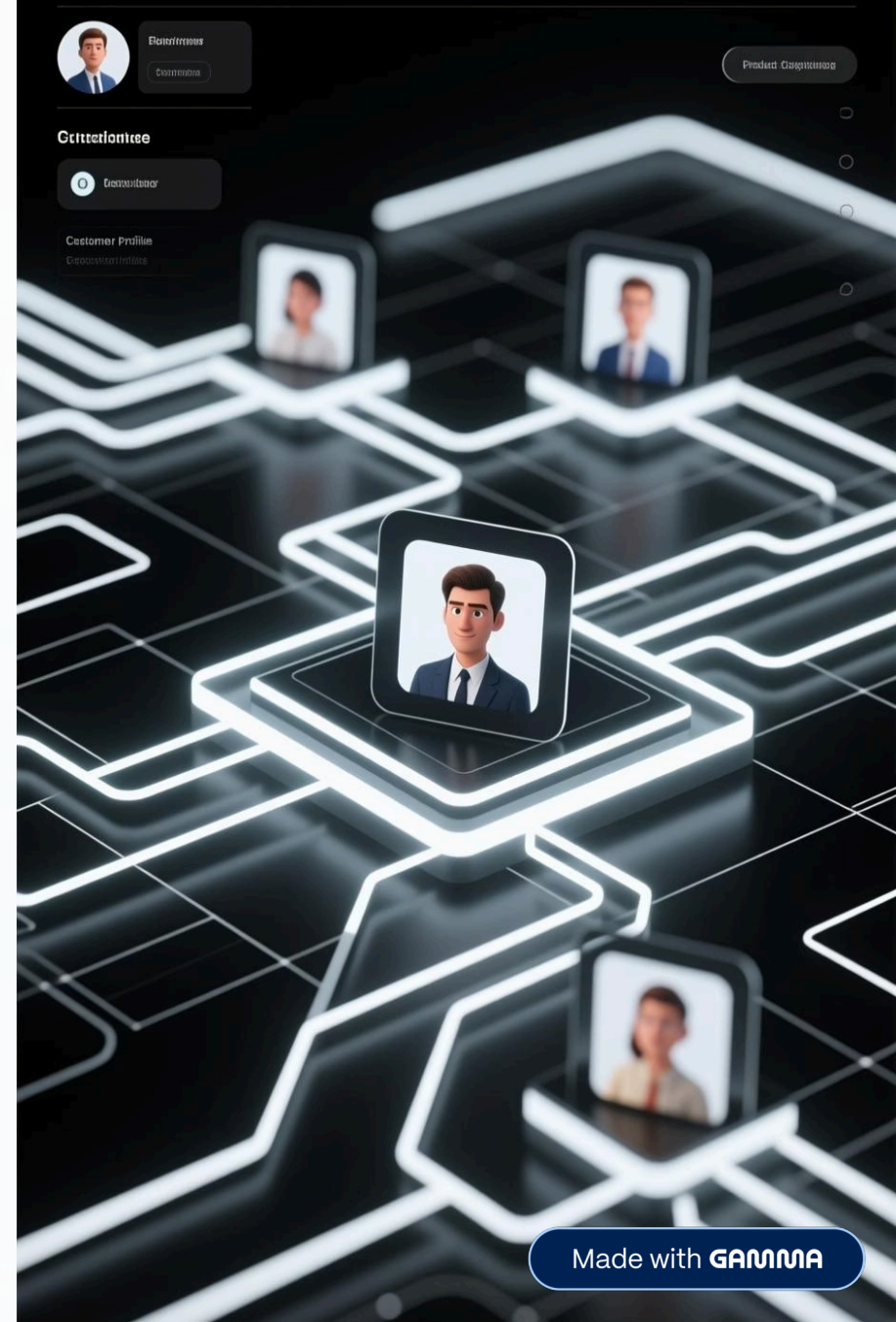


Sales Insights Project





Dataset Summary

3,900 Rows

Comprehensive transactional data.

18 Columns

Customer demographics, purchase details, shopping behavior.

Key Features

Age, Gender, Location, Item, Category, Amount, Season, Review Rating, Subscription Status.

Missing Data

37 values in Review Rating column.

