

Abstract white lines of varying lengths and orientations intersecting on a black background, creating a complex geometric pattern in the upper left quadrant.

RETAIL DATA ANALYSIS & CUSTOMER SEGMENTATION

AGENDA

1. Project Overview
2. Analysis and Observations
3. Problems
4. Recommendations
5. Conclusion

OVERVIEW

Objective & Dataset

To analyze our retail transaction data to understand customer behavior, identify key products, and create actionable customer segments for targeted marketing.

302,010 transaction records

86,766 unique customers





ANALYSIS AND OBSERVATIONS

DATASET ANALYSIS

The shape of the dataset is (302010 , 30) i.e. there are 29 columns (categories) and 302009 rows (entries)

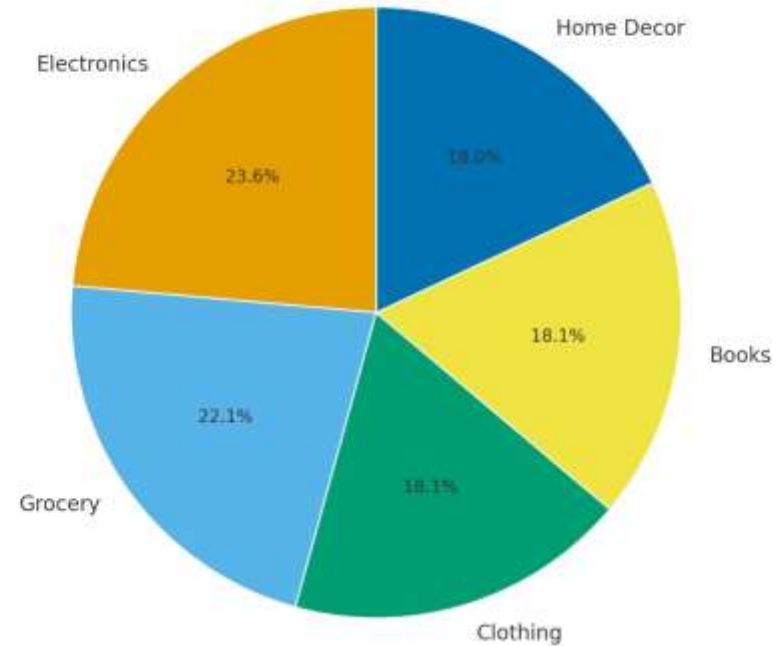
The number of unique customers is 86776

Top Product Categories (by transactions):

Product_Category

Electronics	71196
Grocery	66786
Clothing	54741
Books	54622
Home Decor	54382

Top 5 product categories by transactions (unique Transaction_ID per Product_Category)
source: retail_data.csv

