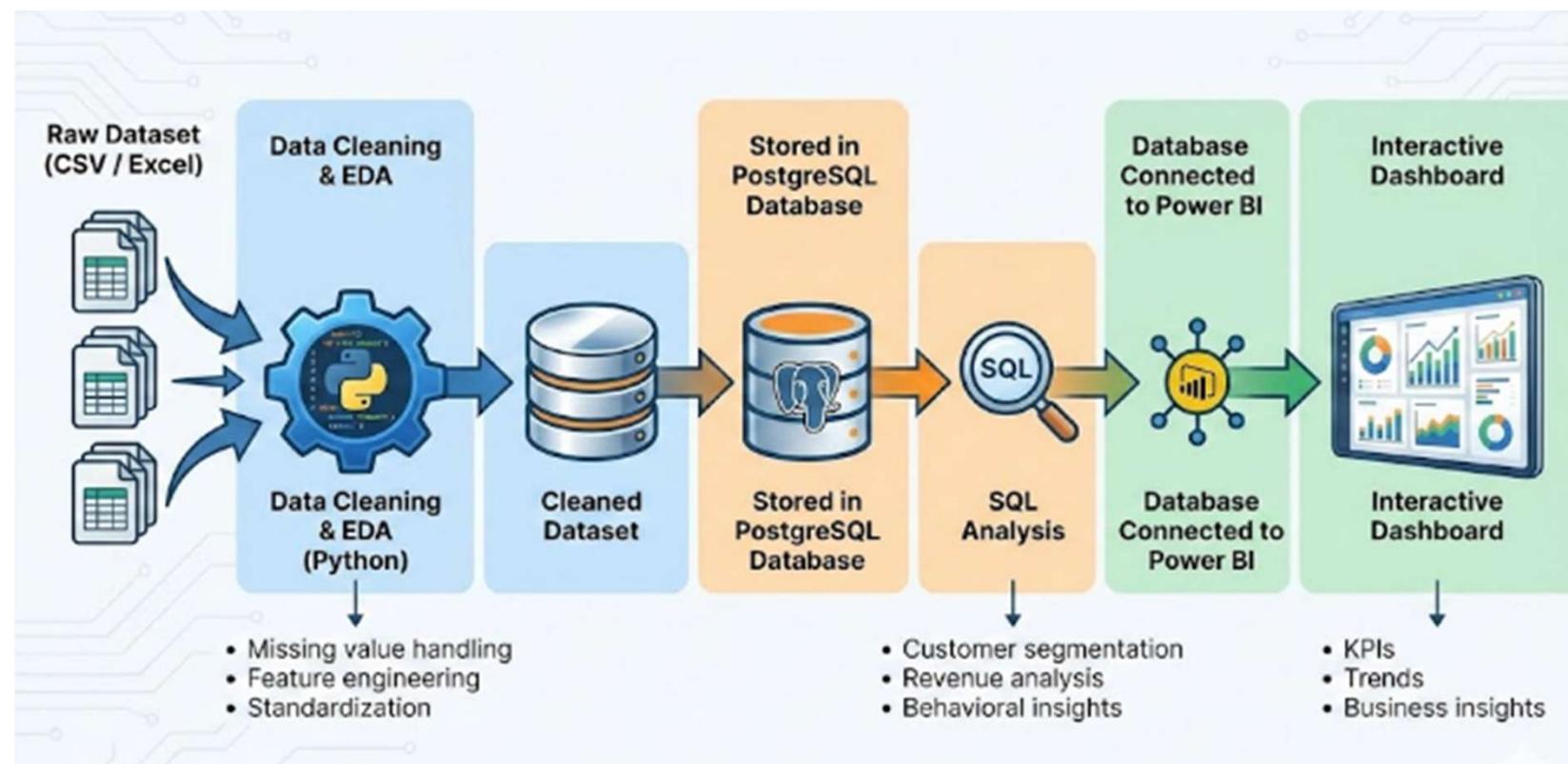


Retail Customer Behavior Analysis

Deep-dive insights into 3,900 purchases to drive strategic business decisions.



Dataset Overview

Our analysis is built on a robust dataset of 3,900 transactions, capturing a comprehensive view of the modern shopper's journey.



