

FINAL PROJECT

UNLOCKING STRATEGIC MARKETING INSIGHTS WITH CUSTOMER BEHAVIOR ANALYTICS

Link : [Google Colab](#)

Link : [Dashboard PBIX](#)

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MAEVA AP- DS33B



We're in the era of **Omnichannel Acceleration**

Customer behavior has shifted 48% now
Retail shop across both online and
offline channels, 41% are fully digital,
and only 12% remain physical-first.

This transformation calls for precise,
timely, and personalized marketing **yet**
many brands still struggle to keep up.

What Holds Marketing Back (Challenge)

- ▶ **Lack of Targeted Execution**
Campaigns are broadcasted with little personalization → low engagement.
- ▶ **Inefficient Promotions**
Discounts are distributed broadly, driving up cost and lowering loyalty.
- ▶ **Poor Timing**
Campaigns aren't aligned with real-time behavior → missed opportunities.

Customer Expectations Are Rising. Marketing Precision Must Follow.

Approach & Methodology

Step

Data Understanding

Explored records on customer demographics, transactions, channels, loyalty, and discount usage

Data Cleaning

Handled missing values, standardized & converted time fields to datetimes

Feature Engineering

Created new variables that related and support the EDA

Exploratory Data Analysis

Analyze the behavior trends & marketing analytics

Extracting + Analysis

Result and Strategic insights

What Actually Happen?

EXPLORATORY DATA ANALYSIS

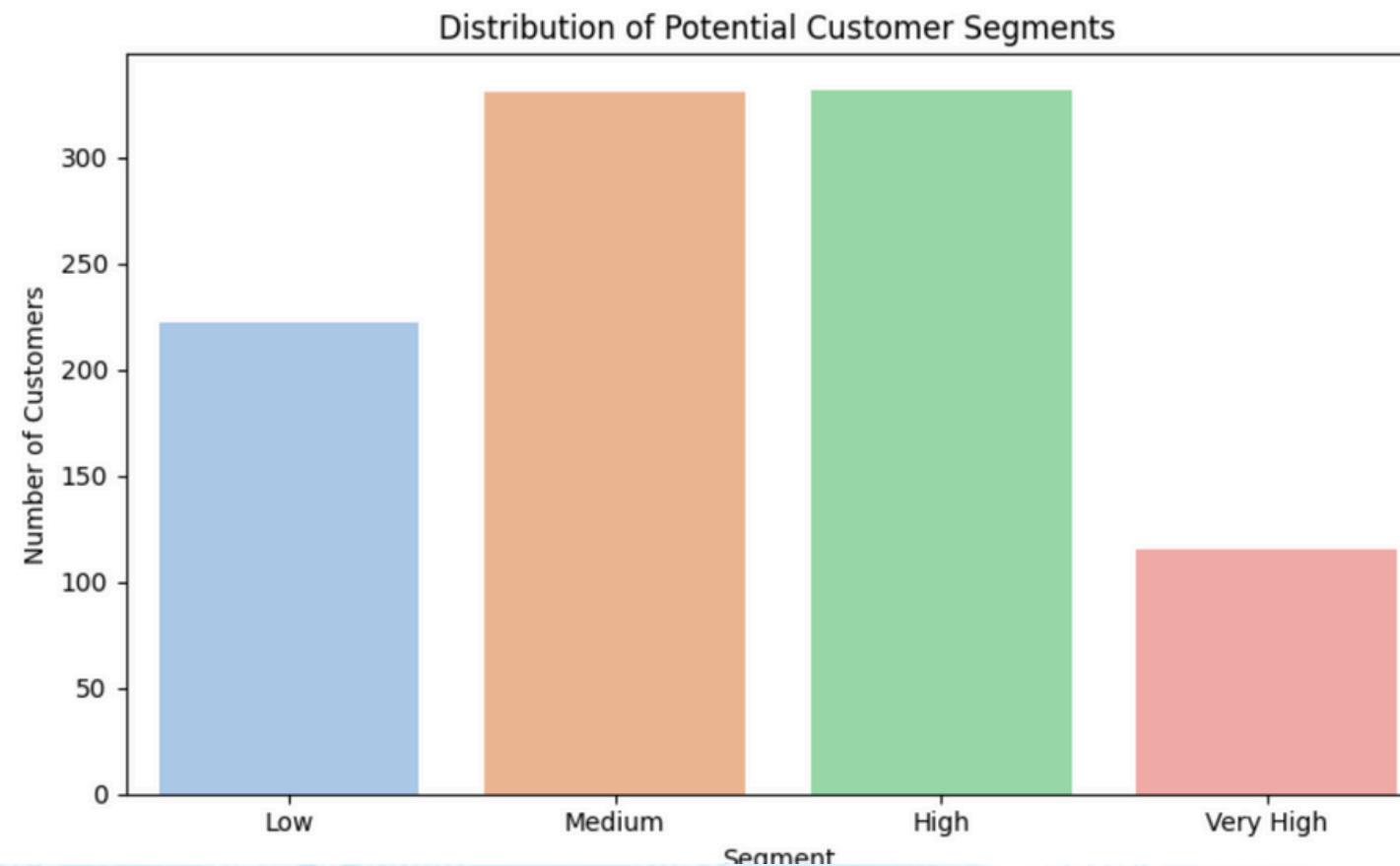
NAVIGATING THE MARKETING LANDSCAPE
THROUGH DATA INSIGHTS



Know your customer, unlock your advantage

Whose our customers?