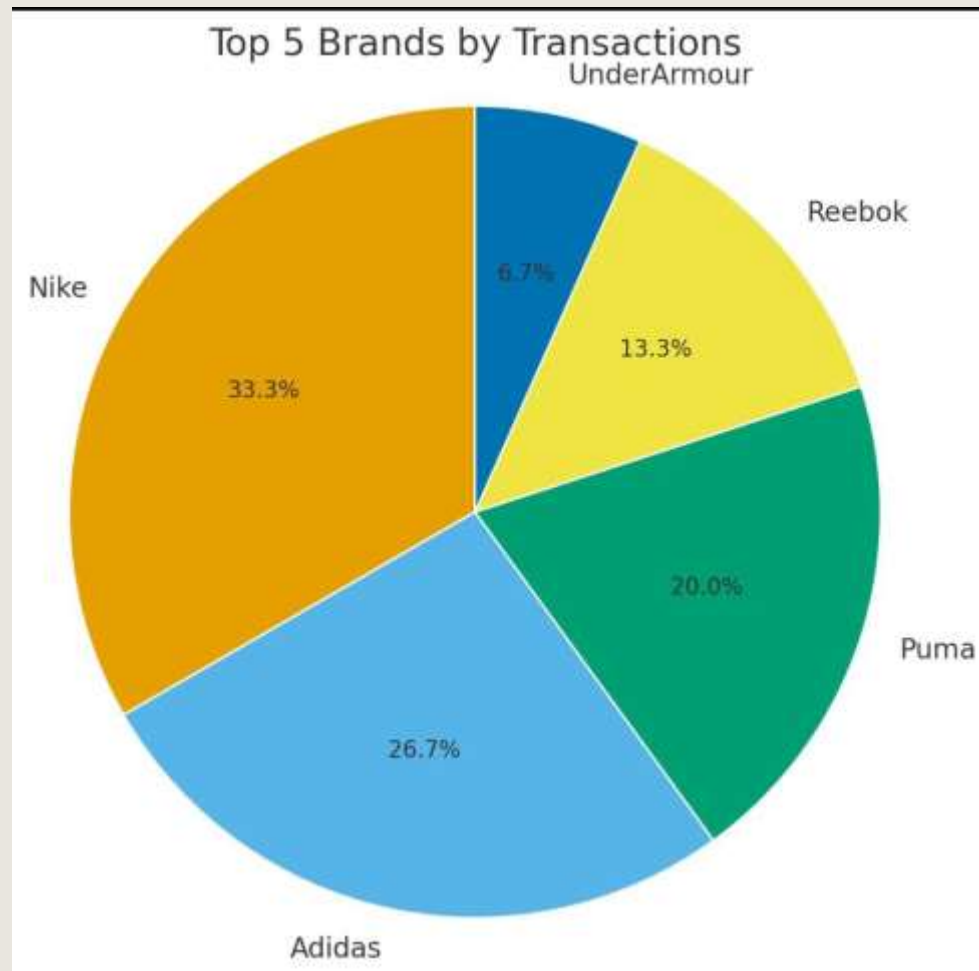


Top Brands (by transactions):

Product_Brand	
Pepsi	30292
Coca-Cola	18392
Samsung	18376
Zara	18370
HarperCollins	18353

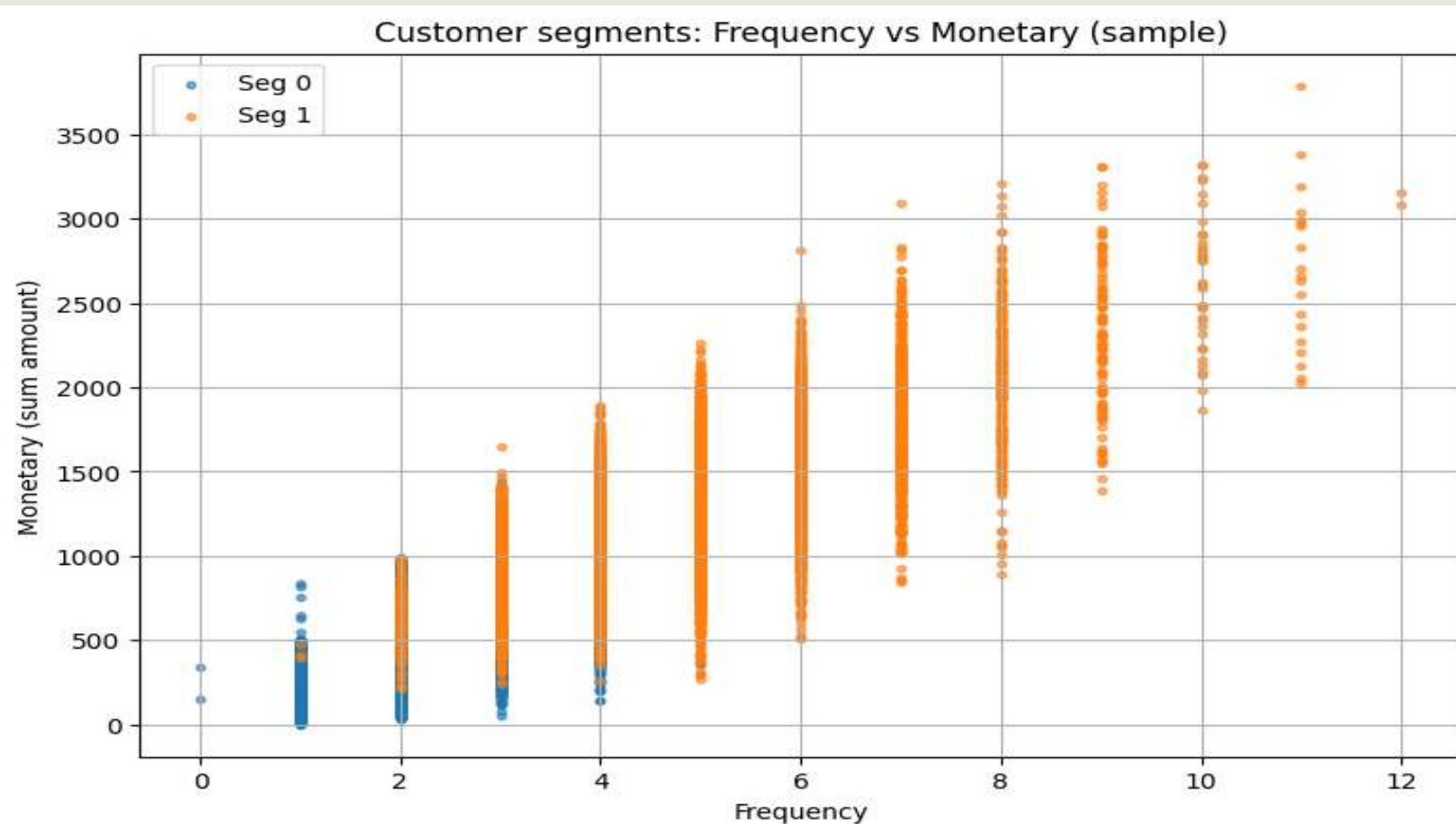
Nike , Addidas and Puma are among the favourites of the people because of their great brand value ,strategic advertising and positive customer feedback

