

# **Case study : Analysis of DMART Products**

Exploring Product Diversity, Opportunities, and Recommendations

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***Roll No: 2021IMG-008***

# Introduction

## ➤ Case Study Overview: DMart Product Analysis

Examining product diversification, pricing, and opportunities for customer engagement in the retail sector.

## ➤ Objectives of the Study

- Evaluate DMart's product portfolio, pricing, and discount strategies.
- Identify areas for enhancement and optimization.
- Provide recommendations to improve customer satisfaction.

# DMart: Revolutionizing Retail

## ➤ **DMart: A Retail Powerhouse in India**

- Established in 2002.
- Unwavering commitment to quality products at competitive prices.
- Rapid expansion, reaching customers nationwide.
- Diverse product catalog spanning various categories.
- Solidified as a household name across the country.

## ➤ **Geographical Presence**

- From north to south and east to west.
- DMart's presence is felt nationwide.

## ➤ **Adaptation to Modern Consumer Needs**

- Venturing into the online retail sector as "DMart Ready."
- Strategically meeting the evolving needs of modern consumers.



# Dataset description

- **Source:** Curated from Kaggle.
- **Purpose:** Provides a detailed glimpse into the extensive array of DMart products.
- **Accessibility:** Publicly accessible and considered a reliable resource for our analysis.
- **Release Date:** Publicly released by DMart in August 2022.
- **Scope:** Offers a comprehensive view of the diverse range of products available at DMart, covering both physical stores and the online platform, DmartReady.

```
df.head()
```

✓ 0.0s

Python

	Name	Brand	Price	DiscountedPrice	Category	SubCategory	Quantity	Description	BreadCrumbs
0	Premia Badam (Almonds)	Premia	451.0	329.0	Grocery	Grocery/Dry Fruits	500 gm	India	Grocery > Grocery/Dry Fruits
1	Premia Badam (Almonds)	Premia	109.0	85.0	Grocery	Grocery/Dry Fruits	100 gm	India	Grocery > Grocery/Dry Fruits
2	Premia Badam (Almonds)	Premia	202.0	175.0	Grocery	Grocery/Dry Fruits	200 gm	India	Grocery > Grocery/Dry Fruits
3	Nutraj California Almonds (Badam)	Nutraj	599.0	349.0	Grocery	Dry Fruits	500 gm	USA	Grocery > Dry Fruits
4	Nutraj California Almonds (Badam)	Nutraj	1549.0	659.0	Grocery	Dry Fruits	1 kg	USA	Grocery > Dry Fruits

# Dataset info

- **Data Dimensions:** With 5189 rows and 9 columns, this dataset serves as a rich source of information.
- **Key Columns:** Notable columns include 'Name,' 'Brand,' 'Category,' 'Price,' 'Discounted Price,' 'Subcategory,' 'Quantity,' 'Description.'


```
df.info()
✓ 0.0s

<class 'pandas.core.frame.DataFrame'>
RangeIndex: 5189 entries, 0 to 5188
Data columns (total 9 columns):
#   Column              Non-Null Count  Dtype
---  -
0   Name                 5188 non-null   object
1   Brand                4789 non-null   object
2   Price                5188 non-null   float64
3   DiscountedPrice      5188 non-null   float64
4   Category             5186 non-null   object
5   SubCategory          5186 non-null   object
6   Quantity             5188 non-null   object
7   Description           5187 non-null   object
8   BreadCrumbs          5186 non-null   object
dtypes: float64(2), object(7)
memory usage: 365.0+ KB
```



# DMart's Product Insights

Through this section, Providing a comprehensive overview of DMart's product diversification, brand performance, pricing and discount strategies, and category distribution for an in-depth understanding.

- **Overview:** Gain an in-depth understanding of DMart's product diversification.
  - **Category Distribution:** Understand the distribution of products across categories.
  - **Brand Performance:** Identify prominent brands and assess their performance.
  - **Pricing and Discounts:** Analyze pricing and discounts across categories.
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# overview of DMart's Product

- **Total Products:** With over 4,300 unique products in its catalog, DMart offers an extensive range of options to cater to diverse customer needs.
- **Total Brands:** DMart collaborates with 823 unique brands, signifying a rich blend of products from various sources.
- **Total Categories:** DMart's product diversity extends across 29 distinct categories, ensuring a comprehensive shopping experience.

