

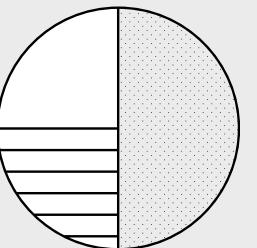
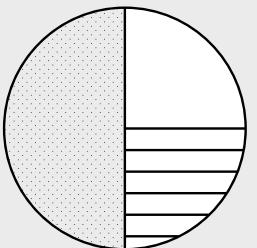
CUSTOMER DEMOGRAPHICS AND PURCHASE BEHAVIOR ANALYSIS

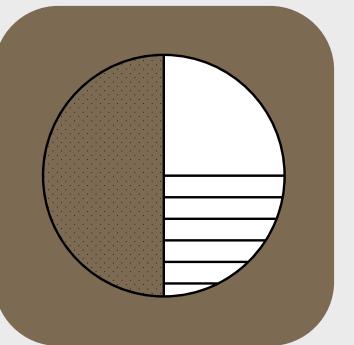
MS EXCEL

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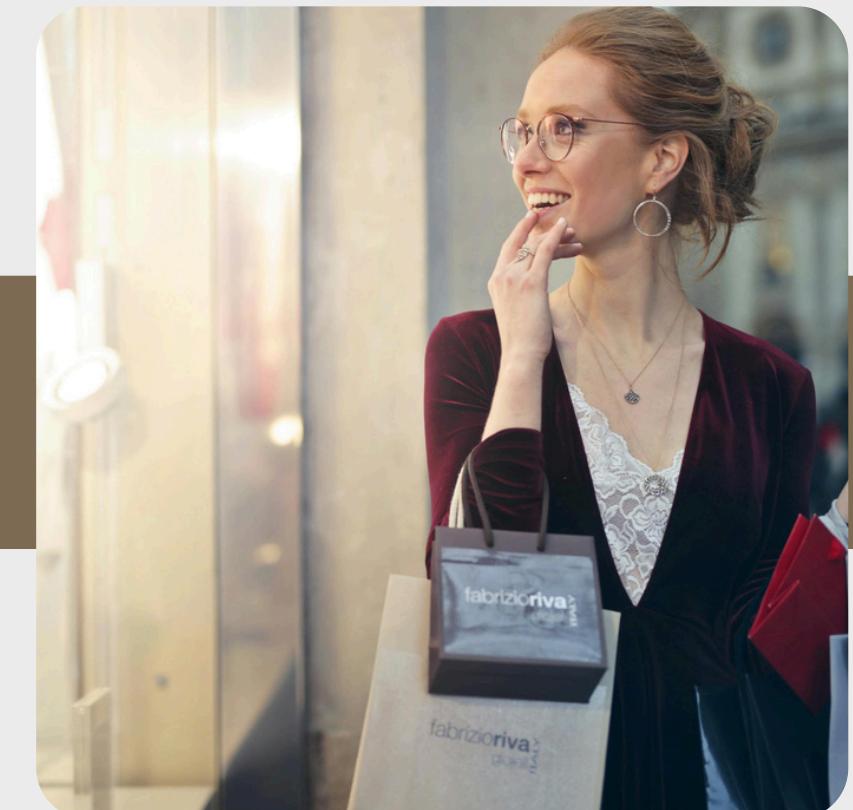




AGENDA



- Skills take away From This Project
- Objective
- My Approach - Customer Segmentation, Sales Forecasting, Product Category Performance, Marketing Strategy Optimization.
- Data Visualizations.
- Key Insights & Recomendations



SKILLS TAKE AWAY FROM THIS PROJECT



- Data Cleaning & Preprocessing using Excel
- Lookup Functions - Vlookup, Xlookup, Index Match.
- Aggregate Functions - SumIFS, CountIFS, AverageIFS
- Data Visualization Techniques in Excel (Charts, Pivot Tables).
- Statistical Analysis in Excel
- Trend Analysis and Forecasting in Excel
- Interpretation of Business Insights from Data

OBJECTIVE

- To understand customer demographics and purchase behavior trends
- To optimize their marketing and inventory strategies.
- To analyze and visualize customer demographics, product categories, and purchase patterns.





MY APPROACH

- **Customer Segmentation:** Identifying key customer groups based on demographics and purchasing behavior to develop targeted marketing strategies.
- **Sales Forecasting:** Understand purchase trends to forecast future sales and inventory needs.
- **Product Category Performance:** Assess the performance of different product categories and their impact on revenue generation.
- **Marketing Strategy Optimization:** Use demographic insights to tailor marketing strategies for different regions and age groups.

UNDERSTANDING THE DATA

9 Columns ; 27,343 Rows

Customer ID: Unique identifies each customer.

Name: The customer's full name.

Age: The age of the customer, expressed in years.

Gender: The gender of the customer, categorized as Male, Female, or Other.

Region: The geographic region where the customer resides (e.g., North, South, East, West).