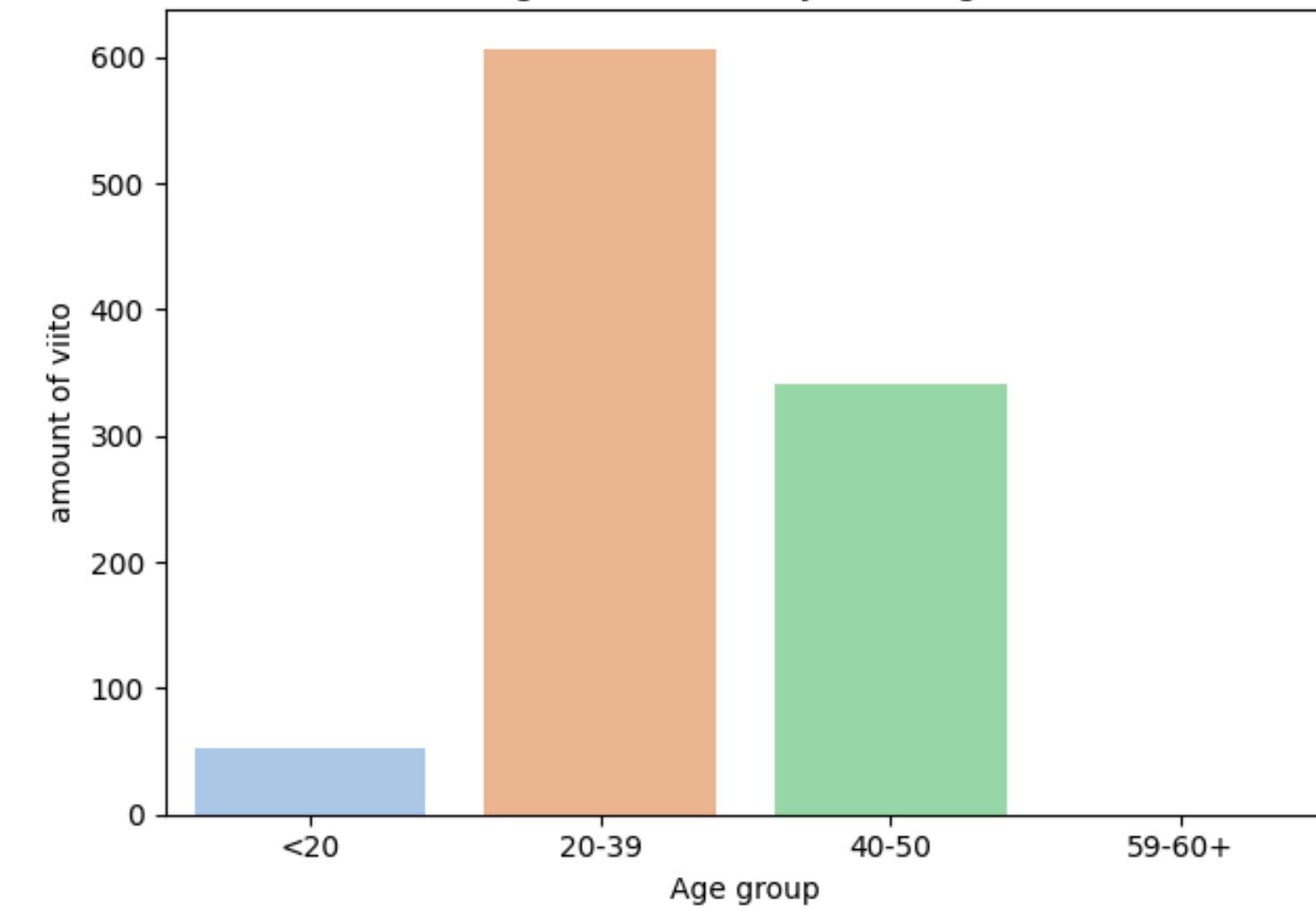
Customer Segment



- Medium, High & Very High segments = small in size, big in value
- Marketing efforts cannot still one-size-fits-all

Core Customer Aged

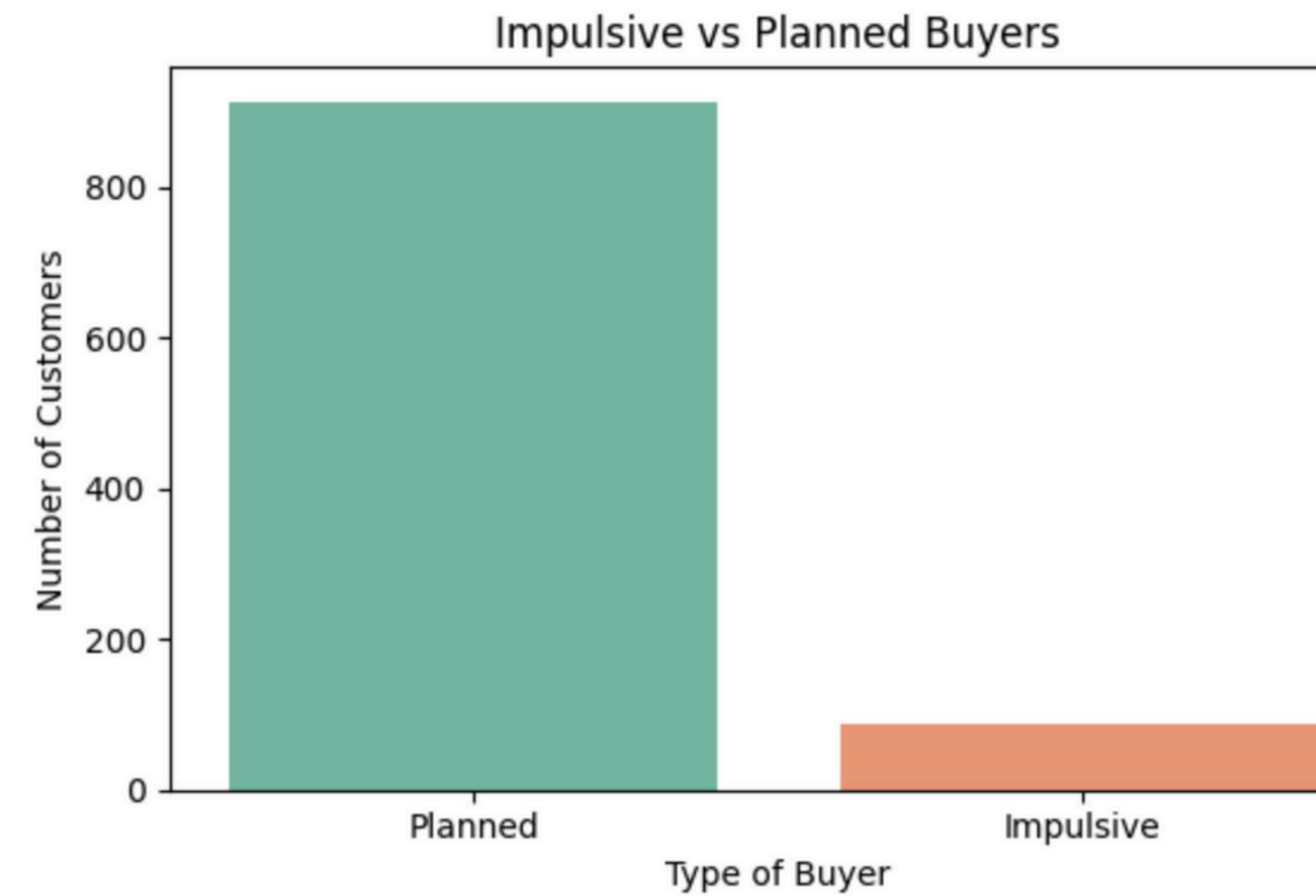
Age distribution by the range



- Customers are mostly aged 25–40 (Young to mid adult range)

Which Customer Behaviors Should We Target to Maximize Value?