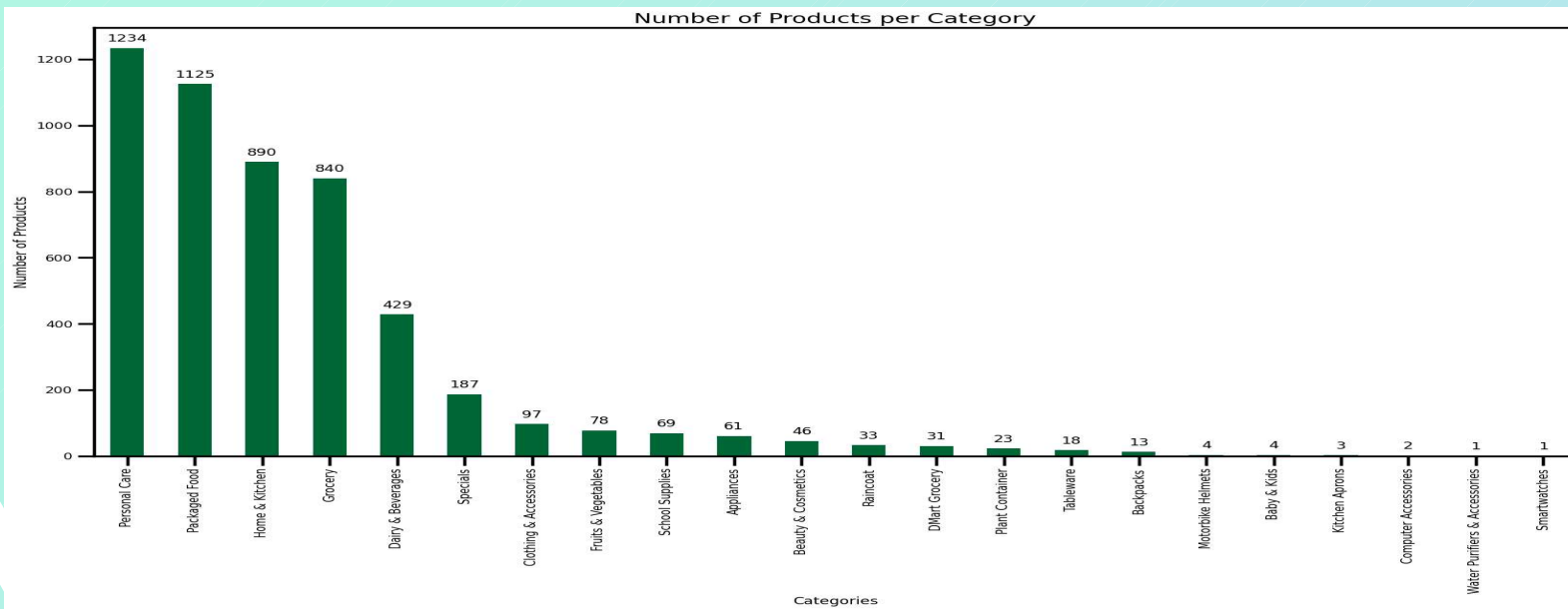
Number of unique products: 4360

Number of unique brands: 822

Number of unique categories: 29

# Category distribution

- **Category Insights:** 'Personal Care', 'Grocery', 'Dairy & Beverages', and 'Packaged Food' have the highest product counts.
- 'Smartwatches' and 'Computer Accessories' present opportunities for expansion.