Exploratory Data Analysis (Python)

1

Data Loading

Imported dataset using pandas.

2

Initial Exploration

Checked structure and summary statistics.

3

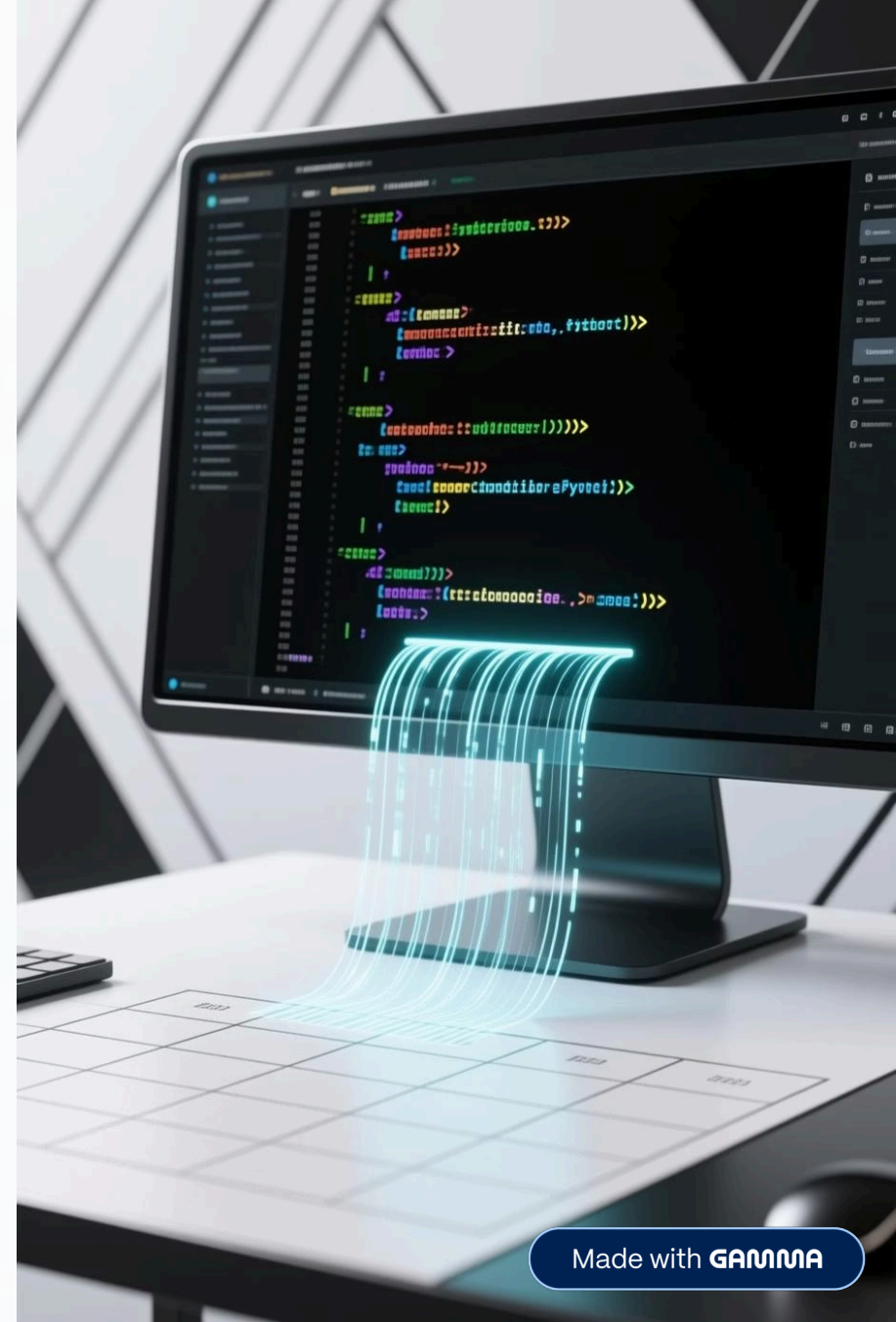
Missing Data

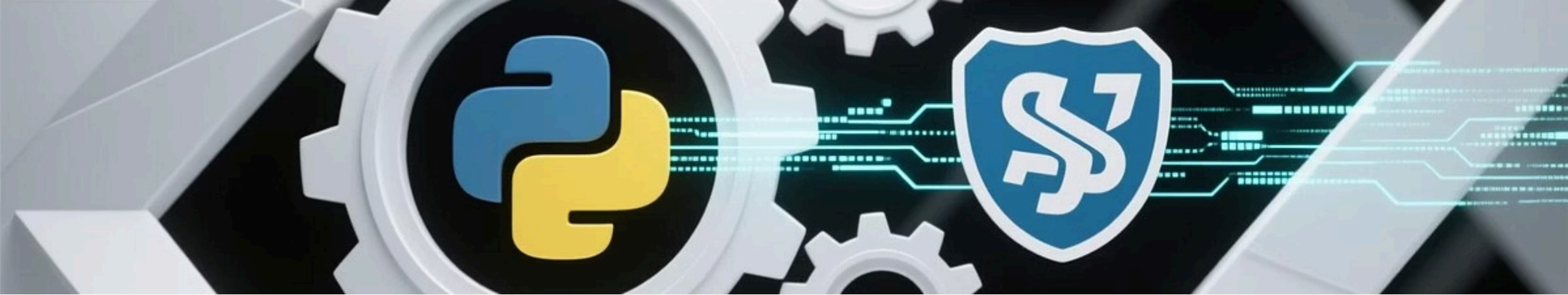
Imputed Review Rating with median.

4

Standardization

Renamed columns to snake_case.





Feature Engineering & Consistency



Age Group

Created by binning customer ages.



Purchase Frequency

Derived from purchase data.