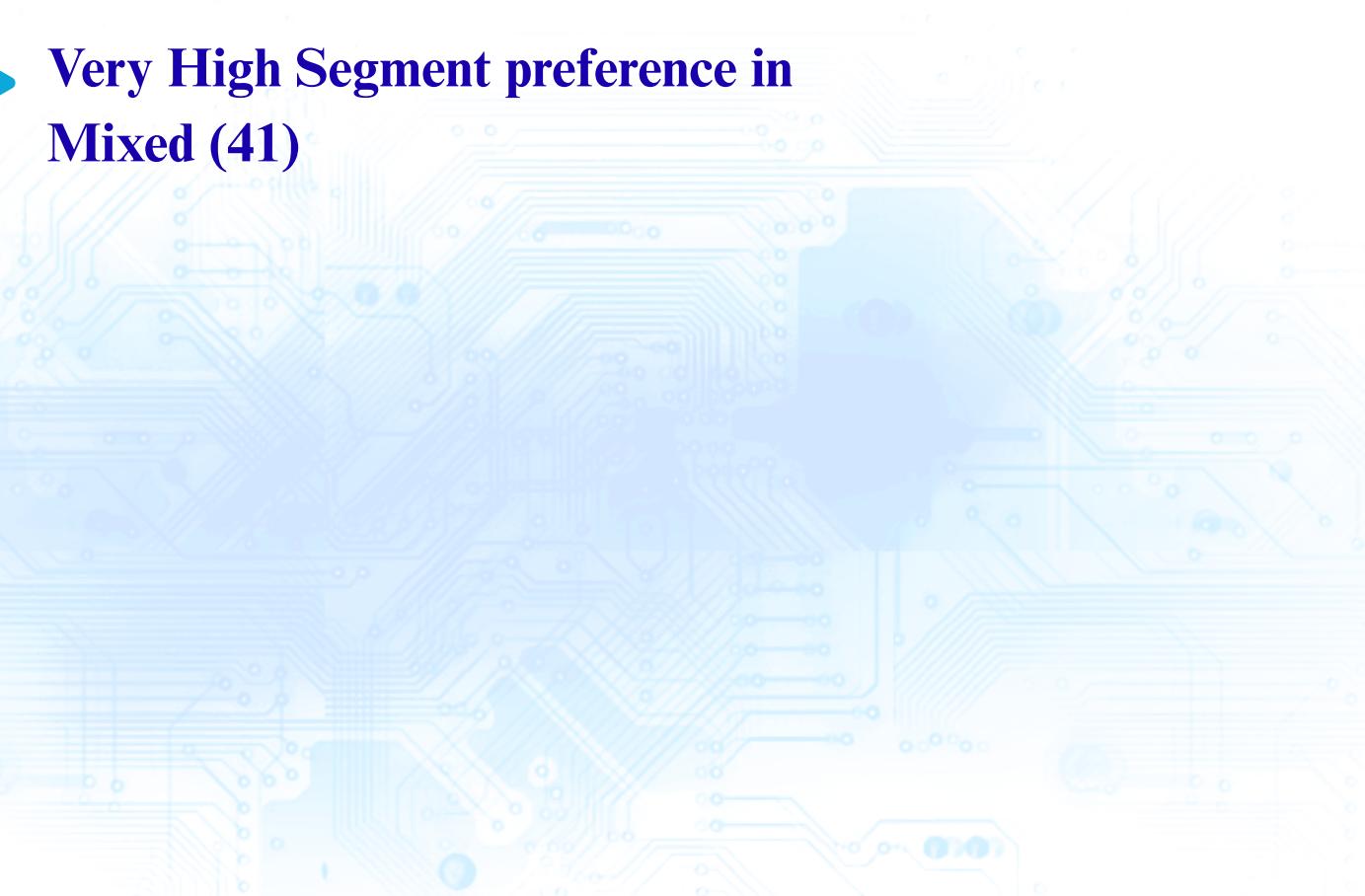
Customer Behavior



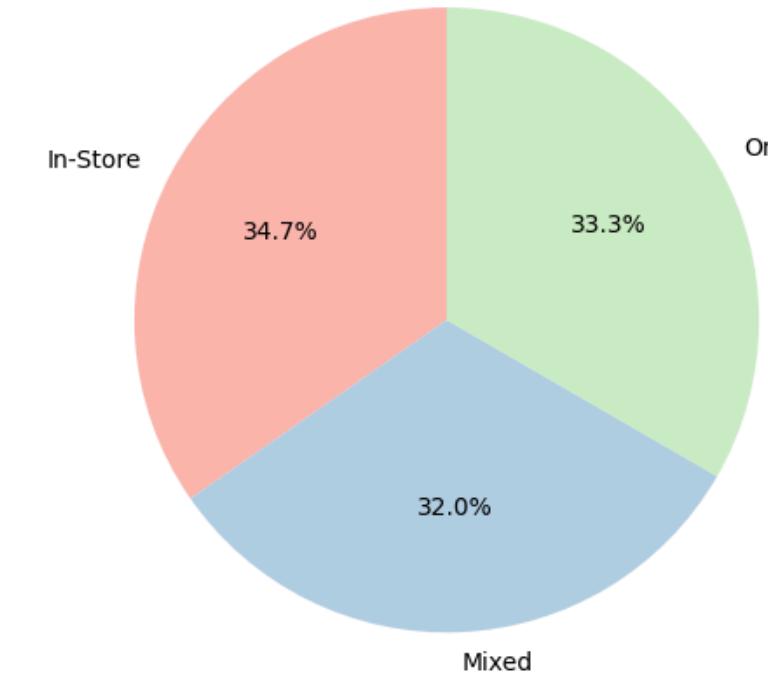
- Most customers plan their purchases in advance.
- Only a small segment makes impulsive buys.
- **Marketing should focus on nurturing planned buyers.**

With how, when, and where customers actually shop?

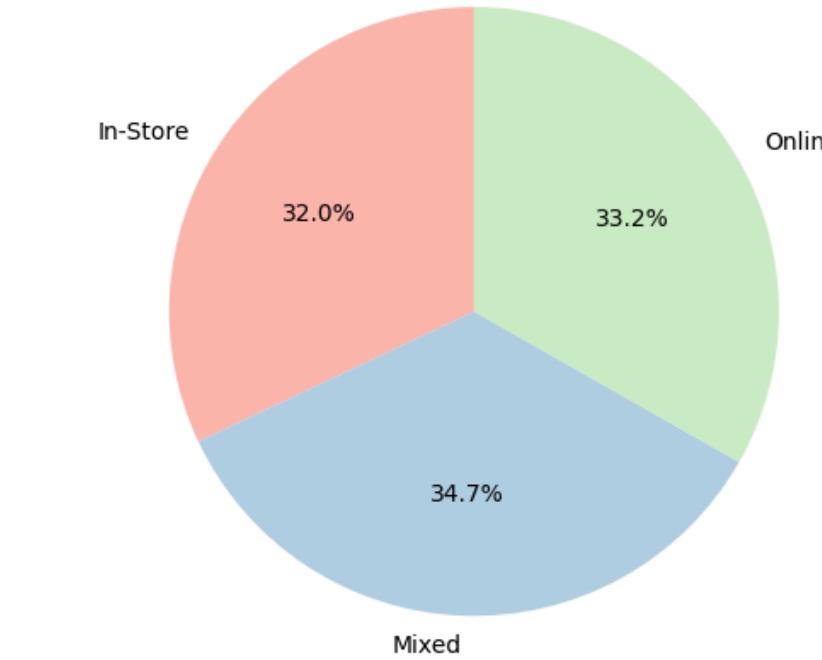
- ▶ **Low Segment: Prefers In-Store (117)**
- ▶ **Medium Segment active on Mixed Channel (115)**
- ▶ **High Segment active on In Store(109)**
- ▶ **Very High Segment preference in Mixed (41)**



