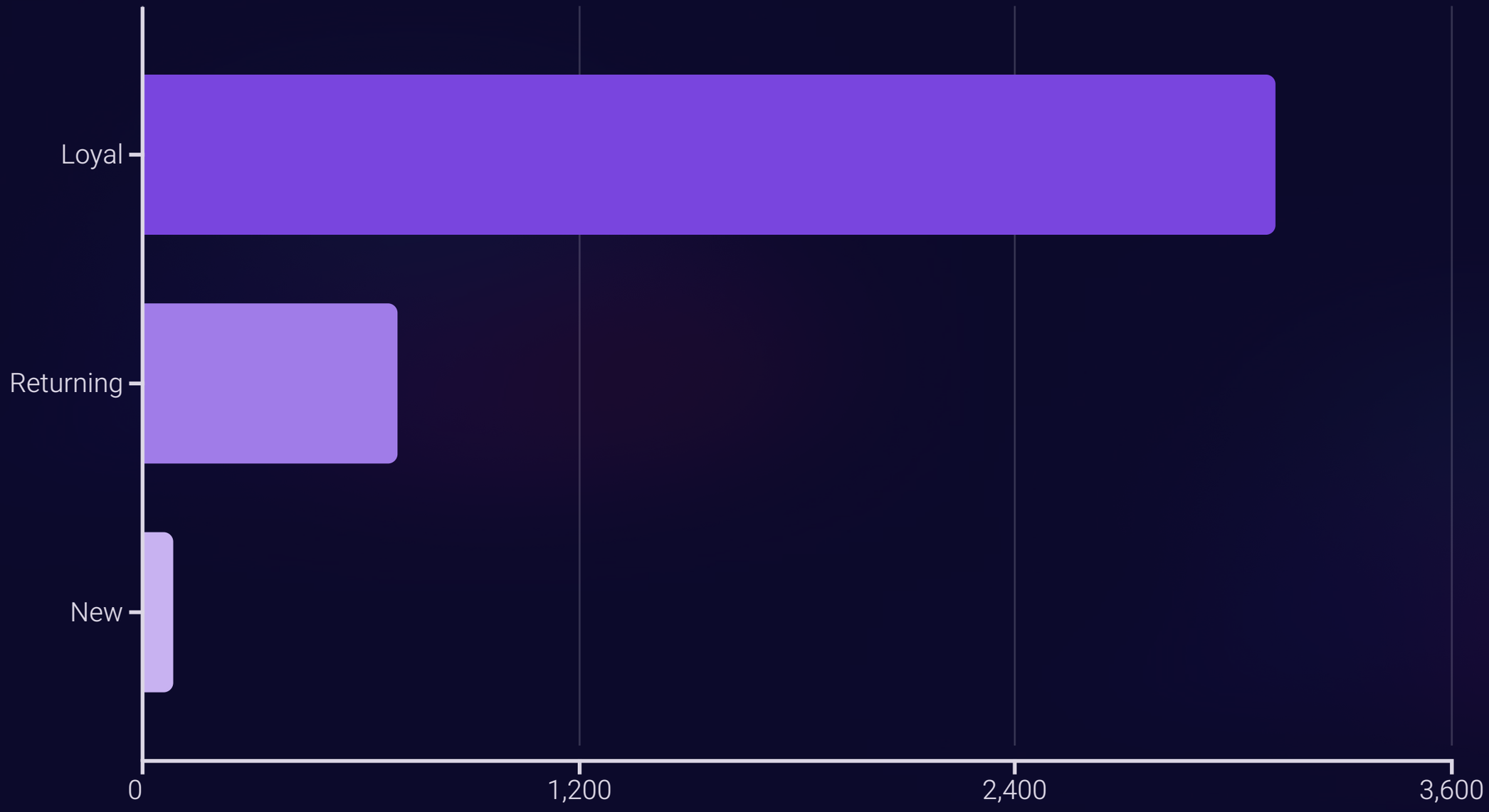
Customer Segmentation



80% of customers classified as loyal with repeat purchase history

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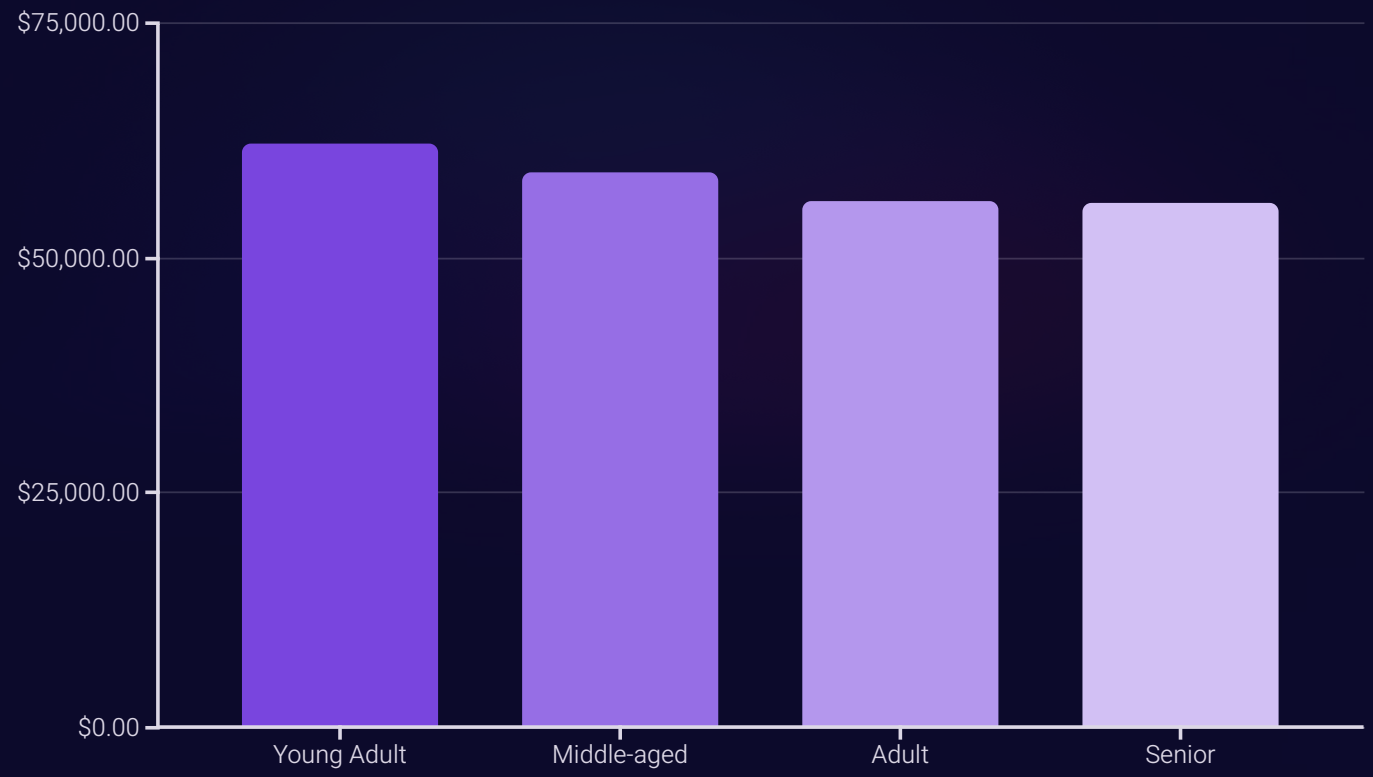
Revenue by Age Group



Young adults lead revenue generation

Balanced distribution across all age segments

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Strategic Recommendations

1

Boost Subscriptions

Promote exclusive benefits to convert non-subscribers

2

Loyalty Programs

Reward repeat buyers to strengthen retention

3

Review Discount Policy

Balance sales growth with margin control

4

Product Positioning

Highlight top-rated items in marketing campaigns

5

Targeted Marketing

Focus on high-revenue segments and express shipping users

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