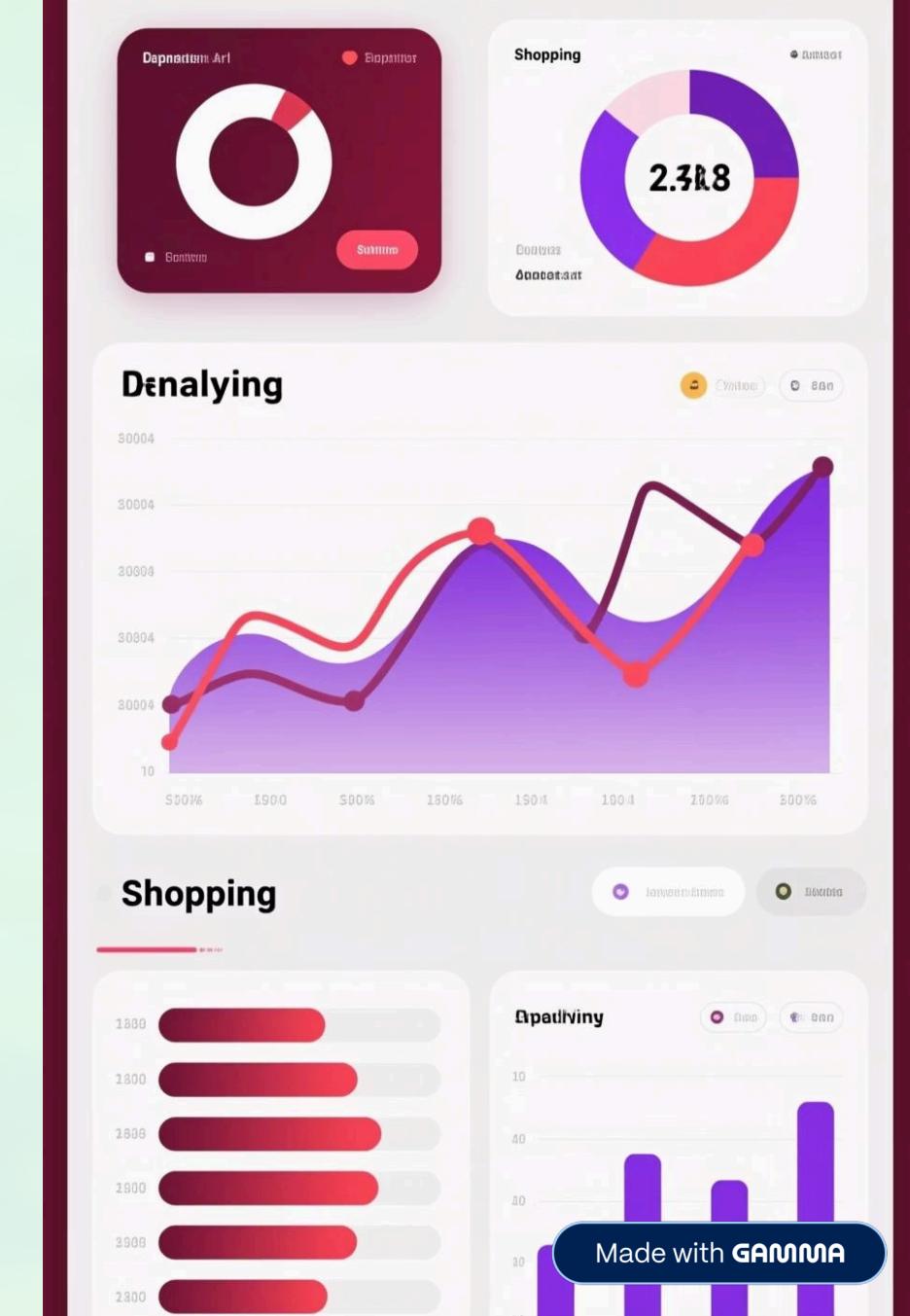


# Customer Shopping Behavior Analysis

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





# Dataset at a Glance

3,900

## Total Purchases

Transactions analyzed  
across all categories

18

## Data Points

Features tracking  
demographics and  
behavior

50

## Locations

Geographic diversity in  
customer base

\$59. . .