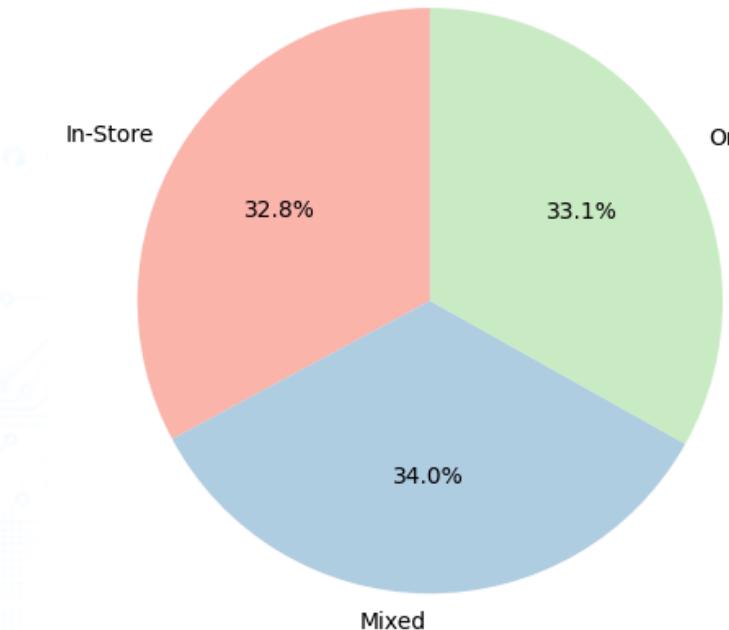
Channel Preference =Segment Low



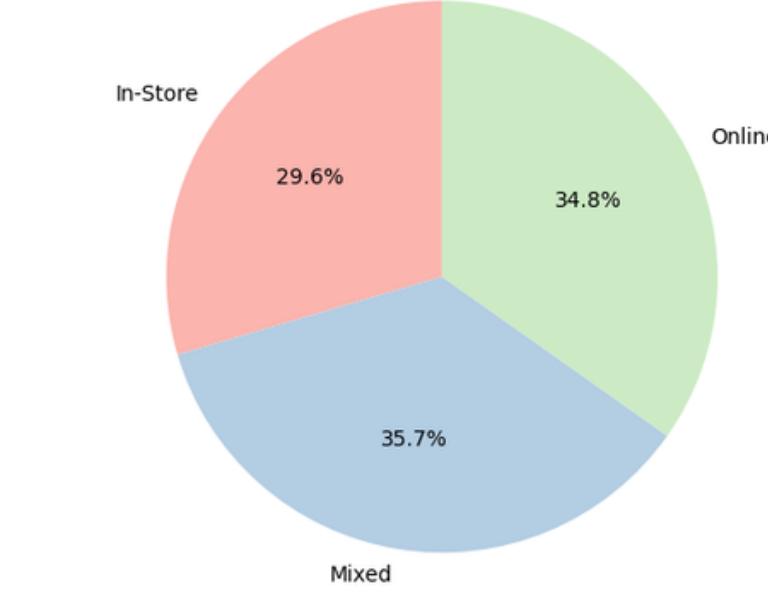
Channel Preference - Segment Medium



Channel Preference =Segment High



Channel Preference = Segment Very High

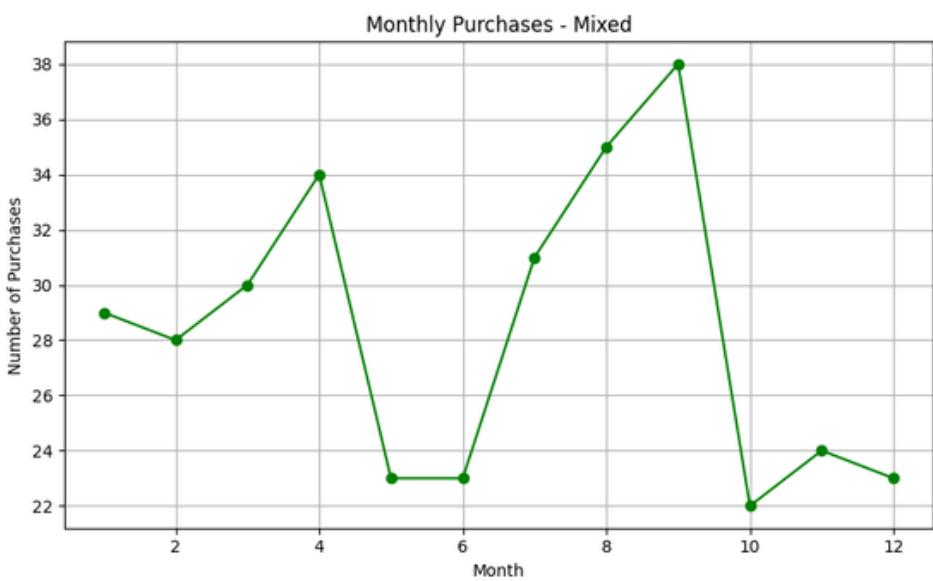


With how, when, and where customers actually shop? (Contd)



INSTORE

- Sales peak in March and August (33&32)
- Lowest in September (17)
- Best for seasonal promotion



MIXED

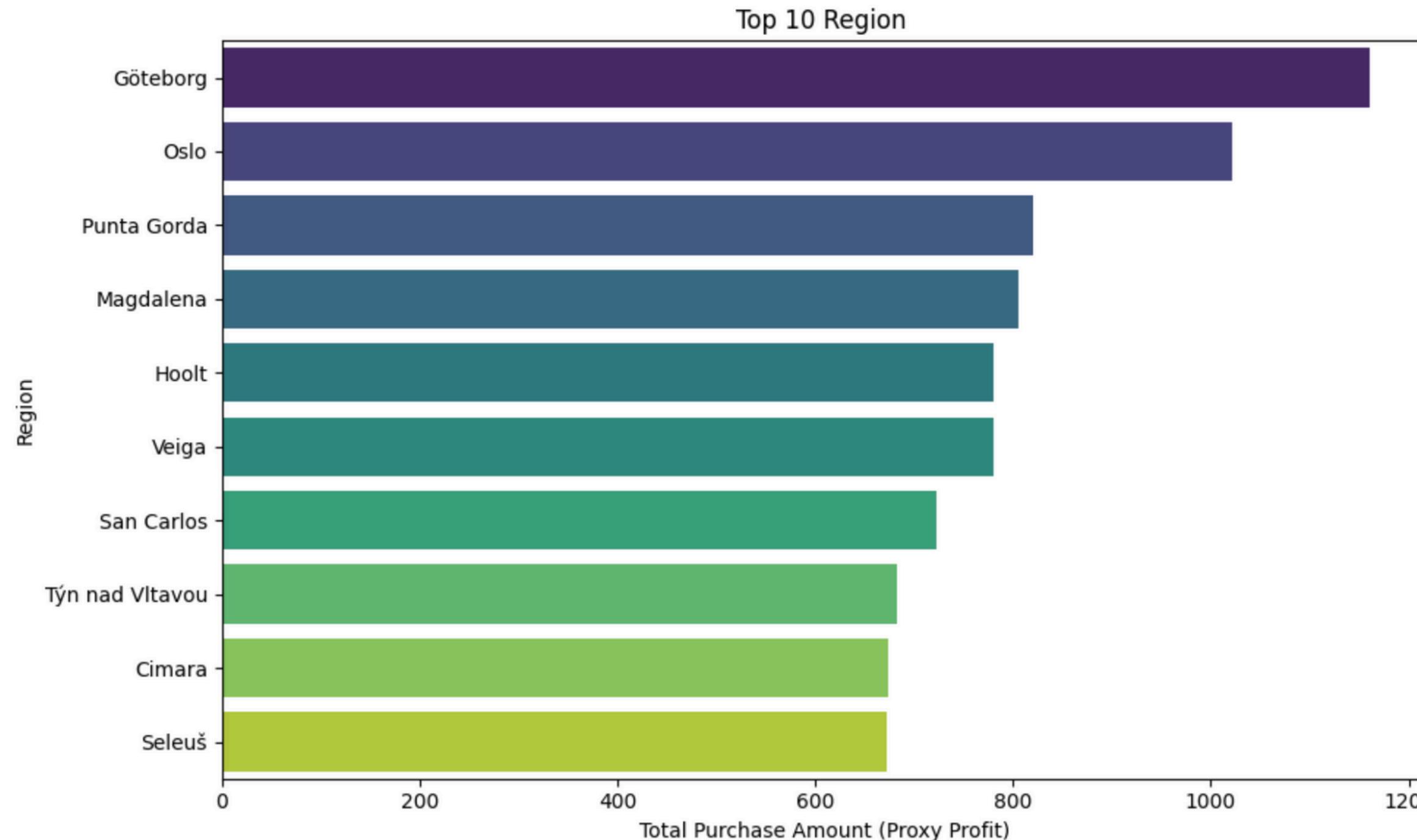
- Consistently the highest-performing channel
- Spike in September (38)
- Customers prefer a flexible
- Priority for omnichannel marketing