Customer Profiles

Age (18-70), Gender, Location, and Subscription Status.



Purchase Details

Category, Amount, Season, Size, and Color.



Behavioral Data

Shipping type, Frequency, and Review Ratings (avg 3.75).



Data Preparation & Engineering

Before analysis, we utilized Python and Pandas to ensure data integrity and create advanced features for deeper segmentation.

01

Cleaning & Imputation

Filled missing Review Ratings using the median of each product category.

02

Feature Engineering

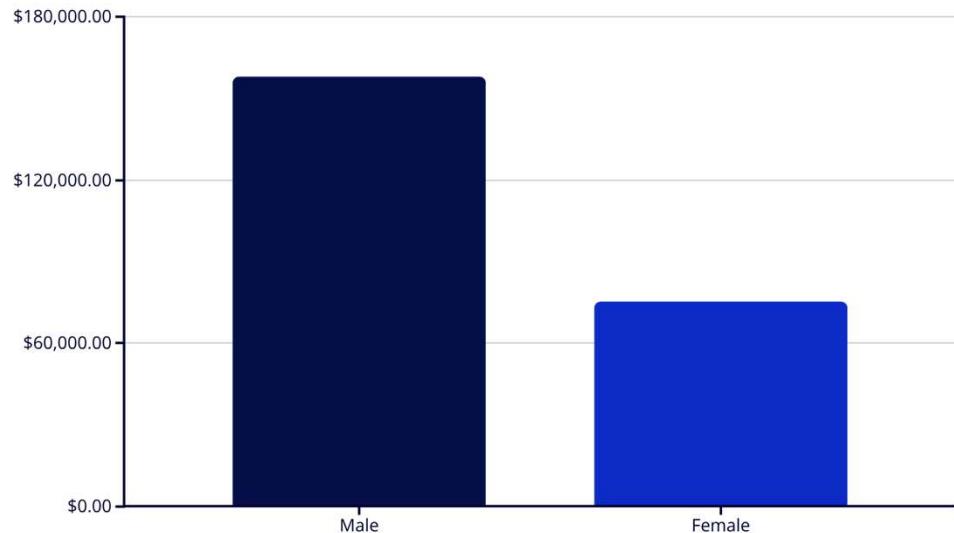
Created age groups and purchase frequency metrics for better targeting.

03

Database Integration

Standardized columns and loaded cleaned data into PostgreSQL for SQL analysis.

Revenue & Spending Insights



Key Findings

- Male customers contribute significantly higher total revenue (\$157.8k).
- 839 high-spending customers use discounts but still exceed average spend.
- Express shipping users spend more on average (\$60.48) than standard users (\$58.46).

Top Rated & Discounted Products

Understanding the relationship between customer satisfaction and price sensitivity.

Top 5 Rated Items

| Item | Rating |
|---------|--------|
| Gloves | 3.86 |
| Sandals | 3.84 |
| Boots | 3.82 |
| Hat | 3.80 |
| Skirt | 3.78 |

Percentage sold on Discount

| Item | Rate |
|----------|-------|
| Hat | 50.0% |
| Sneakers | 49.6% |
| Coat | 49.0% |
| Sweater | 48.1% |
| Pants | 47.3% |

Subscription & Loyalty Analysis

While non-subscribers drive more total volume, subscribers represent a stable core of the business.

1053

Subscribers

Generating \$62,645 in total revenue.

2847

Non-Subscribers

Contributing \$170,436 to the bottom line.

3116

Loyal Segment

The vast majority of our customer base.

Category Performance

A breakdown of the top-performing items across our four primary product categories.

Accessories

Jewelry (171 orders), Sunglasses, and Belts.



Clothing

Blouses (171 orders), Pants, and Shirts.

Footwear

Sandals (160 orders), Shoes, and Sneakers.



Outerwear

Jackets (163 orders) and Coats.