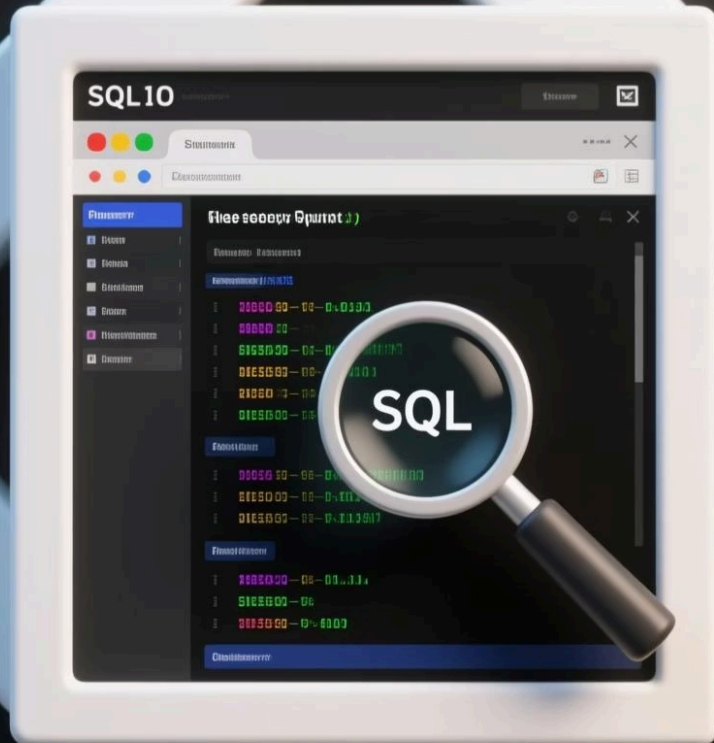
Data Consistency

Dropped redundant promo_code_used column.

Database Integration

Loaded cleaned data to Postgre for SQL analysis.

SQL Analysis: Key Business Questions



1 Revenue by Gender

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

2 High-Spending Discount Users

Identified 839 customers.

3 Top 5 Products by Rating

Gloves (3.86), Sandals (3.84), Boots (3.82), Hat (3.80), Skirt (3.78).

4 Shipping Type Comparison

Standard: \$58.46, Express: \$60.48.