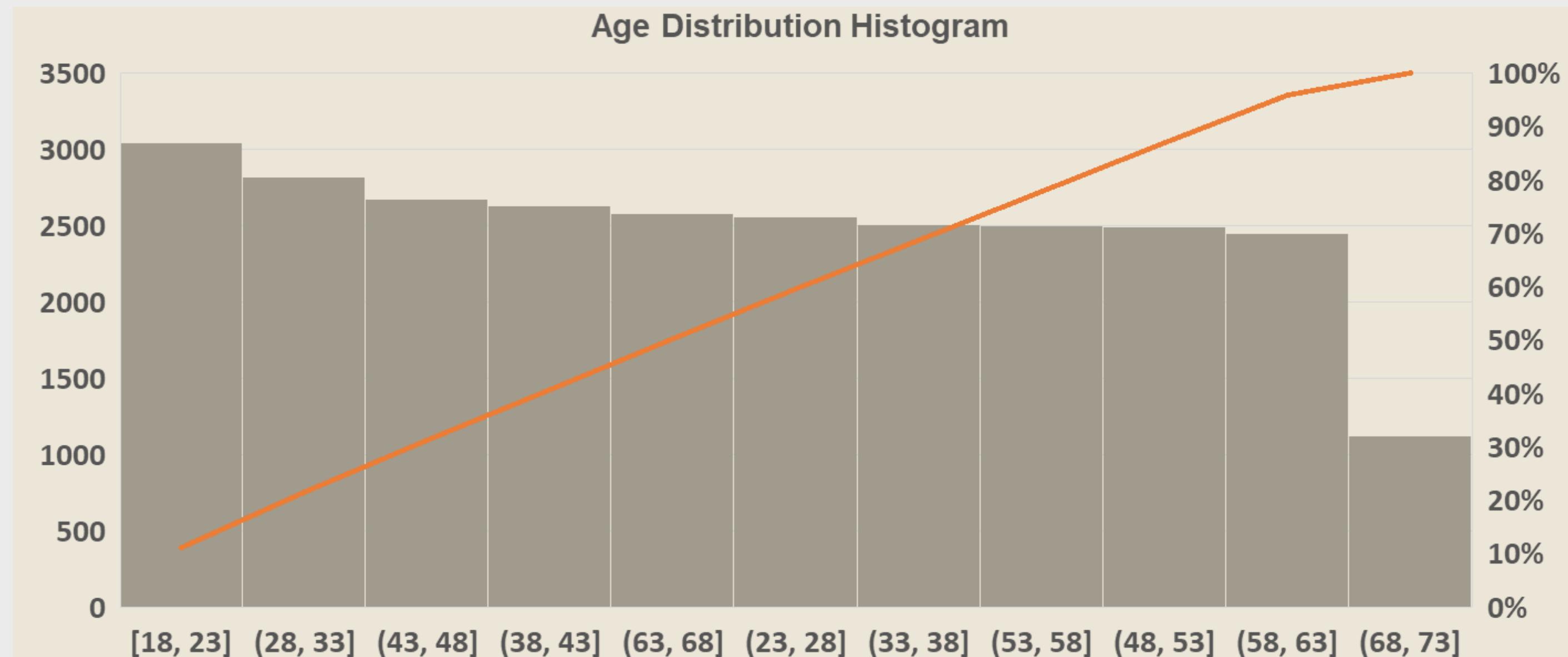
Product Category: The type of product purchased, such as Electronics, Clothing, Groceries, etc.

Product ID: A unique identifier for each product.

Purchase Date: The date of the purchase, in YYYY-MM-DD format.

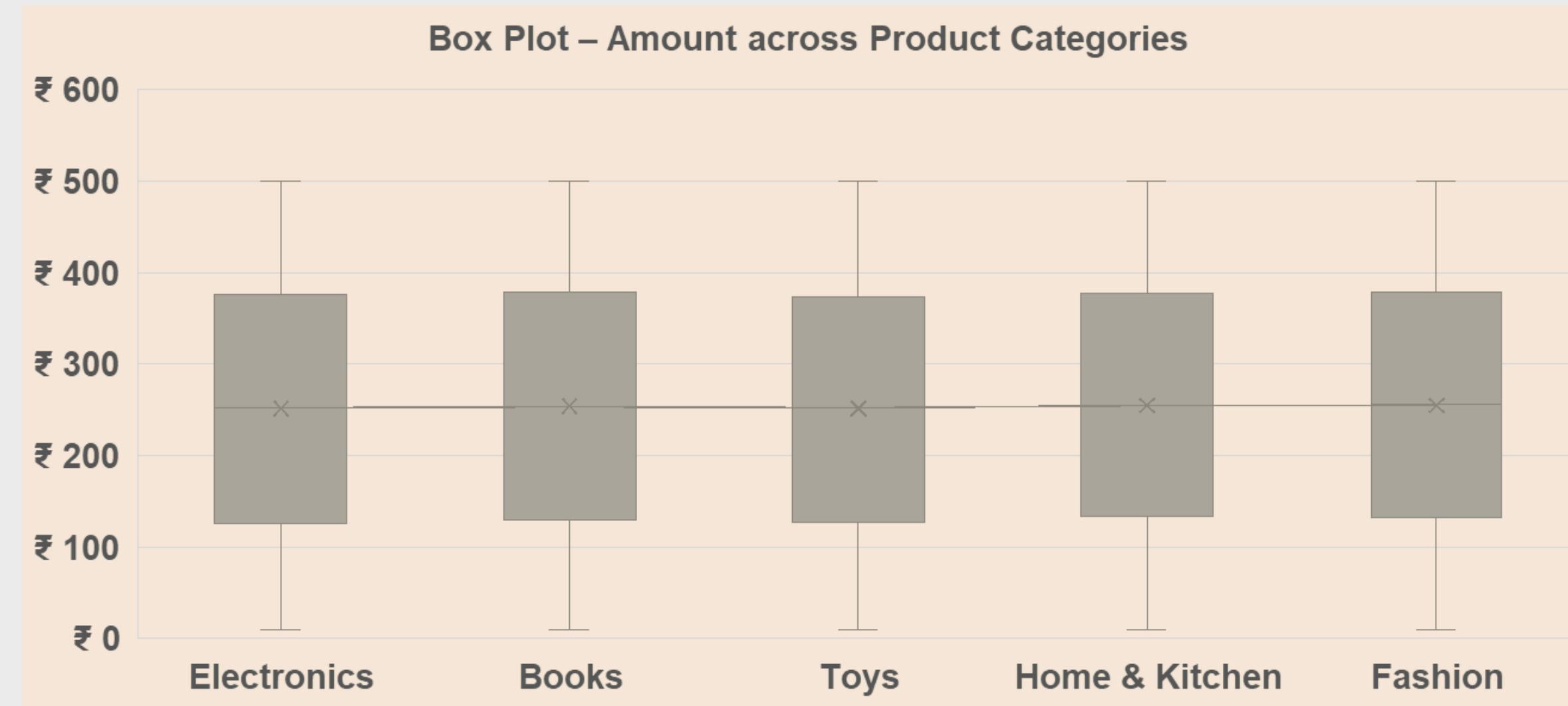
Amount: The total amount spent by the customer on a specific purchase, in currency

AGE DISTRIBUTION DEMOGRAPHICS



- ✓ **Trend - 20% of overall transactions by 18 to 23 age group**
- ✓ **Market Strategy - Young Adults** - tech-savvy, socially conscious, and actively engaged with trends.

