



# **AMAZON SALES DATA INSIGHTS: A Data-Driven Exploration**

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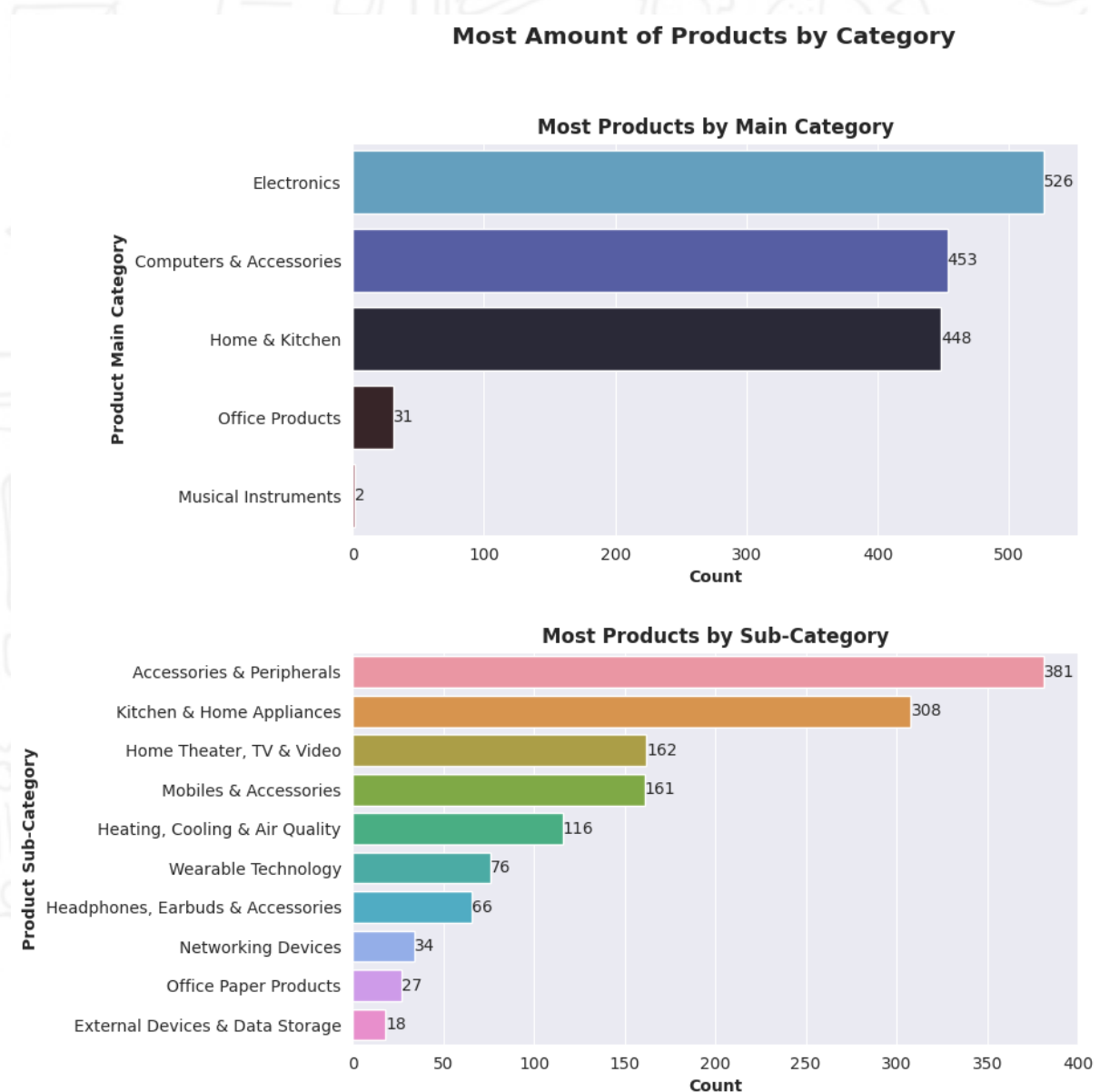
## Introduction

The study "Exploratory Data Analysis of Amazon Sales Data" is a thorough examination of the underlying patterns and insights generated from a rigorously cleaned and prepared dataset of Amazon sales. We hope to get a thorough grasp of the dataset, its intricacies, and potential implications for strategic decision-making through this analysis.