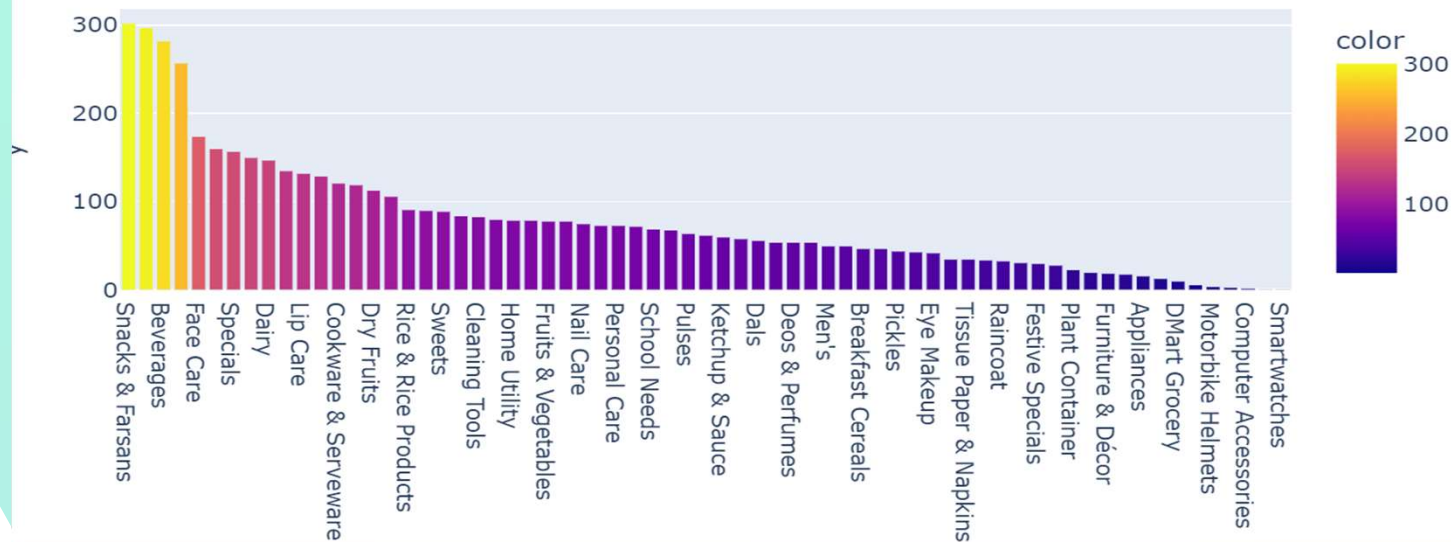




# Sub-Category distribution

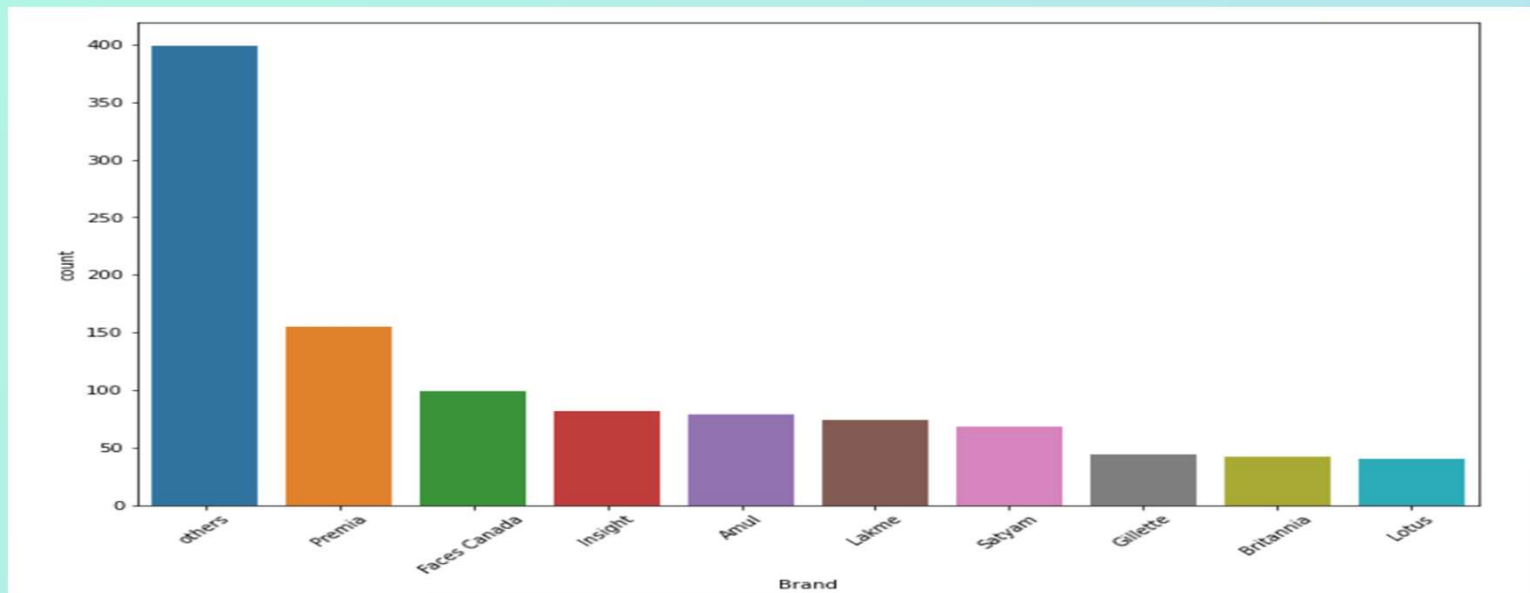
- 'Snacks' and 'Beverages' stand out with the highest product counts.
- 'Deos & Perfumes' and 'Appliances' present untapped opportunities.
- Potential to attract a broader customer base; exploration of expansion strategies recommended.