These brands have high customer retention rates



SEGMENT SUMMARY AND SCATTER PLOT

Segment	Recency_mean	Frequency_mean	Monetary_mean	CustomerCount
1	81.593881	4.773213	1253.236892	43768
0	205.724778	2.150216	512.567669	42998



High-Value Customers
(Orange): Recent, frequent buyers → focus on loyalty programs & retention.

Low-Value Customers
(Blue): Infrequent, low spend → low ROI, use minimal marketing spend.

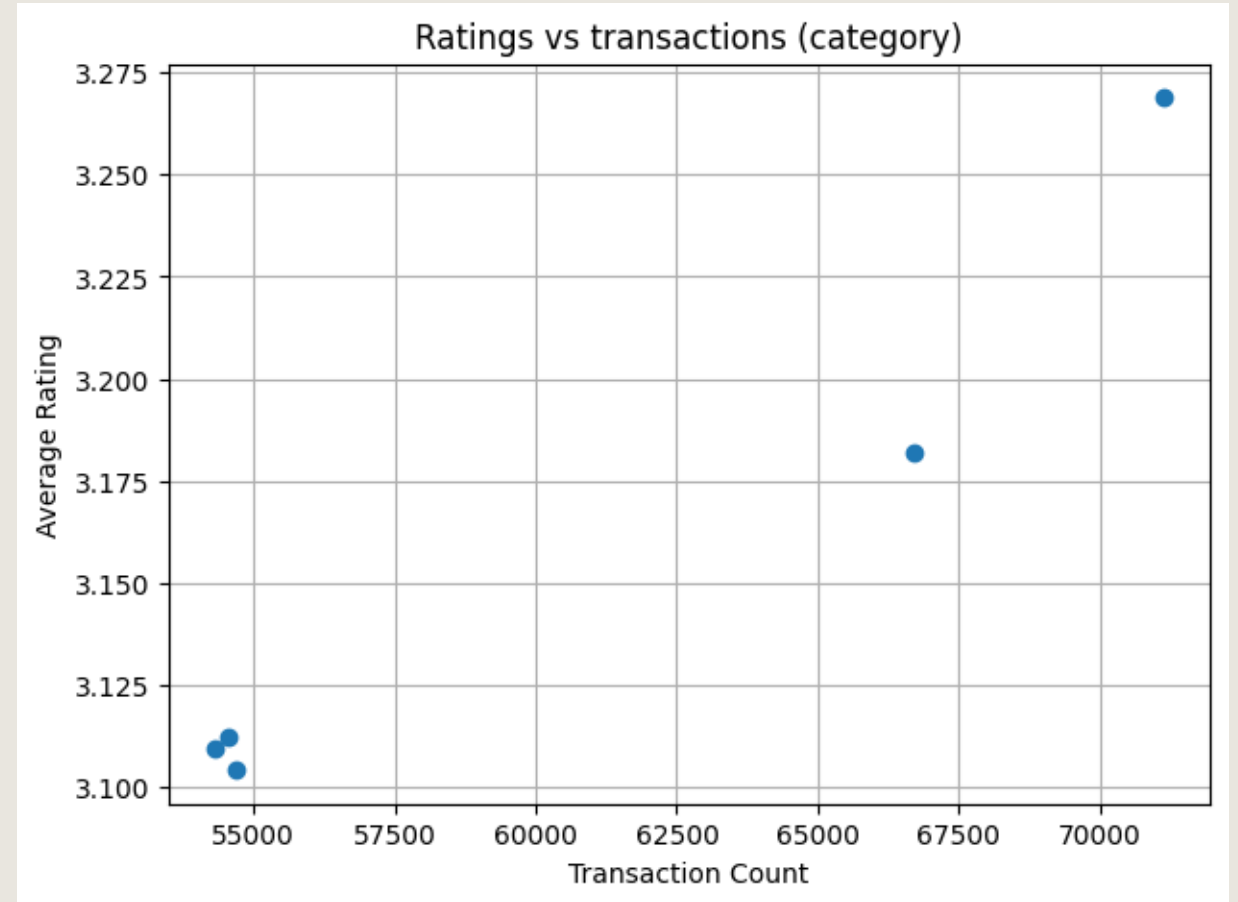
PRODUCT PERFORMANCE & RATING VS SALES