ONLINE

- Peak April and July (34–35)
- More fluctuation than the mixed channel
- Ideal for seasonal discount and targeted retargeting campaigns in active month

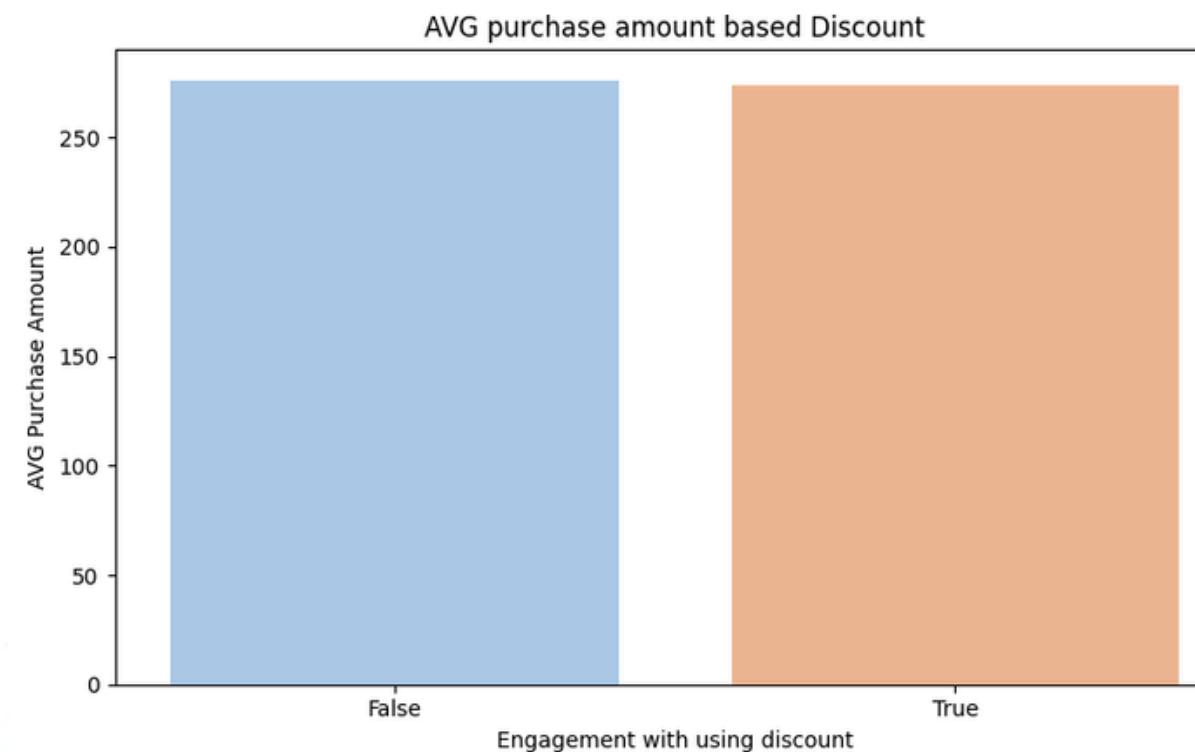
With how, when, and where customers actually shop? (Contd)



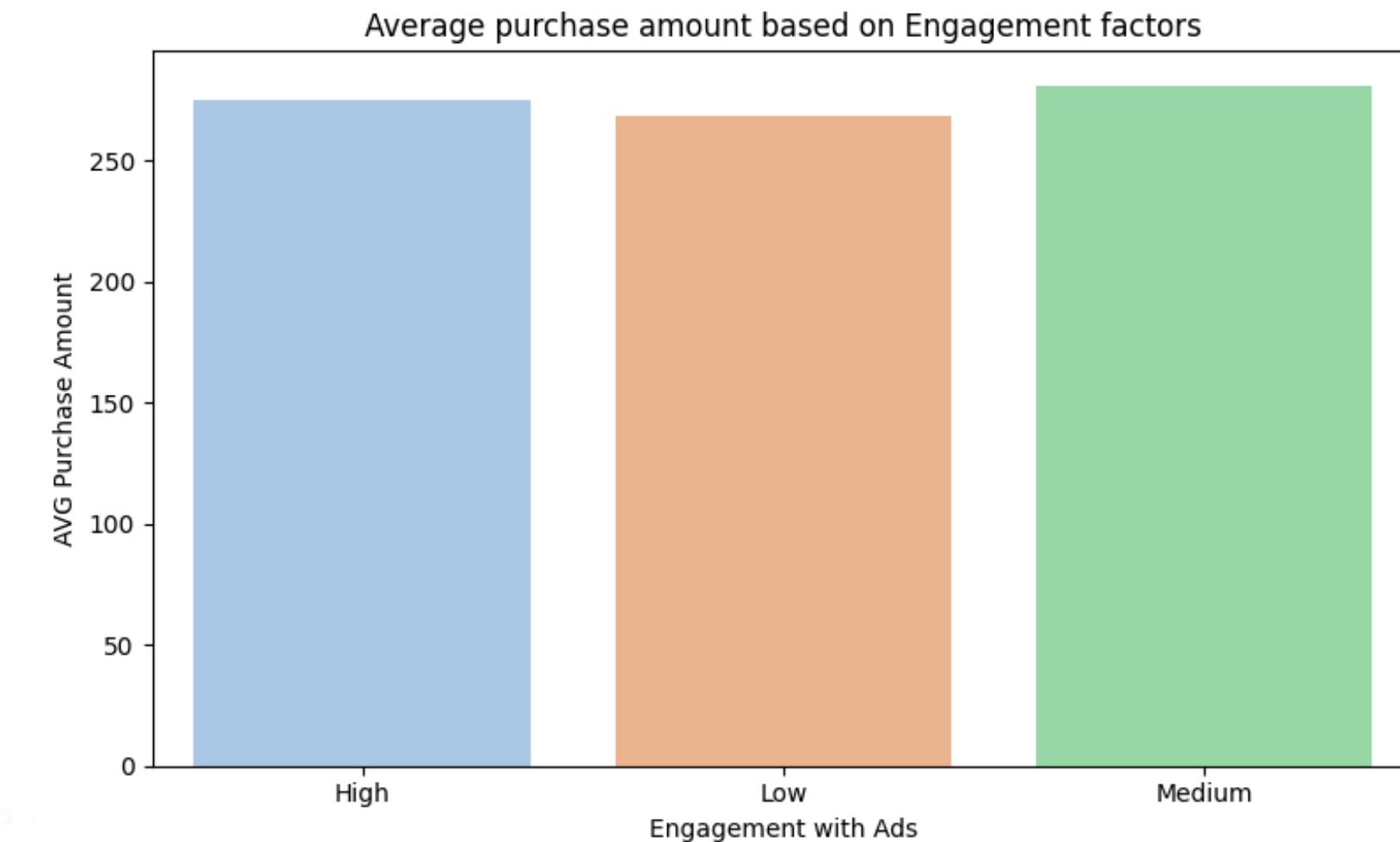
- Gotenborg become the most high performing branch

Which Strategy to Maximize Revenue?