PURCHASE AMOUNT ACROSS CATEGORIES

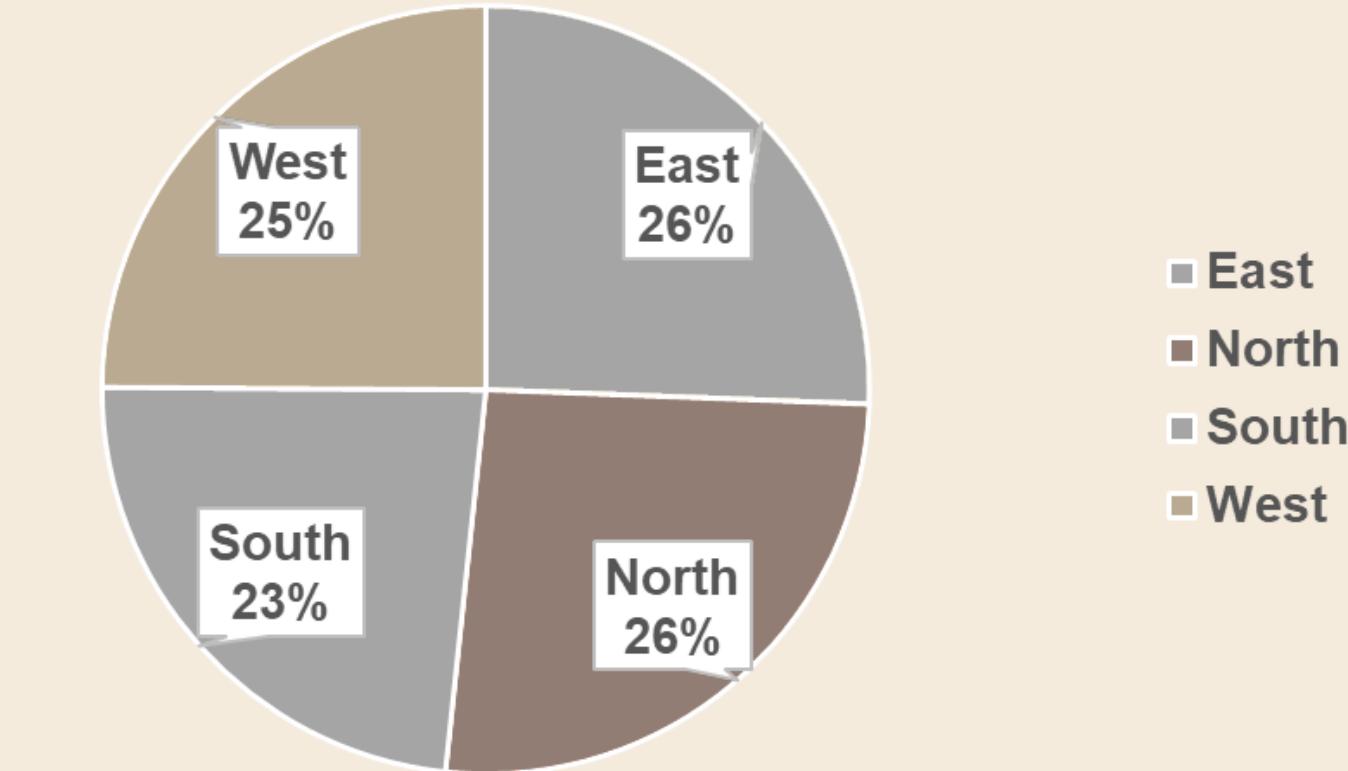


- ✓ Normal Distribution ; Median Values - 250, Q1 - 125 ,Q3 - 375.
- ✓ Customer Segmentation : Q1 - Budget-conscious buyers,Q3 - Premium shoppers.
- ✓ Marketing Strategy : Median – 250(Most Common) - "best value" options in campaigns; promotions and recommendations.

CUSTOMER DISTRIBUTION ACROSS REGIONS

Regions	Customer Percentage
North	26.09%
East	25.59%
West	24.89%
South	23.43%
Grand Total	100.00%