Number of Products in each Subcategory



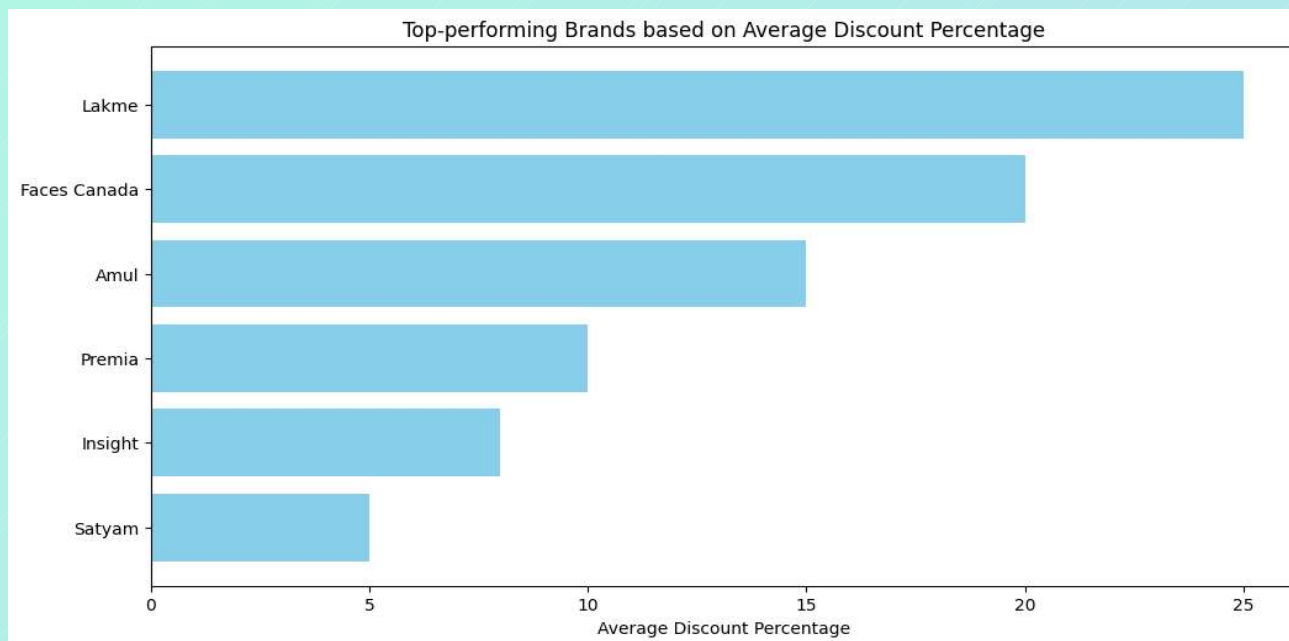
# Brand Analysis

- DMart collaborates with 823 unique brands.
- **Most Popular:**
- Premia leads with 155 listed products.
- Faces Canada follows with 99 products.
- Insight ranks third with 82 products.



# Brand performance

- **Top-performing Brands (Average Discount Percentage):** Lakme leads with an average discount of 25%.
- Faces Canada follows with a 20% average discount.
- Amul is among the top-performing brands with a 15% average discount.



# Key takeaways from brand analysis

- **Strategic Recommendation:** Identify top brands with popularity but a low number of products or unavailability.
- Advocate for an increase in the number of products for these brands.
- Capitalize on market demand and enhance brand representation in DMart's inventory.

Total products for	Dabur:	24
Total products for	Colgate:	36
Total products for	Britannia:	42
Total products for	HUL:	0
Total products for	Parle:	25
Total products for	Nestle:	15
Total products for	ITC:	9
Total products for	Amul:	79
Total products for	Patanjali:	15
Total products for	Marico:	0
Total products for	Godrej:	41
Total products for	Haldiram:	25
Total products for	Tata:	42

# Pricing and Discount Strategies

- **Average Price & Discount Percentage:** Average product price at DMart is approximately 236.
- DMart offers an average discount of 26% on its products.
- Competitive pricing and attractive discounts contribute to winning the loyalty of price-conscious shoppers.
- Continuous assessment of the financial impact of discounts is recommended.

```
df.describe()
```