Discount factors



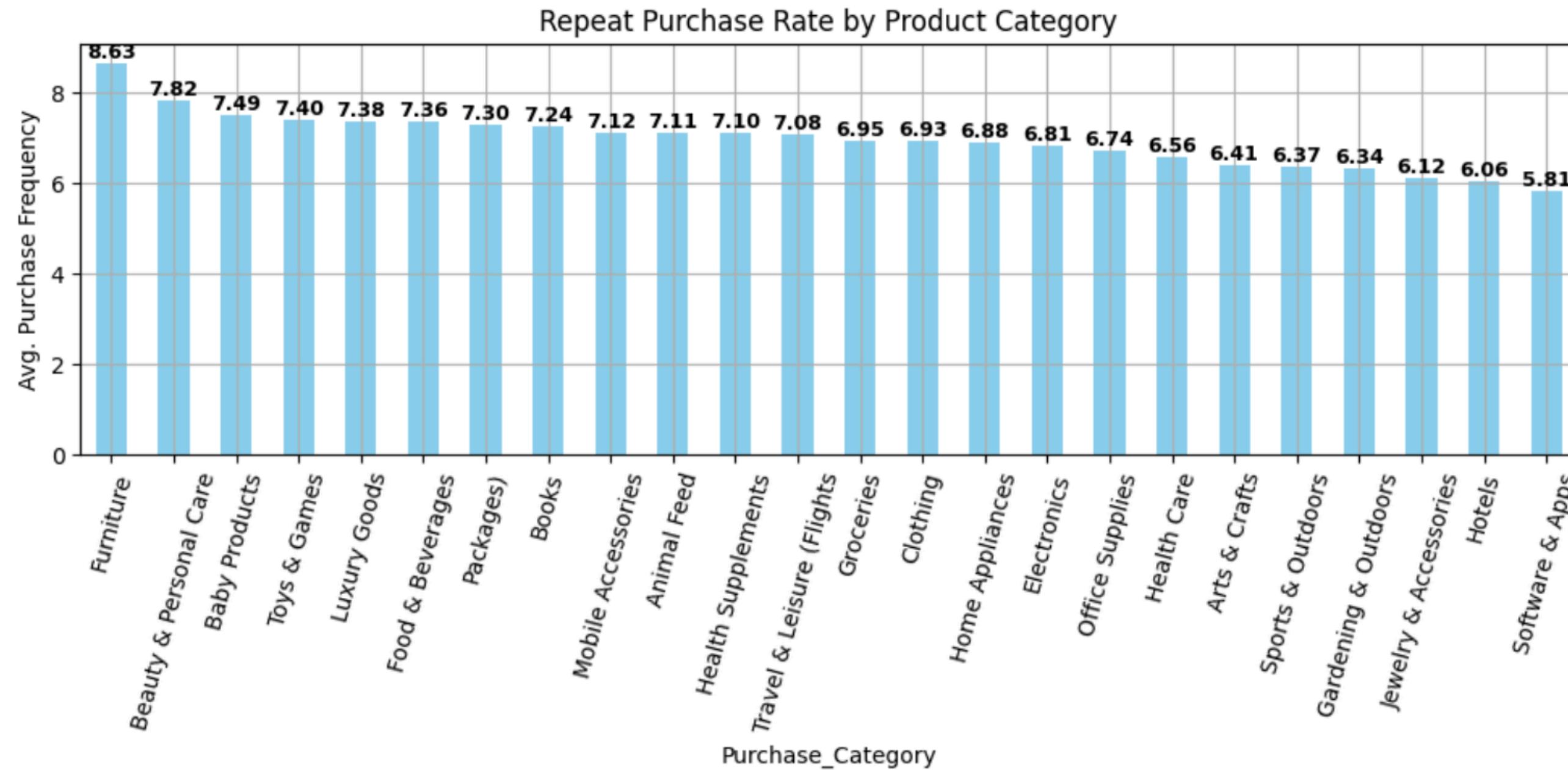
Ads Factors



- Discount Used (1930.2)
- Without Discount (1889.4)
- **Discount = Still Good Startegies**

- The of customers (52.6%) have a high level of engagement with the ad
- **But the other is still in medium to low engagement level**

Product high return



- Highest = Furniture
- Personal care and baby product = high demand
- low = software & apps

RECOMMENDATION

NAVIGATING THE MARKETING LANDSCAPE
THROUGH DATA INSIGHTS



Attract in right time, right channel



Online



In-store

| Task | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec |
|----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|
| AWARENESS CAMPAIGN | | | | | | | | | | | | |
| PRE-VALENTINE / SEASONAL | | | | | | | | | | | | |
| BIG SEASONAL DISCOUNT | | | | | | | | | | | | |
| FLASH SALE/CASHBACK | | | | | | | | | | | | |
| REMINDER & RETARGETING | | | | | | | | | | | | |
| LOYALTY + SOFT PUSH | | | | | | | | | | | | |
| MID YEAR DISCOUNT | | | | | | | | | | | | |
| PROMO INDEPENDENCE DAY/ BUNDLING | | | | | | | | | | | | |
| OMNICHANNEL BIG CAMPAIGN | | | | | | | | | | | | |
| LOYALTY FOLLOW-UP | | | | | | | | | | | | |
| BLACK FRIDAY EARLY EXPOSURE | | | | | | | | | | | | |
| HOLIDAY PROMO- NEW YEAR | | | | | | | | | | | | |