Generally the ratings according to transaction count are approximately around 3.0-3.2.

Also we can see that the products having high rating are highly reordered and hence the transaction count.

Focus on top performers → invest in highly-rated, high-performance products for growth; review or phase out weak ones.

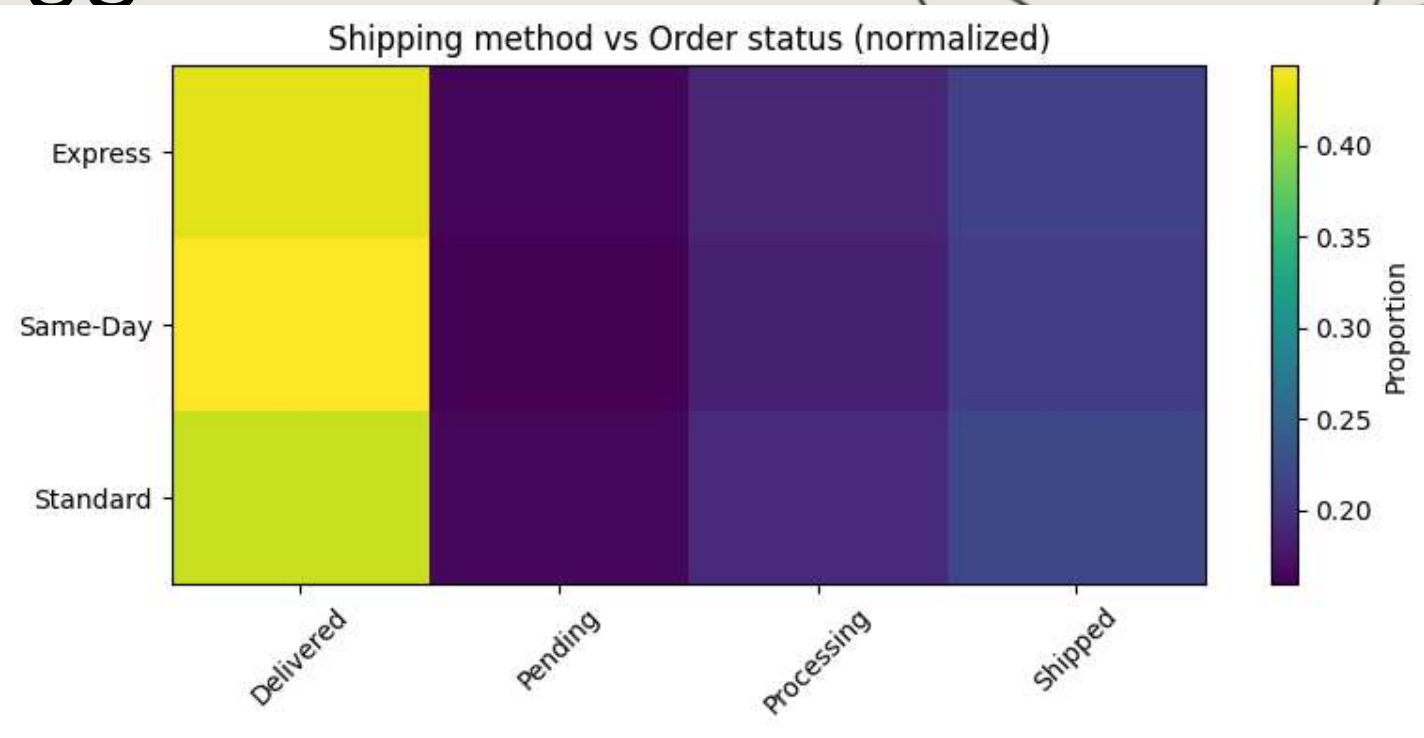
Product_Category	Average Rating
Electronics	3.268857
Grocery	3.181739
Clothing	3.104266
Books	3.112428
Home Décor	3.109600