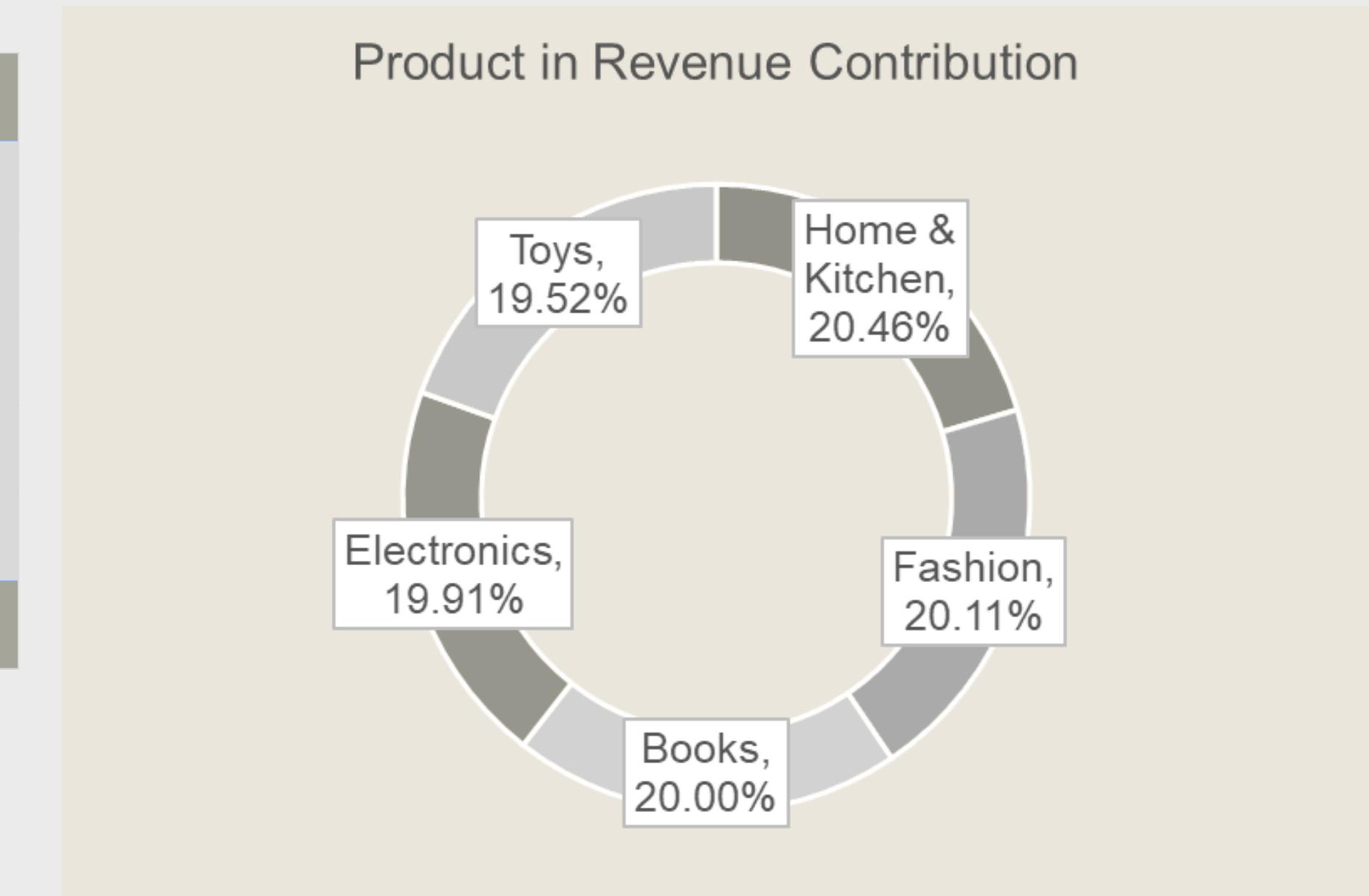
Customer Distribution across Regions



- ✓ **Total Number customers – 4846 made 27,397 Transaction.**
- ✓ **Highest Customer Base – North(1264,26.1%),East (1240,25.59%)**
- ✓ **Lowest Customer Base – South (1135,23.4%)**

REVENUE GENERATED ACROSS PRODUCTS

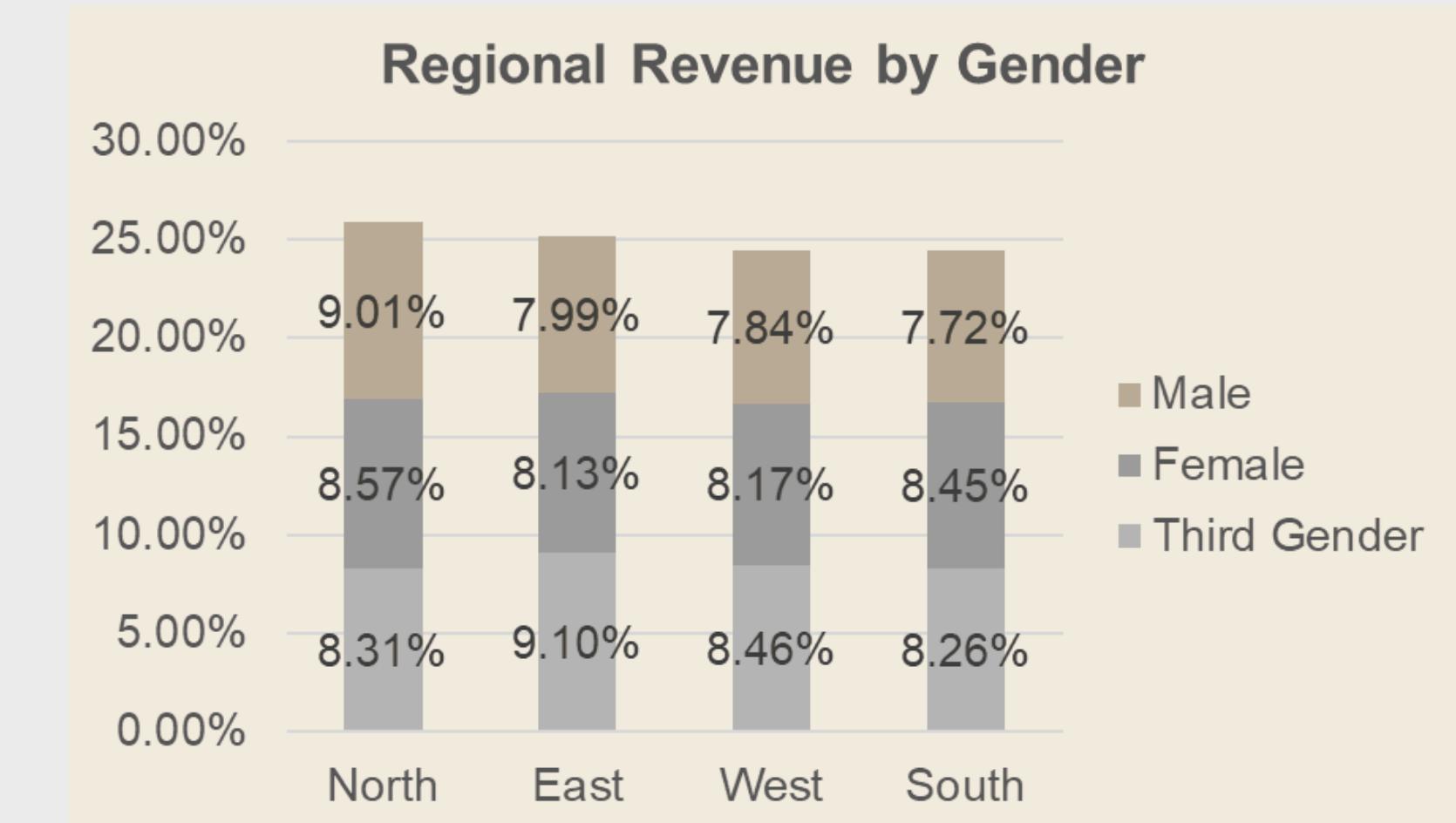
Products	Revenue Generated
Home & Kitchen	20.46%
Fashion	20.11%
Books	20.00%
Electronics	19.91%
Toys	19.52%
Grand Total	100.00%



- ✓ **Highest** - Kitchen 20.46% (**Marketing Strategy**: Pair related products e.g kitchen sets with bundle offers.)
- ✓ **Lowest** - Toys 19.5% (**Marketing Strategy** : Parents & Gift Givers ; Promote **festive or birthday discounts** and emphasize **educational or developmental toys** for kids.)