## Average Purchase

Mean transaction value  
per customer



# Data Preparation Journey

01

## Data Loading & Exploration

Imported dataset using pandas, analyzed structure with df.info() and summary statistics

02

## Cleaning & Standardization

Imputed 37 missing review ratings, renamed columns to snake\_case format

03

## Feature Engineering

Created age\_group bins and purchase\_frequency\_days for deeper analysis

04

## Database Integration

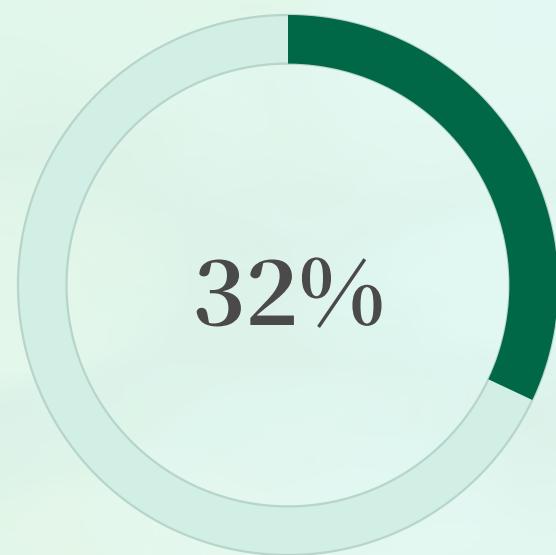
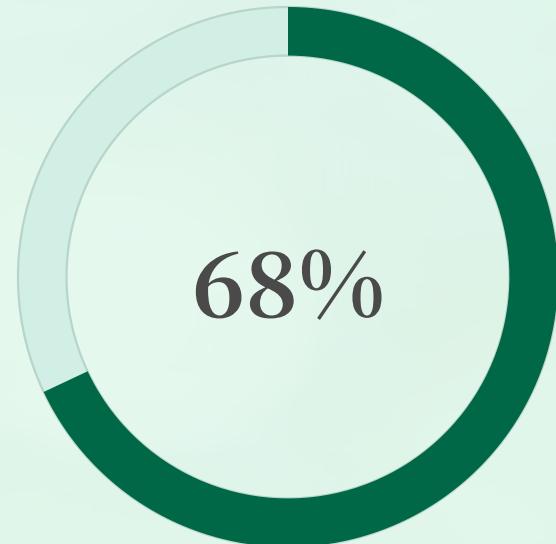
Connected to PostgreSQL, loaded cleaned data for SQL analysis

# Revenue Insights: Gender & Spending



## Male Customers Drive Revenue

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



# Top-Rated Products



Gloves

3.86 average rating



Sandals

3.84 average rating



Boots

3.82 average rating



Hat

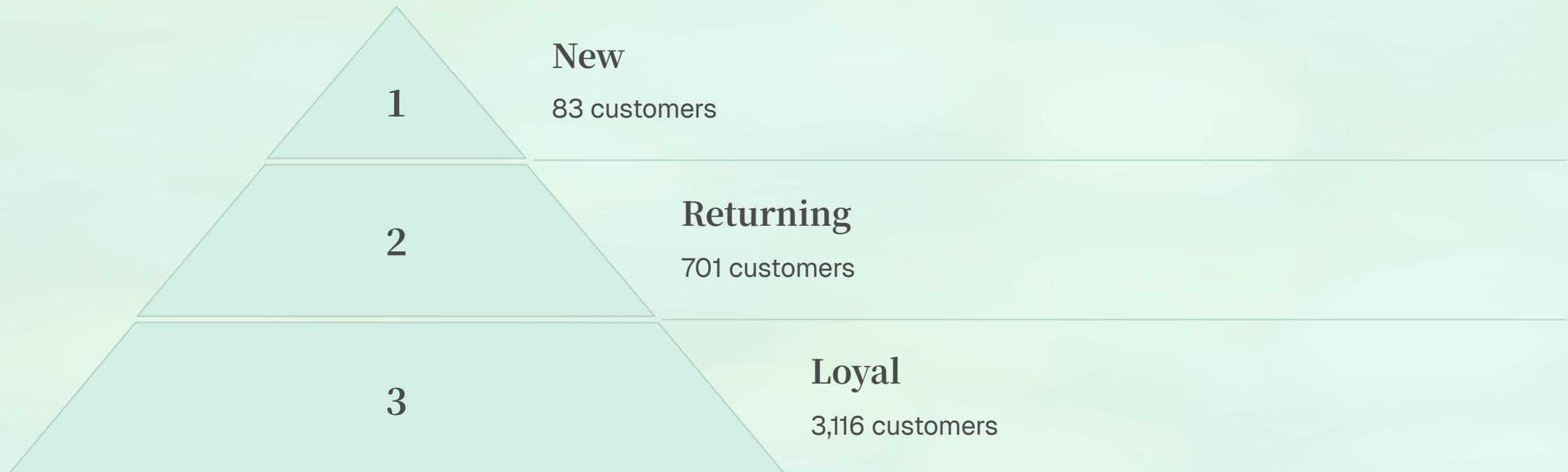
3.80 average rating



Skirt

3.78 average rating

# Customer Segmentation Breakdown



80% of customer base classified as loyal, indicating strong retention but opportunity to convert new buyers

