

Customer Shopping Behavior Analysis

Understanding 3,900 purchases to drive smarter business decisions

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Project Scope & Approach



Goal

Understand shopping patterns,
preferences, and spending
drivers



Dataset

3,900 purchases across 18
data points



Tools

Python, PostgreSQL, Power BI

Dataset Overview

Customer Information

- Age, Gender, Location
- Subscription Status

Purchase Details

- Item, Category, Size, Color
- Purchase Amount
- Shipping Type

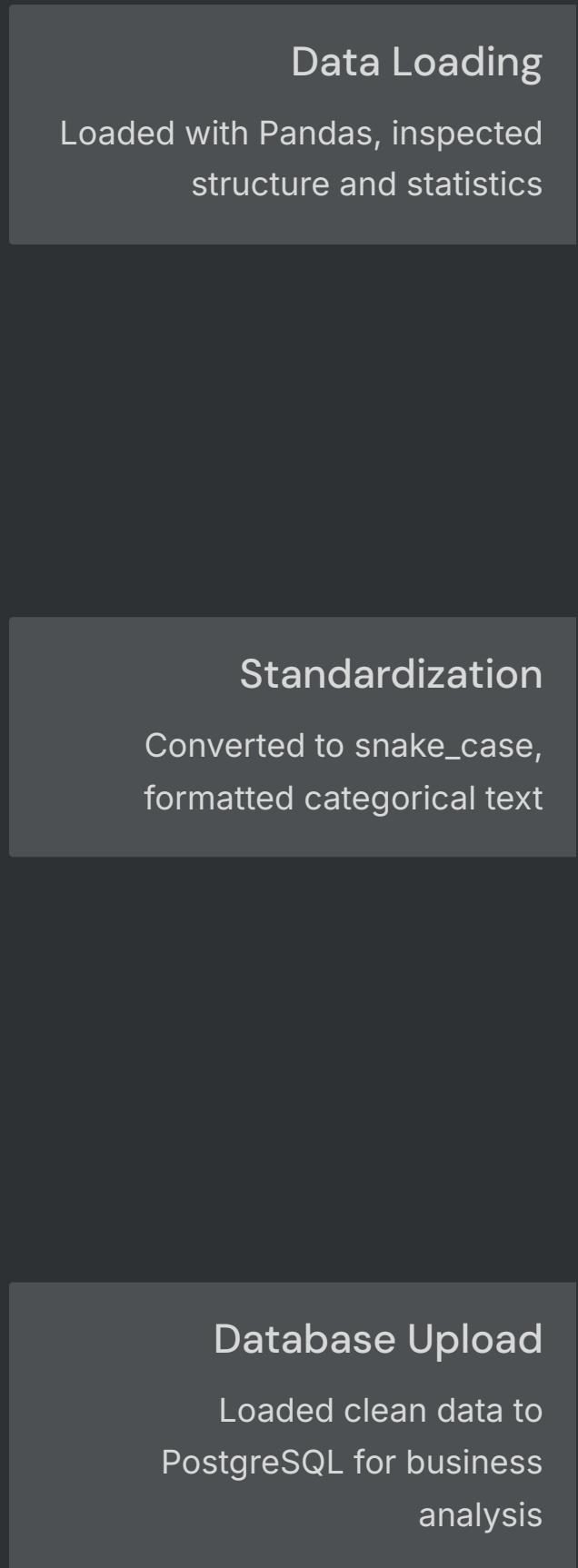
Shopping Behavior

- Discount Applied
- Previous Purchases
- Frequency of Purchases
- Review Rating

Data Quality

37 missing review ratings, slight feature overlap addressed

Data Preparation Process



Key Business Insights

Revenue by Gender

Spending patterns compared across customer segments

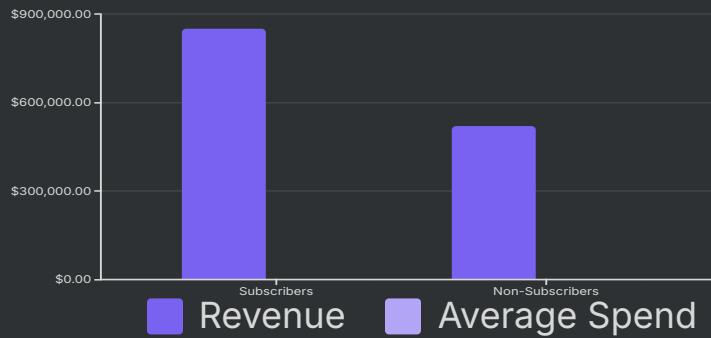
Customer Segmentation

Classified as New, Returning, or Loyal buyers

Top-Rated Products

Identified highest-performing items by customer reviews

Subscription Impact Analysis



Subscribers Drive Higher Value

Significant revenue uplift
and increased average
spend per transaction





Shipping & Discount Patterns