REVENUES SEGMENTED BY GENDER ACROSS REGION

Region	Third Gender	Female	Male	Grand Total
North	8.31%	8.57%	9.01%	25.89%
East	9.10%	8.13%	7.99%	25.21%
West	8.46%	8.17%	7.84%	24.47%
South	8.26%	8.45%	7.72%	24.43%
Grand Total	34.12%	33.32%	32.56%	100.00%



Observation Trends

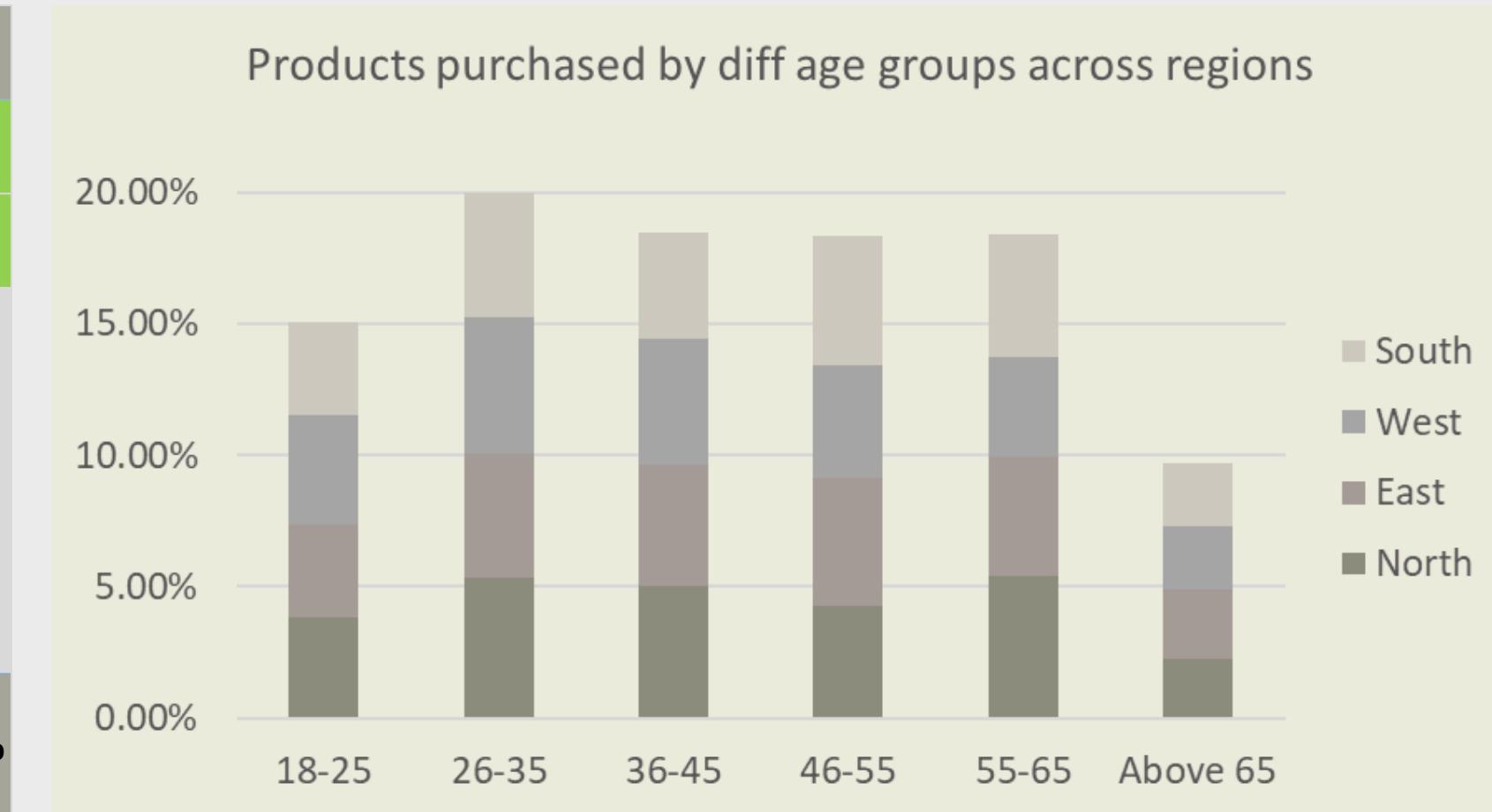
- ✓ The **Third Gender** makes the highest contribution in the East region (9.10%), surpassing both Male and Female categories.
- ✓ **Male revenue** is highest in the North (9.01%) but shows a gradual decline from North to South.
- ✓ **Female contributions** relatively consistent across regions, peaking slightly in the North(8.57%).

Recommendations

- ✓ **Resource Distribution** - North & East 25% +- Prioritize ; Optimized Inventory.
- ✓ **Weak Area** - Southern region Males - 7.72% Influencers, Social Media Marketing ,Local Events, Flat Discount on gender basis, Coupons ; Lower the availability of resources comparatively.