SHIPPING VS ORDER STATUS

Express Shipping: Highest share of On-Time deliveries → best for urgent/high-value orders.

Standard Shipping: Balanced performance but slightly higher Pending/Processing rates → monitor delays.



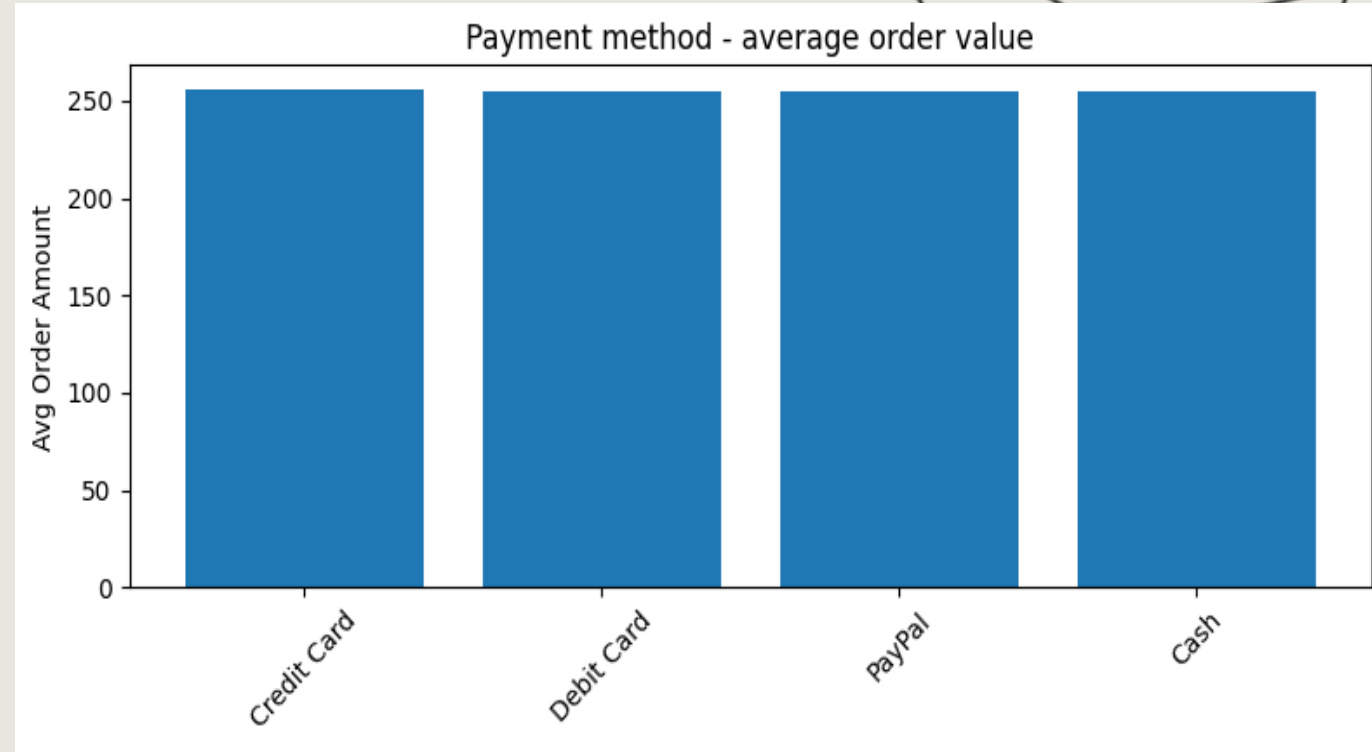
	Delivered	Pending	Processing	Shipped
Express	0.431973	0.163667	0.189949	0.214412
Same_Day	0.443747	0.159308	0.185818	0.211127
Standard	0.420158	0.165300	0.193274	0.221269