# Shipping & Subscription Analysis

## Shipping Type Impact

Express

\$60.48 average spend

Standard

\$58.46 average spend

Express shipping users spend 3.5% more per transaction

## Subscription Status

2,847

Non-Subscribers

\$59.87 avg spend

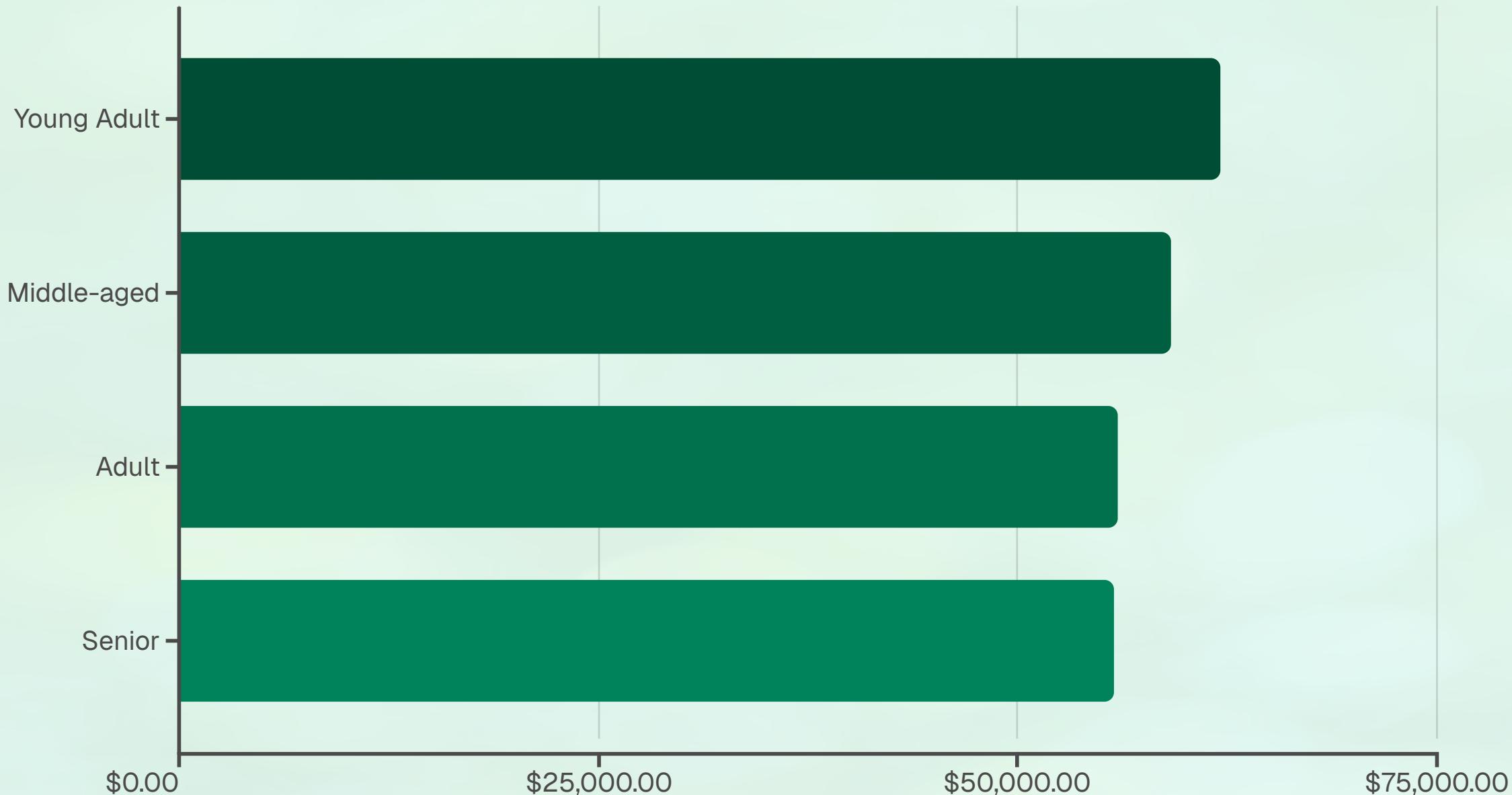
1,053

Subscribers

\$59.49 avg spend

Minimal spending difference suggests untapped subscription value

# Revenue by Age Group



Young adults lead revenue generation, but all age groups contribute relatively evenly

# Discount Strategy Insights



## High-Value Discount Users

839 customers used discounts but spent above average—smart shoppers seeking value

## Discount-Dependent Products

- Hat: 50% discount rate
- Sneakers: 49.66%
- Coat: 49.07%
- Sweater: 48.17%
- Pants: 47.37%

Nearly half of these products sold with discounts—review pricing strategy

# Strategic Recommendations

## Boost Subscriptions

Promote exclusive benefits to convert non-subscribers—minimal spend difference shows untapped potential

## Loyalty Programs

Reward repeat buyers to accelerate movement from returning to loyal segments

## Review Discount Policy

Balance sales boosts with margin control—50% discount rates may erode profitability

## Product Positioning

Highlight top-rated items (gloves, sandals, boots) in marketing campaigns

## Targeted Marketing

Focus on young adults and express-shipping users for highest revenue impact