PRODUCTS PURCHASED BY DIFFERENT AGE GROUPS ACROSS REGIONS

Age	North	East	West	South	Total
18-25	3.81%	3.57%	4.15%	3.55%	15.09%
26-35	5.32%	4.75%	5.19%	4.74%	20.00%
36-45	5.00%	4.61%	4.85%	4.02%	18.48%
46-55	4.25%	4.91%	4.25%	4.95%	18.36%
55-65	5.40%	4.54%	3.81%	4.64%	18.40%
Above 65	2.26%	2.65%	2.37%	2.39%	9.67%
Grand Total	26.05%	25.04%	24.62%	24.29%	100.00%



Trends

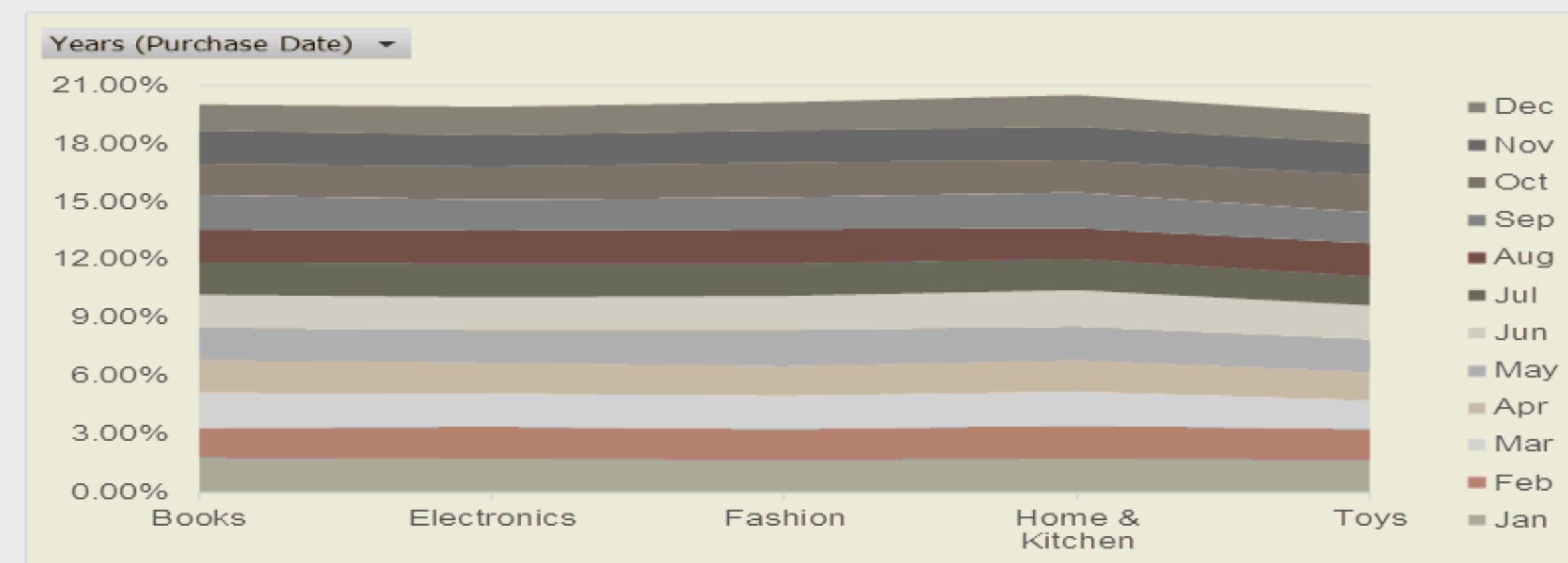
- ✓ Top Purchases - (18–25 and 26–35) ; 35% of products ; Younger Customers - west .
- ✓ Mid-Age Group (36–45 & 46–55) & Senior Group (Above 65) - Equally Distributed among regions.

Marketing Strategies

- ✓ 18–25 (Young Adults) - tech-savvy, Omnichannel , Influencer Campaigns,
- ✓ 26–35 (Young Professionals) - Content-Driven Marketing, Lifestyle Marketing.
- ✓ 36–45 (Mid-Career Group) - Value-Oriented Ads, Family-Centric approach.
- ✓ 46–55 (Mature Professionals) - Trust and Credibility, Educational Content.
- ✓ 55 & Above (Retirees) - Traditional Media, Ease of Use