Strategic Customer Approach



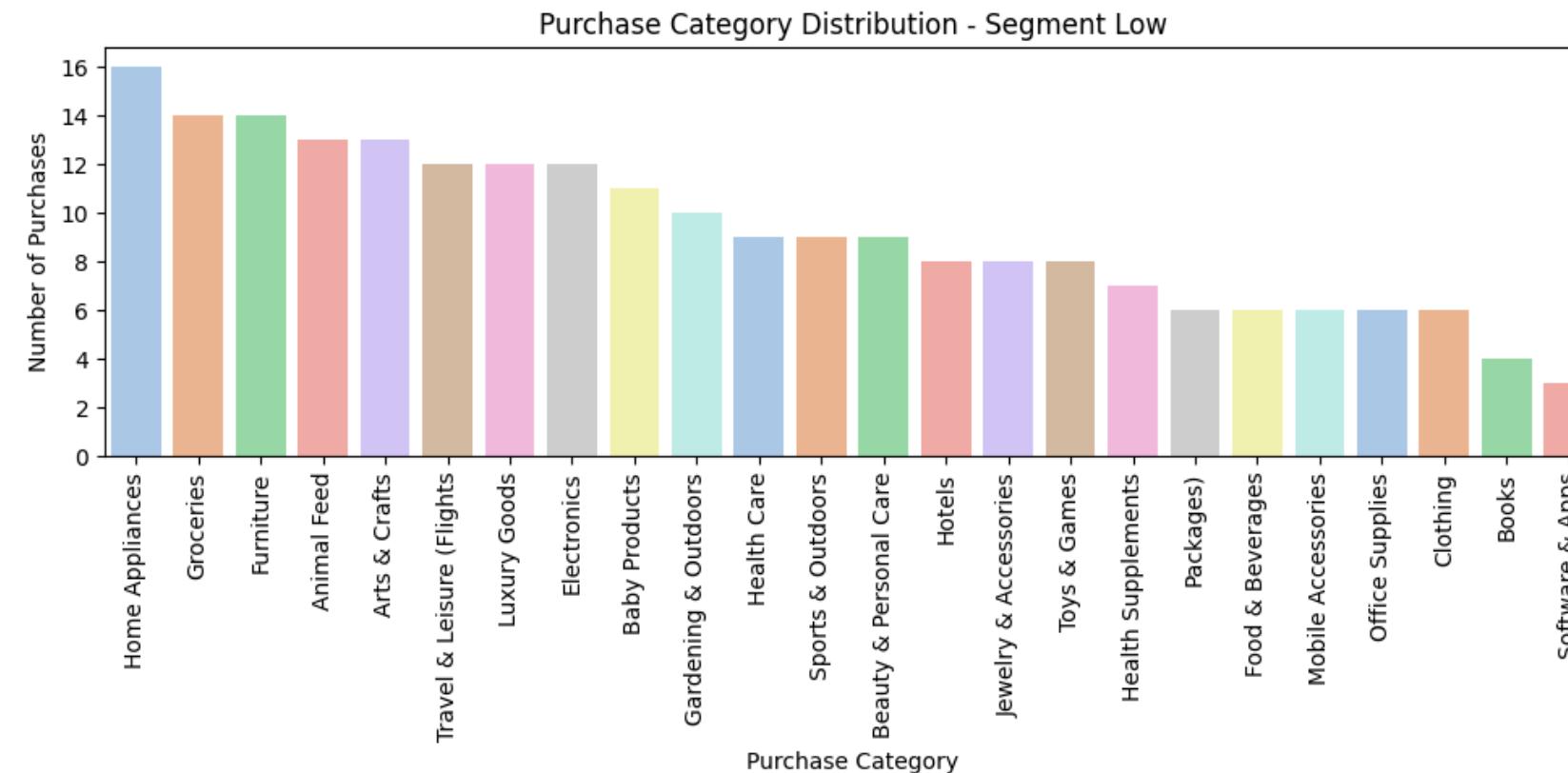
Build curiosity
IG/WA sneak peek, countdowns, product highlights

Drive intent to purchase
Retargeting ads, WA/email blast, limited-time alert

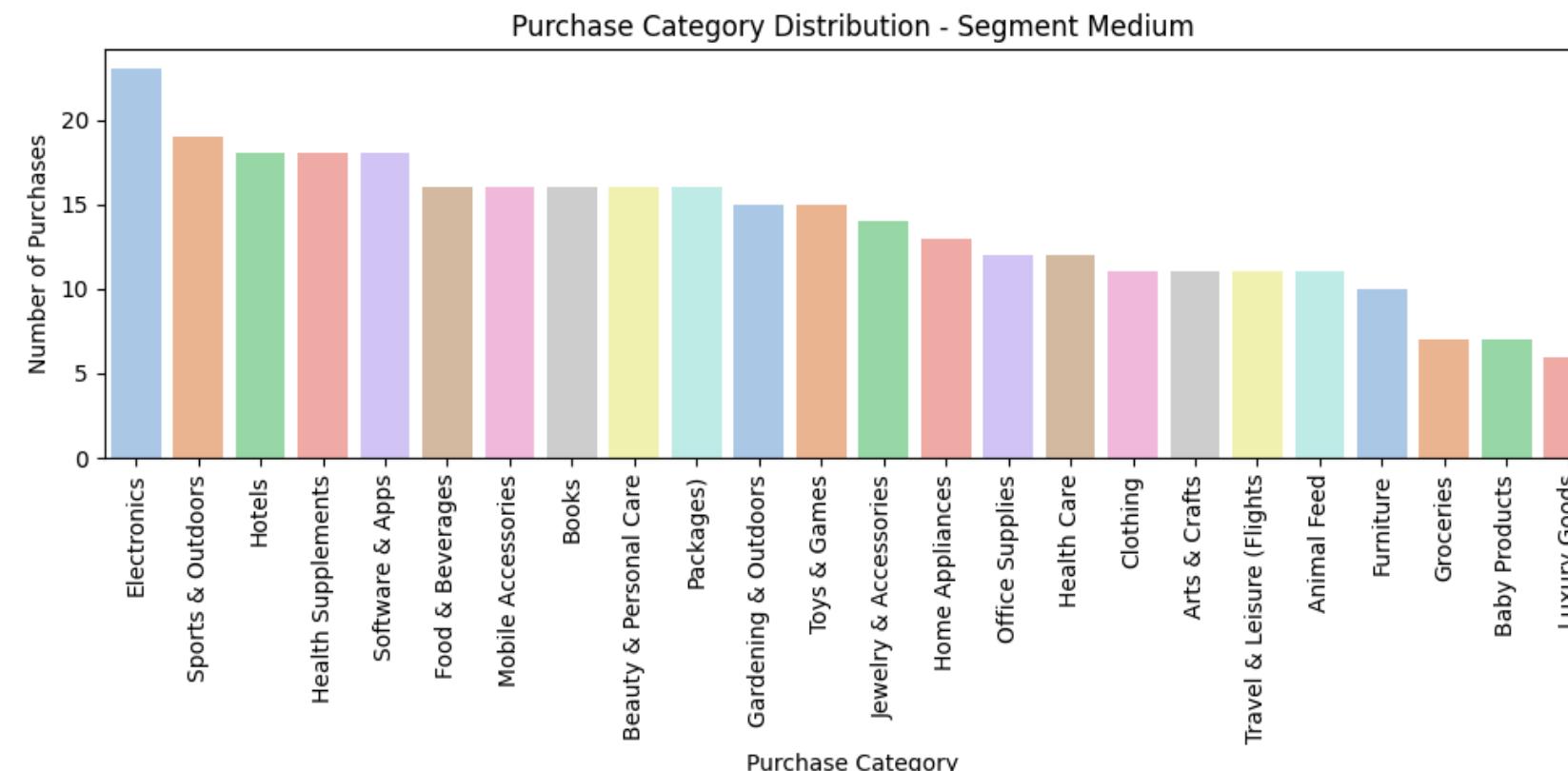
Trigger conversions
Flash sale, urgency (🕒 “Ends soon”), in-store signage