1

Shipping Type Comparison

Express shipping customers spend more per order than standard shipping users

2

High-Spending Discount Users

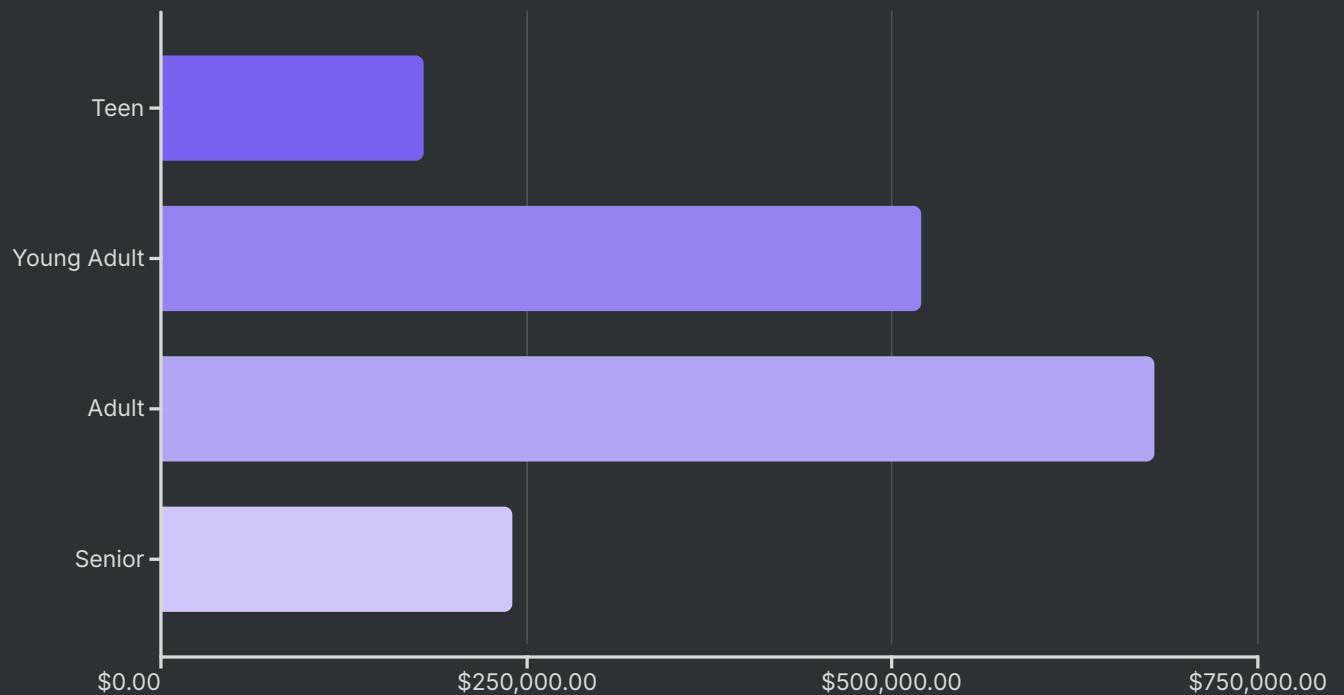
Identified customers using discounts while maintaining above-average spend

3

Discount-Dependent Products

Certain items frequently purchased only when discounts applied

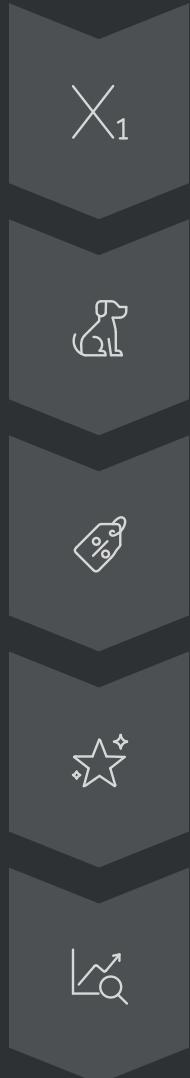
Age Group Revenue Distribution



Adults and Young Adults represent highest-value customer segments for targeted marketing



Business Recommendations



Increase Subscriptions

Offer exclusive deals and free express shipping

Build Loyalty Program

Reward repeat buyers with points and cashback

Optimize Discounts

Review discount-dependent products, consider value pricing

Promote Top Items

Highlight best-sellers and top-rated products

Target High-Value Segments

Focus marketing on high-revenue age groups

Key Takeaway

Clear understanding of customer behavior enables strategic actions to increase revenue, improve customer satisfaction, and strengthen customer loyalty.

3,900

Purchases
Analyzed

18

Data Points

6

Actionable
Strategies

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