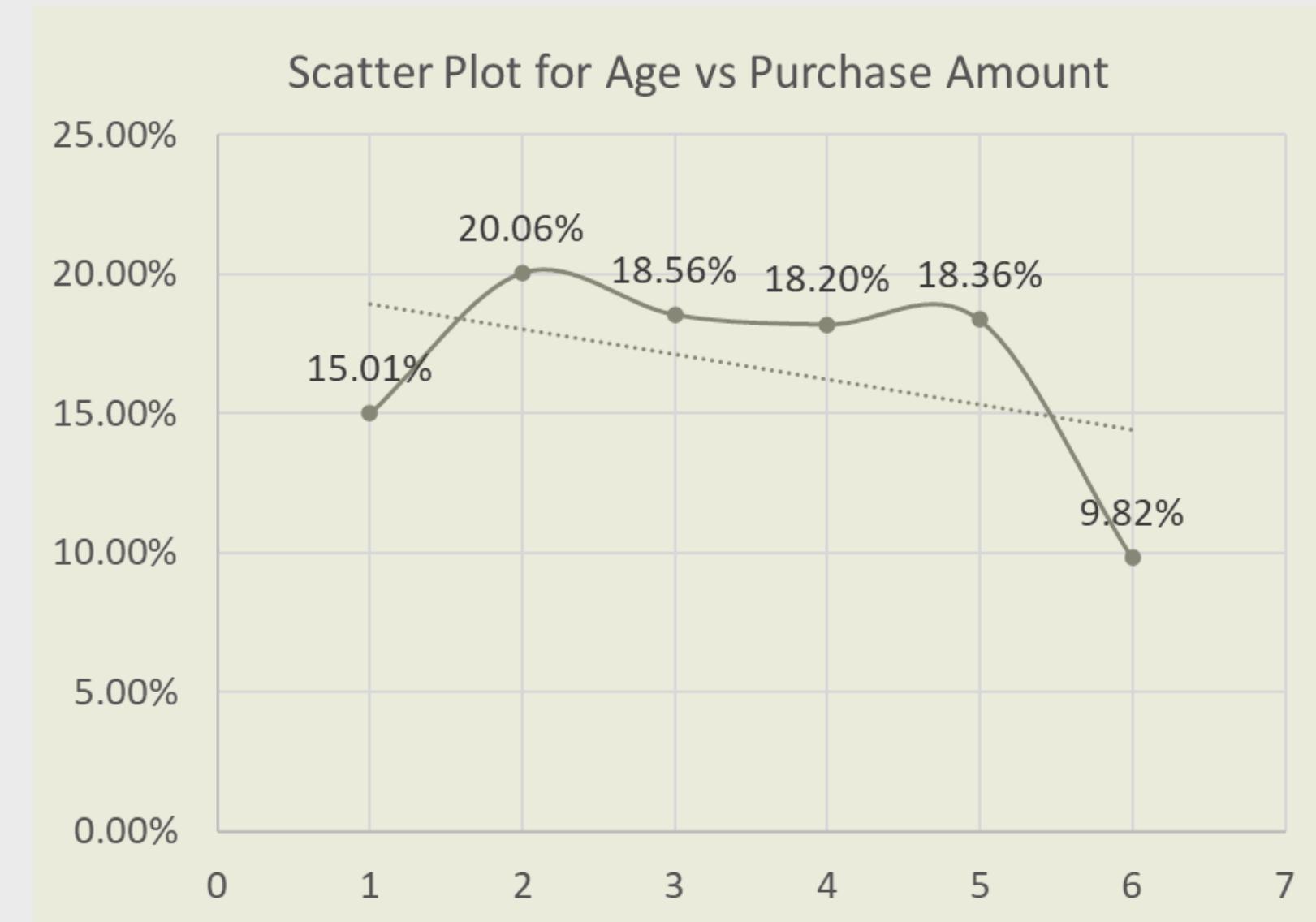
MONTHLY REVENUE DISTRIBUTION ACROSS DIFFERENT PRODUCTS GROUPS

Years (Purchase Date) (All)														
Sum of Amount	Column Labels	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Grand Total
Row Labels														
Books		1.81%	1.57%	1.80%	1.71%	1.62%	1.68%	1.69%	1.68%	1.77%	1.66%	1.71%	1.30%	20.00%
Electronics		1.78%	1.62%	1.72%	1.59%	1.68%	1.69%	1.75%	1.68%	1.57%	1.70%	1.62%	1.49%	19.91%
Fashion		1.70%	1.61%	1.69%	1.59%	1.82%	1.72%	1.71%	1.74%	1.65%	1.82%	1.66%	1.42%	20.11%
Home & Kitchen		1.78%	1.72%	1.70%	1.67%	1.69%	1.90%	1.61%	1.59%	1.81%	1.70%	1.71%	1.59%	20.46%
Toys		1.74%	1.56%	1.47%	1.49%	1.67%	1.72%	1.51%	1.73%	1.55%	1.96%	1.62%	1.51%	19.52%
Grand Total		8.80%	8.08%	8.38%	8.04%	8.48%	8.71%	8.26%	8.42%	8.35%	8.84%	8.32%	7.32%	100.00%



REVENUE DISTRIBUTION WITH DIFF AGE GROUPS

Age Group	Amount
18-25	15.01%
26-35	20.06%
36-45	18.56%
46-55	18.20%
55-65	18.36%
Above 65	9.82%
Grand Total	100.00%

