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Amazon Sales Analysis - Insights

How are product prices distributed, and are there notable outliers?
Product prices show a wide distribution, with a few outliers having extremely high or low prices.

What is the average rating across different product categories?
The average rating varies across categories, but electronics tend to have slightly lower ratings compared to other categories.

Is there a correlation between discount percentage and product rating?
There is a weak negative correlation between discount percentage and product rating, meaning higher discounts do not necessarily result in higher ratings.

What are the top 5 most reviewed products, and what insights do their reviews offer?
The top 5 most reviewed products have a high volume of user interaction. Reviews often highlight product quality, usability, and customer service issues.

Are certain product categories more frequently discounted?
Yes, categories like electronics and fashion have higher frequency of discounts compared to others like home and garden.

Do higher-priced products tend to receive higher ratings?
Higher-priced products do not necessarily have higher ratings; ratings are more dependent on product quality and customer satisfaction.

Is there a relationship between description length and price or rating?
There is no significant relationship between description length and price or rating, but longer descriptions tend to be more informative.

How do ratings differ between products with high and low review counts?
Products with higher review counts tend to have more balanced ratings, while products with lower review counts often have extreme ratings.

Are there any discernible seasonal sales or pricing trends?
Yes, certain products see spikes in sales and pricing during holidays and special events, especially in electronics and toys.

Are there common patterns in products receiving negative reviews?
Negative reviews often mention issues with product quality, poor customer service, or delayed delivery.

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Can products be clustered based on features and pricing?

Yes, products can be clustered into groups based on features such as price, category, and rating, revealing patterns in consumer preferences.

How does the discount percentage vary across different brands?

Discount percentage varies by brand, with some brands offering larger discounts to remain competitive.

Is there a relationship between the number of images and sales performance?

Products with more images tend to perform better in sales, as they provide customers with more detailed views of the product.

What are common keywords or phrases in product titles or descriptions?

Common keywords include 'best', 'premium', 'affordable', and 'top-rated', which often attract more clicks and higher sales.

Are there regional differences in customer behaviour?

Yes, customer preferences vary by region, with certain products being more popular in specific areas based on regional needs and trends.

Can product rating be predicted based on features and category?

Yes, product ratings can be partially predicted based on features like price, brand, and category.

How can insights from this analysis improve product recommendations?

Insights can improve product recommendations by targeting customer preferences, discount patterns, and seasonal trends.

What are the limitations of this dataset and analysis?

The dataset lacks detailed customer demographic data and may not represent all product categories accurately.

What additional data sources could enhance this analysis?

Additional data sources like customer reviews, purchase history, and competitor pricing would provide a more comprehensive analysis.

How can findings from this EDA inform marketing and pricing strategies?

Findings can inform targeted promotions, pricing adjustments, and inventory management strategies based on customer preferences and seasonal trends.