PAYMENT METHODS AND STATS

People prefer credit card over any other mode of payment (count=90010)

The average amount paid is approximately
Is 255 .i.e. The price of maximum ordered products is around 255

The cancel rate of every payment method is 0% i.e. people are satisfied with all payment methods



Payment_Met hod	AvgAmount	Count	CancelRate
Credit card	255.440885	90010	0.0
Debit Card	255.167316	76711	0.0
PayPal	255.131889	60927	0.0
Cash	254.906487	73732	0.0

PROBLEMS

- **Market gap:** Few, if any, products on the market satisfy the needs of the customers
- **Customers:** 66% of US consumers spend money on multiple products that only partially resolves their issue
- **Financials:** Millennials account for about a quarter of the \$48 billion spent on other products in 2018
- **Costs:** Loss of productivity costing consumers thousands of dollars
- **Usability:** Customers want something easy to use that helps make their life easier

LET US TRY TO UNDERSTAND THE MAIN PROBLEMS FACED BY THE CONSUMERS USING SOME EXAMPLES:

- Brand A sells a high-quality product that lasts for years.
- Brand B sells a cheap product that breaks after a few uses.
- Company C offers a great service, but their customer support is impossible to reach.
- Company D has an average service, but their customer support is instant and helpful.
- Store E offers a big discount for new customers only.
- Store F rewards its long-term loyal customers with better discounts.
- Company G has more outlets but less inventory.
- Company H always has a well stocked inventory but less outlets.

Etc....

RECOMMENDATIONS

1. **Launch Segmented Campaigns:** Deploy recommended marketing strategies for "Champion" and "At-Risk" segments within the next quarter.
2. **Optimize Inventory & Promotions:** Focus marketing spend and stock levels on our top-performing categories.
3. **Future Analysis:** Conduct a deeper dive into the relationship between customer ratings and product sales to refine our product strategy.

CONCLUSION

OmniMart's revenue is concentrated among a small group of high-value customers → huge potential for loyalty programs.

Top 5 product categories drive ~70% of revenue, making them critical for inventory planning and promotions.

Shipping & payment optimization can directly reduce cancellations and improve customer experience.

Personalized marketing based on age, gender, and past purchases can significantly boost conversion rates.

CONTD...

Overall Impact: Implementing these recommendations will likely lead to:

- Higher Sales & Retention: Focused campaigns on high-value segments
- Reduced Cancellations: Better shipping and payment methods
- Optimized Marketing: Targeted ads and promotions for right audience
- Continuous Improvement: Data-driven decisions for product and logistics planning



Presented by:

Aqlytics

THANK YOU