SQL Analysis: Deeper Insights

1 Subscribers vs. Non-Subscribers

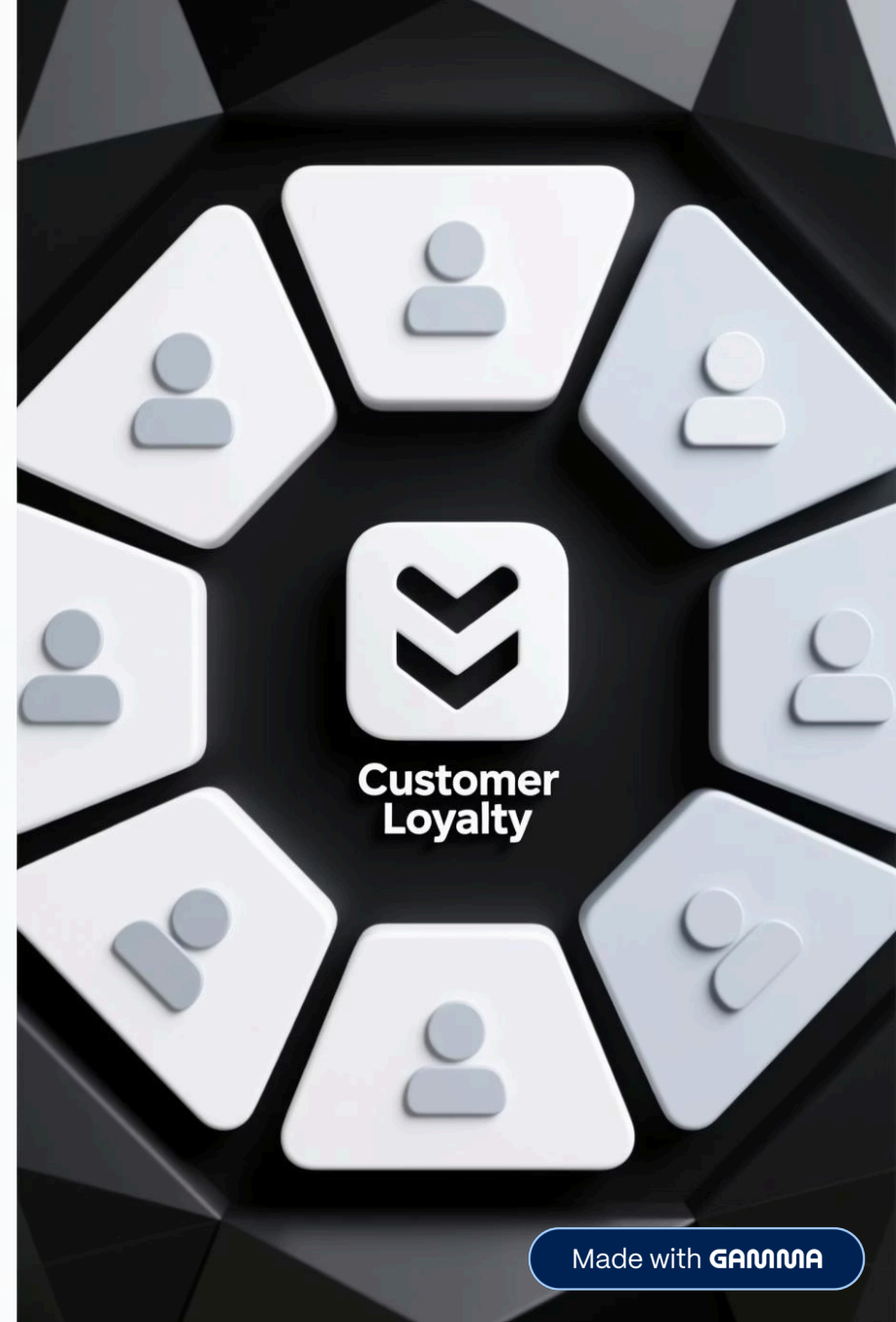
Subscribers: 1053 customers, \$62,645 revenue. Non-subscribers: 2847 customers, \$170,436 revenue.

2 Discount-Dependent Products

Hat (50%), Sneakers (49.66%), Coat (49.07%), Sweater (48.17%), Pants (47.37%).

3 Customer Segmentation

Loyal (3116), New (83), Returning (701).