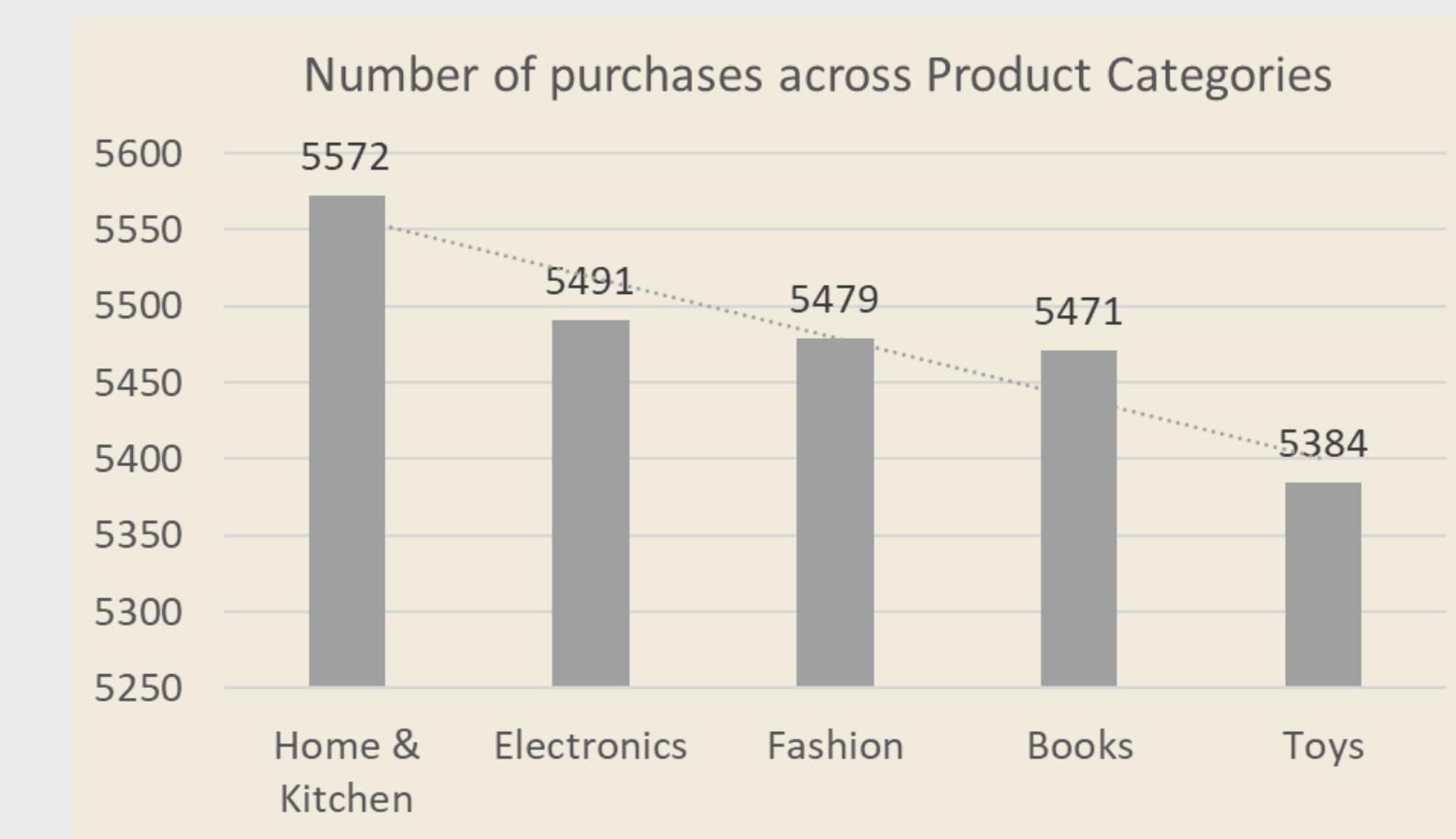


- ✓ Marketing Strategies - Younger Preference , Trends, Needs
- ✓ Middle aged - still hold substantial potential, specialized products or services
- ✓ Older - loyalty programs, targeted promotions, or personalized messaging to increase Ms%

- ✓ **Trendline** - Declines from lower to higher age. Age increases their purchase amount decreases.
- ✓ **Correlation** - Age is inversely proportional to revenue

TOTAL NO OF PURCHASES AMONG PRODUCTS CATEGORIES

Products Category	Number of Purchases
Home & Kitchen	5572
Electronics	5491
Fashion	5479
Books	5471
Toys	5384
Grand Total	27397

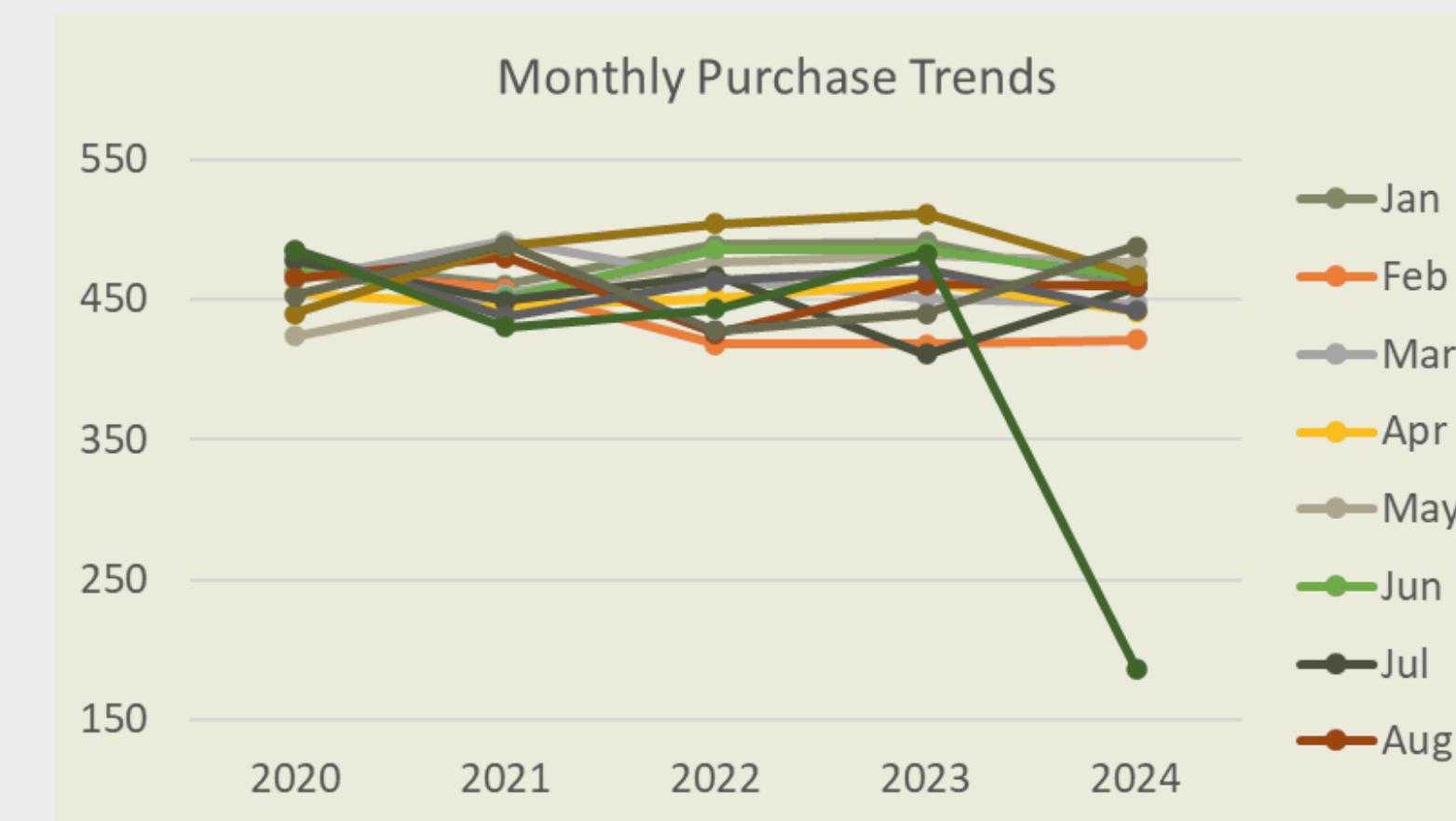


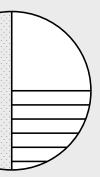
Customer Behavior

- ✓ Preference for Home & Kitchen Products
- ✓ Steady Interest Across Electronics, Fashion, and Books
- ✓ Slight Dip in Toys Purchases

MONTHLY PURCHASE TRENDS

Number of	Months												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Years													
2020	477	470	464	454	424	470	478	465	485	440	453	485	5565
2021	461	458	492	445	454	451	449	480	438	488	489	430	5535
2022	489	418	465	451	477	486	467	426	463	504	428	443	5517
2023	491	418	451	462	482	486	411	461	471	511	440	483	5567
2024	460	421	447	441	476	466	459	460	442	467	488	186	5213
Grand Total	2378	2185	2319	2253	2313	2359	2264	2292	2299	2410	2298	2027	27397





THANK YOU

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