## Foremost Research Aims

- 1) Which product categories dominate our dataset in terms of the number of products?
- 2) Can we pinpoint the highest-priced products in our dataset once discounts are considered?
- 3) Can we identify the lowest-priced products in our dataset once discounts are considered?
- 4) Which products exhibit the largest price differences before and after applying discounts?
- 5) How satisfied are customers with the products, and is there a predominant rating category (e.g., high, average, low)?
- 6) What percentage of products falls into each rating category (e.g., 5-star, 4-star, etc.)?

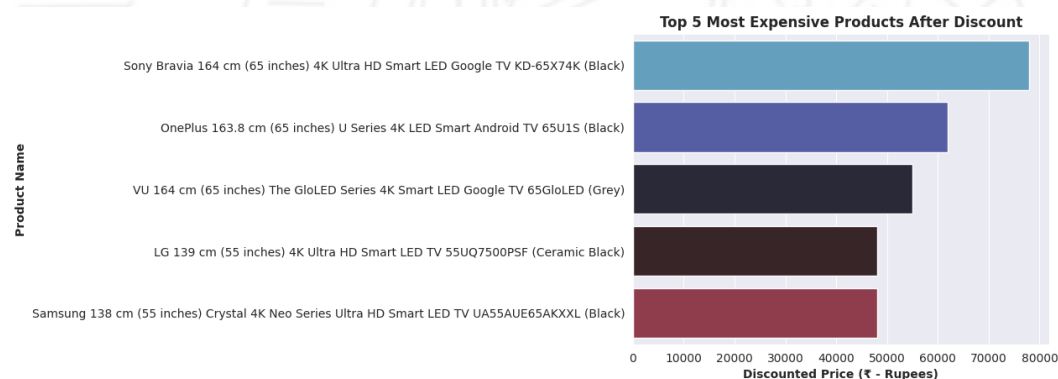
Which product categories dominate our dataset in terms of the number of products?



According to the above two graphs, the category with the most items is 'electronics,' with over 500 products, while the category with the fewest products is 'musical instruments,' with only two products.

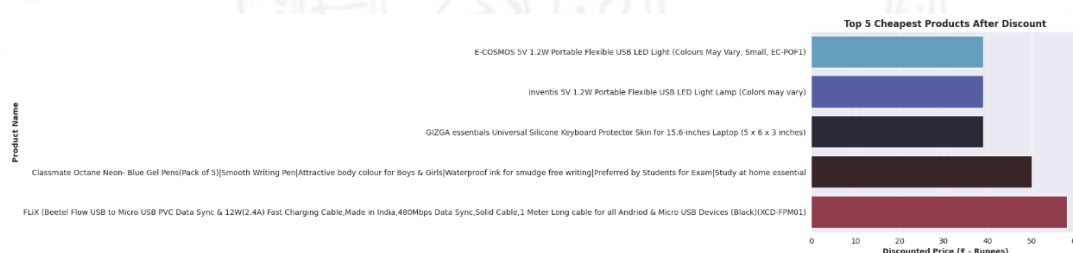
Accessories and peripherals include over 400 goods, whereas external devices and data storage have just 18 products.

Can we pinpoint the highest-priced products in our dataset once discounts are considered?