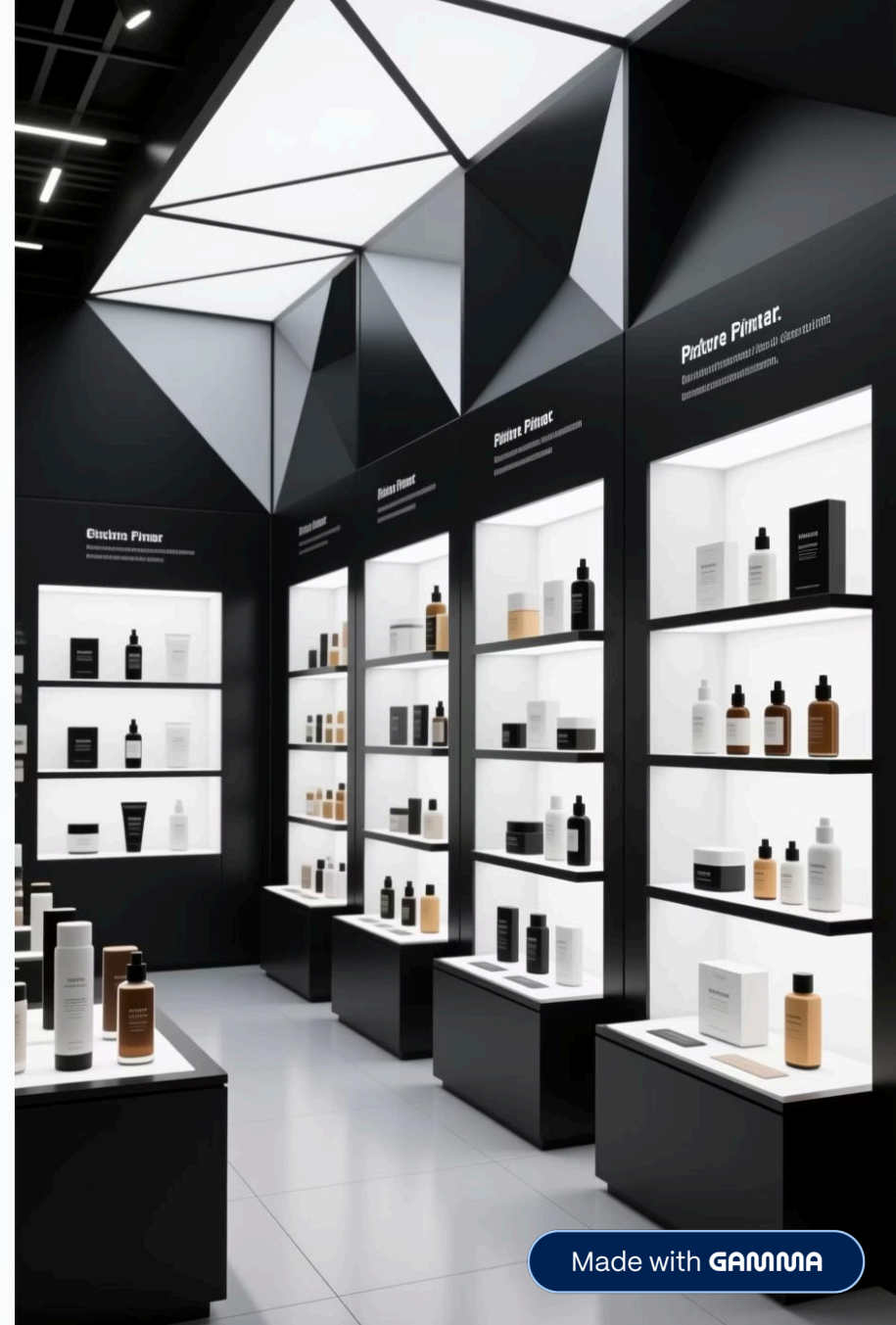
SQL Analysis: Product & Age

Top Products per Category

- Accessories: Jewelry, Sunglasses, Belt
- Clothing: Blouse, Pants, Shirt
- Footwear: Sandals, Shoes, Sneakers
- Outerwear: Jacket, Coat

Revenue by Age Group

- Young Adult: \$62,143
- Middle-aged: \$59,197
- Adult: \$55,978
- Senior: \$55,763