✓ 0.0s

	Price	DiscountedPrice	DiscountPercent
count	5189.000000	5189.000000	5189.000000
mean	343.982540	236.636557	26.023126
std	600.986036	387.168767	15.203967
min	0.000000	0.000000	0.000000
25%	85.000000	64.000000	14.000000
50%	175.000000	125.000000	22.000000
75%	345.000000	249.000000	35.000000
max	10990.000000	7999.000000	98.000000

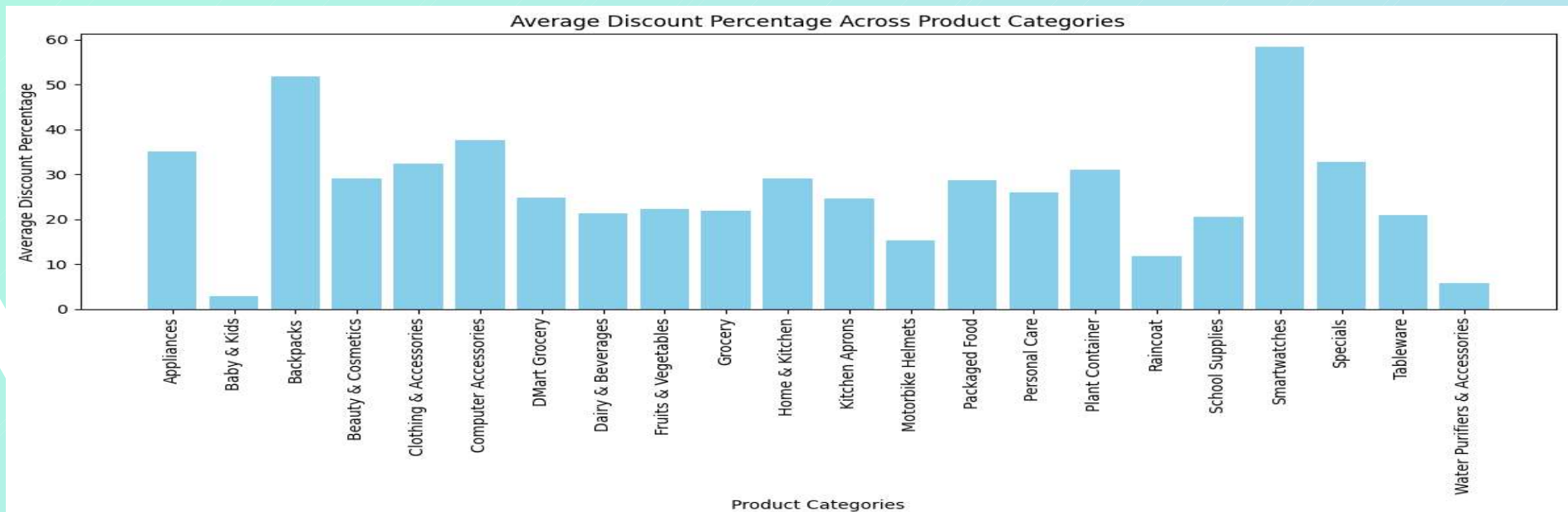
# Pricing and Discount Strategies

- **Discount Strategy:** DMart employs a strategic discounting approach with variations across categories.
- **Category Insights:** "Clothing & Accessories" features an above-average discount of 32%."Grocery" offers a higher-than-average discount of 21%.Tailoring discounts to specific categories enhances DMart's strategic pricing approach.

Category	
Smartwatches	58.000000
Backpacks	51.461538
Computer Accessories	37.500000
Appliances	34.672131
Specials	32.326203
Clothing & Accessories	32.123711
Plant Container	30.521739
Beauty & Cosmetics	28.891304
Home & Kitchen	28.819101
Packaged Food	28.369778
Personal Care	25.570502
DMart Grocery	24.483871
Kitchen Aprons	24.000000
Fruits & Vegetables	21.974359
Grocery	21.438095
Dairy & Beverages	21.046620
Tableware	20.500000
School Supplies	20.289855
Motorbike Helmets	14.750000
Raincoat	11.515152
Water Purifiers & Accessories	5.000000
Baby & Kids	2.750000