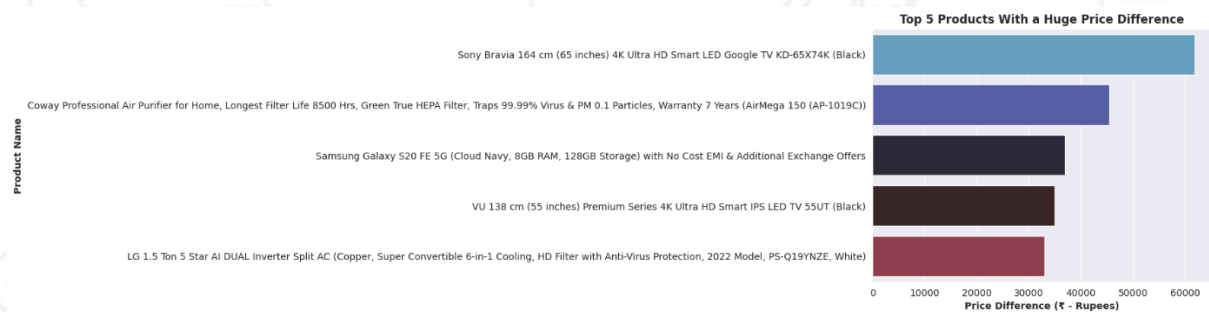
The graph analysis shows that electronics is the highest-priced product category, even after discounts. The top five most expensive products, all from the electronics category, exceed 40000 rupees. The Sony Bravia 65-inch 4K Ultra HD Smart TV stands out as the most expensive, surpassing 70000 rupees. This emphasizes the significance of consumer demand and market trends in the electronics sector.

Can we identify the lowest-priced products in our dataset once discounts are considered?



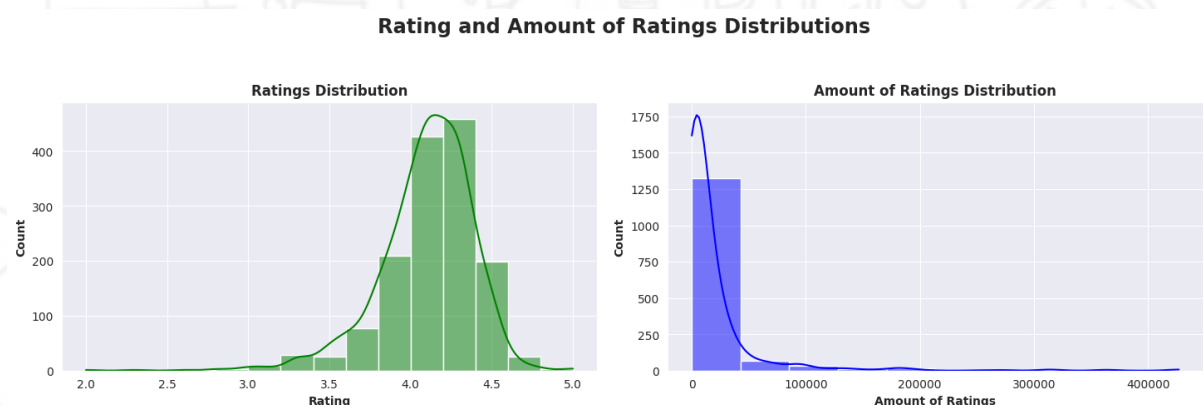
The graph provides insights into the top five most affordable items after applying discounts, which span across a diverse range of product categories. Notably, the least expensive item is a Portable Flexible LED light. This observation highlights the presence of budget-friendly options across various product categories, suggesting that consumers have access to affordable choices regardless of their specific needs or preferences.

Which products exhibit the largest price differences before and after applying discounts?