Retain & upsell
Thank-you message, voucher follow-up, loyalty invite

Customer Approach - Attract with preferable category

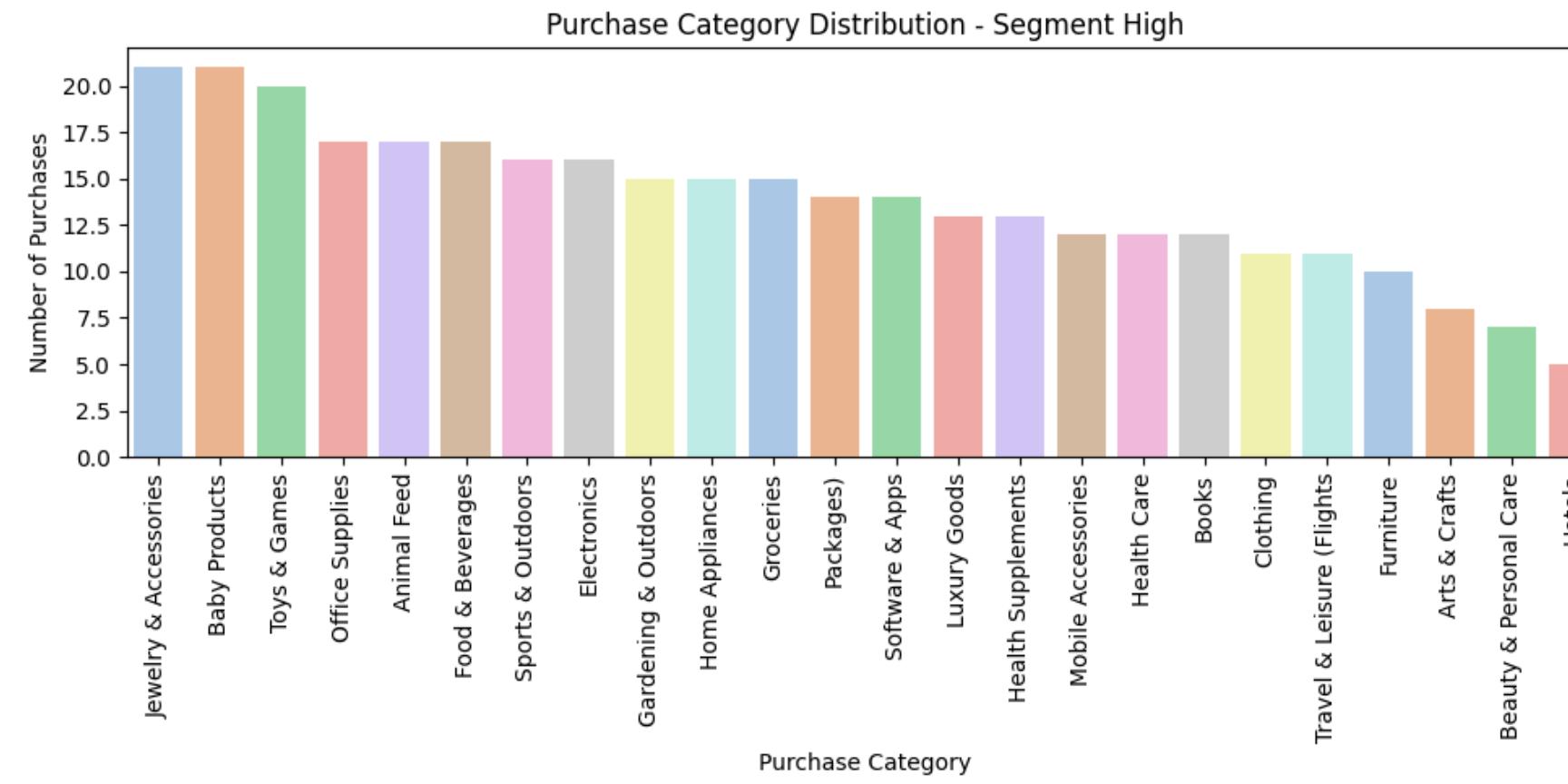


Choose Home appliances and Groceries to attract customer from low segment

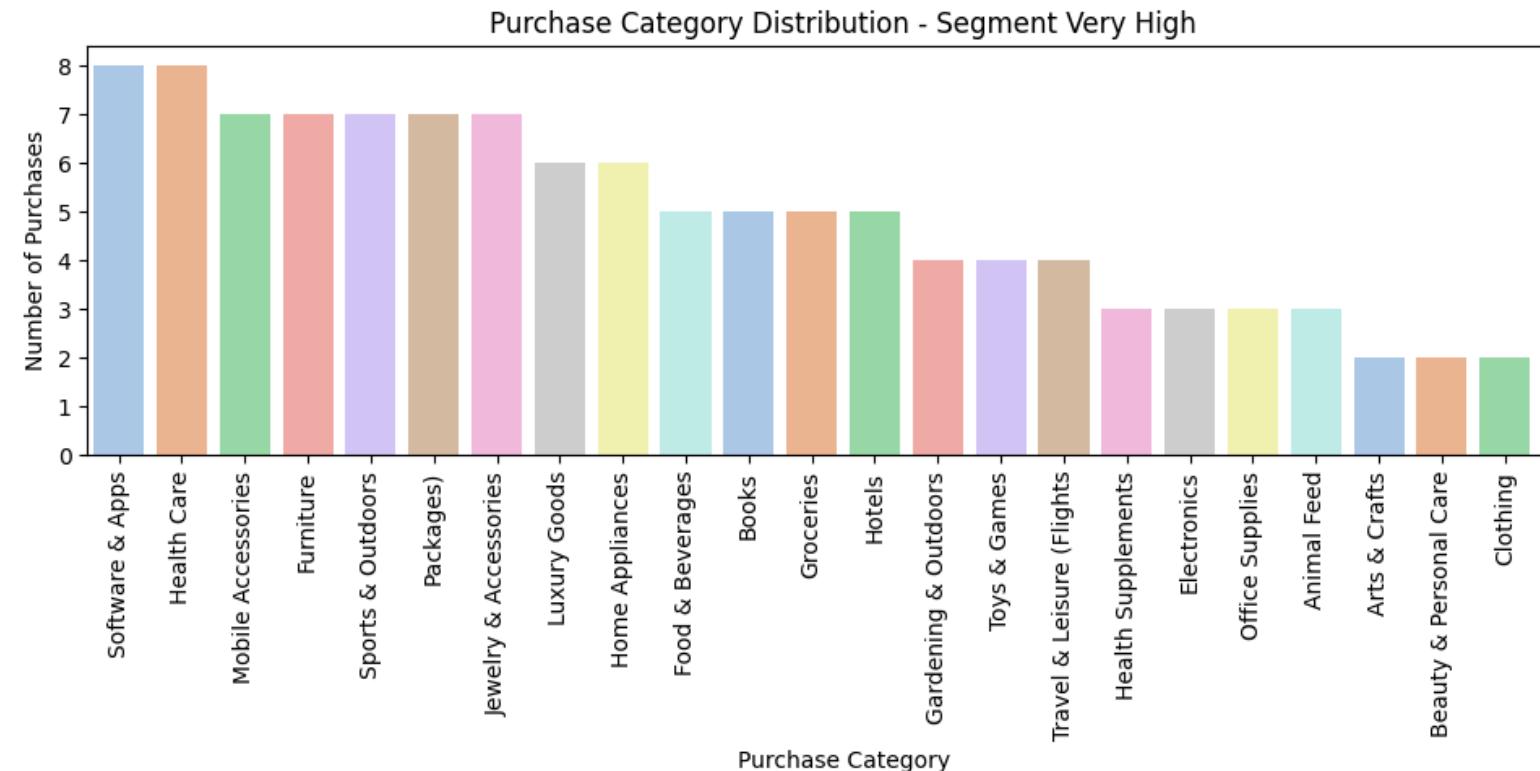


Choose Electronics and outdoor stuff to attract customer from moderate segment

Customer Approach - Attract with preferable category



Choose Home Jewellery or baby products to attract customer from high segments



Choose healthcare and Software or Apps to attract very high segment

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THANK YOU

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