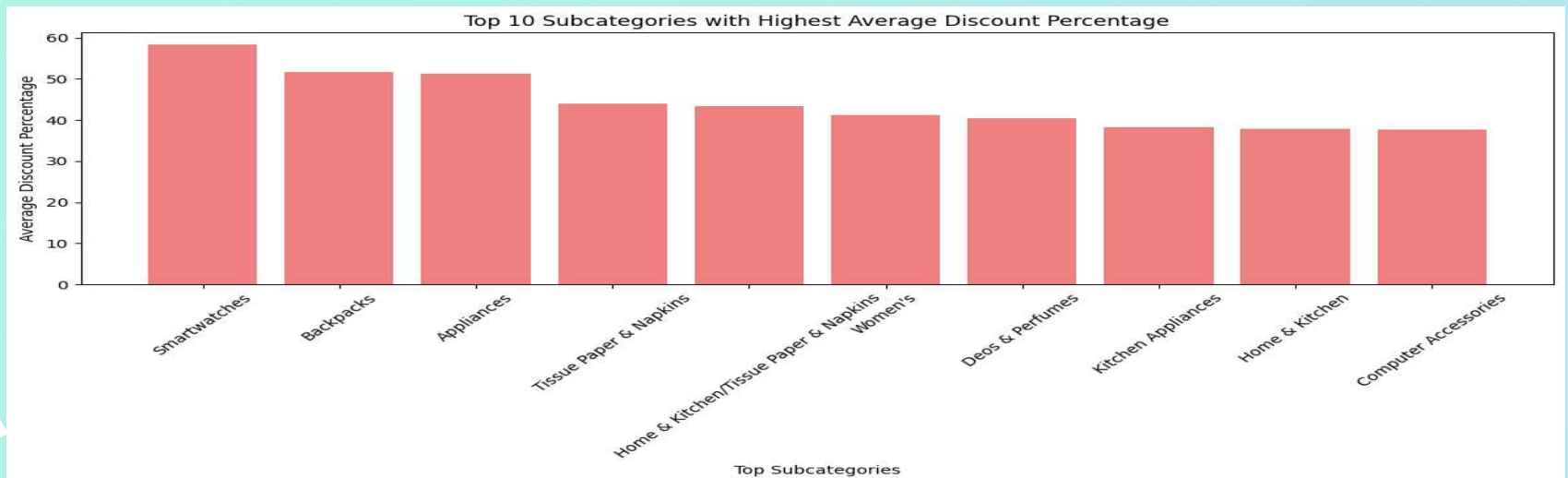
# Key takeaways from Pricing and Discount Strategies

- **Baby & Kids:** DMart's 'Baby & Kids' category offers a low 2.86% average discount; attracting cost-conscious parents and caregivers requires more appealing discounts and promotions.
- **Water Purifiers & Accessories:** In the 'Water Purifiers & Accessories' category, averaging a 5.71% discount, DMart can optimize by reevaluating pricing and offering more competitive prices for water-related solutions.
- **School Supplies:** Despite not having the lowest, 'School Supplies' maintain a 20.58% average discount.



# Key takeaways from Pricing and Discount

- **Category-Specific Discount Analysis: Deos & Perfumes:** Average discount of 40.34% raises questions about maintaining customer attraction and improving profitability.
- **Home & Kitchen:** 'Home & Kitchen' products, with a 43.40% average discount, suggest a need to review strategies for customer interest and profit optimization.
- **Kitchen Appliances:** 'Kitchen Appliances' with a 38.31% average discount prompts consideration for maintaining sales while enhancing profitability.





# Recommendations

## Profitability Recommendations

### ➤ Diversify Product Assortment:

- Explore new categories like 'Smartwatches' and 'Computer Accessories' to enrich product diversity and cater to a broader customer base.

### ➤ Focus on High-Performing Brands:

- Nurture relationships with top brands like Premia, Faces Canada, and Insight to enhance customer satisfaction.

### ➤ Enhance Discount Strategy:

- Fine-tune discounts in categories like 'Baby & Kids' to boost sales and competitiveness.

# Recommendations

- **Optimize Pricing for Subcategories:**
  - Optimize pricing in subcategories with high discounts, balancing customer appeal and profitability.
- **Balanced Category Discounts:**
  - Maintain balanced discounts across categories to uphold customer engagement.
- **Improve Discounting for Seasonal Items:**
  - Implement seasonal pricing strategies in categories like 'School Supplies' for maximum customer attraction.

# Resources

**1.Dataset Source: Kaggle-Dmart Products**

<https://www.kaggle.com/datasets/chinmayshanbhag/dmart-products>

**2. Official Dmart Site: Dmart India**

<https://www.dmartindia.com/>

**Thank You!**