Power BI Dashboard

3.9K

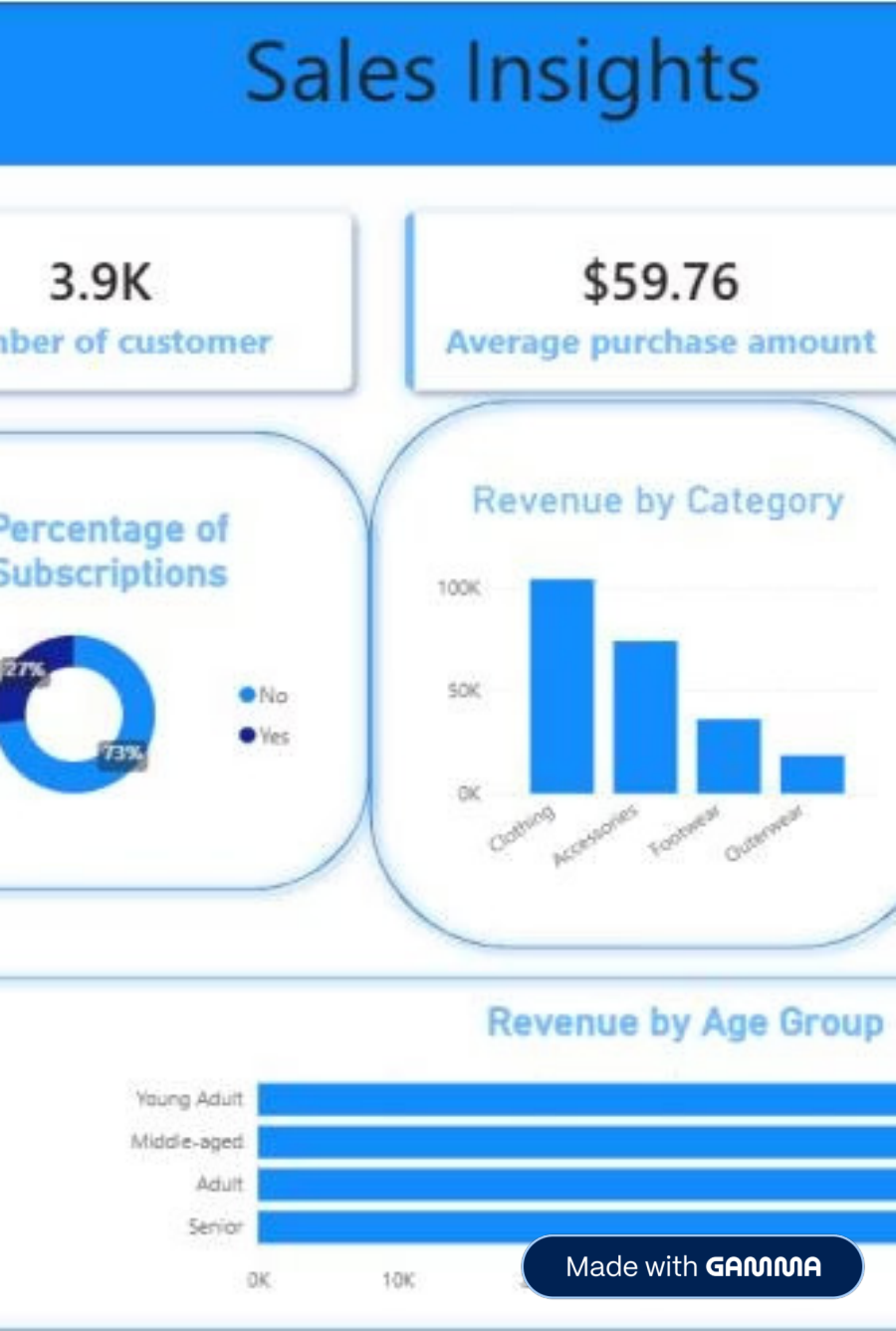
Customers

\$59.76

Avg. Purchase

3.75

Avg. Review



Business Recommendations

1

Boost Subscriptions

Promote exclusive benefits.

2

Customer Loyalty

Reward repeat buyers.

3

Review Discount Policy

Balance sales with margin.

4

Product Positioning

Highlight top-rated items.

5

Targeted Marketing

Focus on high-revenue groups.

Future Growth

Leveraging data insights for strategic business decisions and sustained growth.

Data-Driven

Informed strategies.

Customer-Centric

Enhanced experiences.

Optimized Operations

Increased efficiency.