Revenue by Age Group

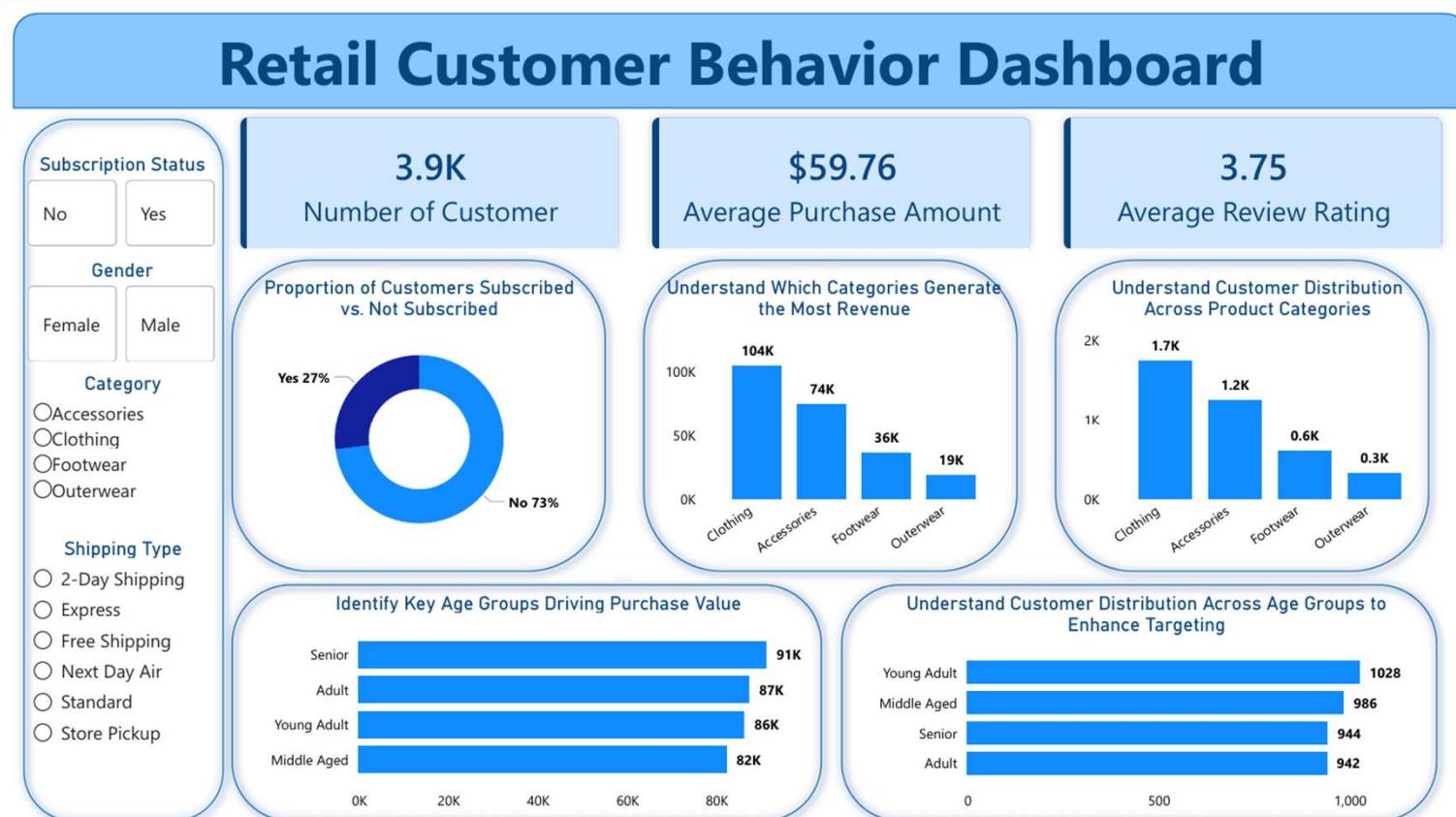
Spending is remarkably balanced across generations, with Young Adults leading slightly.



Interactive Dashboard

Our Power BI dashboard provides real-time visualization of these key retail metrics.

- The dashboard allows for filtering by season, location, and subscription status to uncover localized trends.



Strategic Recommendations

Boost Subscriptions

Offer exclusive benefits to convert the non-subscribed repeat buyers.

Targeted Marketing

Focus efforts on high-revenue Young Adults and Express Shipping users.

Optimize Discounts

Refine discount policies for "Discount-Dependent" items like Hats and Sneakers to protect margins.