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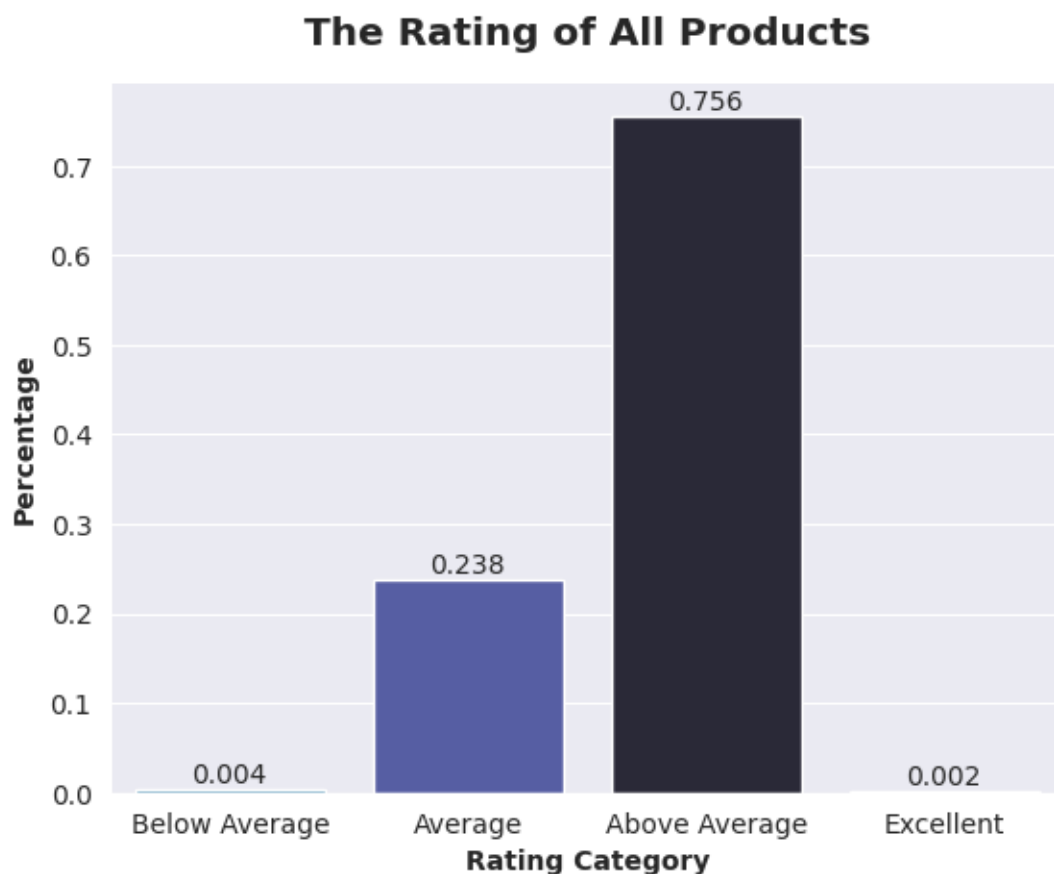
How satisfied are customers with the products, and is there a predominant rating category (e.g., high, average, low)?



The product ratings predominantly fall within the range of 4.0 to 4.375, with no products receiving a rating below 2.0. The distribution of ratings exhibits a slight leftward skew. It is common for products to have a substantial number of ratings, with the majority falling within the range of 0 to 5000. Interestingly, there are some products that have amassed over 40,000 ratings. This indicates a significant rightward skew in the distribution of ratings.



What percentage of products falls into each rating category (e.g., 5-star, 4-star, etc.)?



Based on the information provided, it seems that the majority of the products in the dataset have received ratings that are classified as "Above Average." There are only a few products that have been rated as "Below Average" or "Excellent." Interestingly, there are no products in the dataset that have been rated as "Poor." This suggests that the overall quality of the products in the dataset is relatively high, with most of them receiving ratings above average.

## Key Findings

- 1) **Dominant product category:** Electronics category has the most products, while musical instruments have the fewest.
- 2) **Highest-priced products:** Electronics category contains the most expensive products, with the Sony Bravia 65-inch 4K Ultra HD Smart TV being the priciest.
- 3) **Lowest-priced products:** Affordable options are available across various categories, with a Portable Flexible LED light being the least expensive.
- 4) **Price differences:** Electronics category exhibits significant price variations before and after discounts.
- 5) **Customer satisfaction:** Majority of products have ratings in the 4.0 to 4.375 range, indicating high satisfaction levels.
- 6) **Rating categories:** Most products are rated as "Above Average," with no products rated as "Poor."

## CONCLUSION

The exploratory data analysis of Amazon sales data has yielded valuable insights into product categories, pricing, and customer satisfaction. The findings highlight the dominance of the electronics category, significant price differences, and overall high customer satisfaction. These insights can inform strategic decision-making and provide a deeper understanding of consumer preferences within the Amazon sales dataset.