Amazon Product Review Analysis Report

# Company Overview

RetailTech Insights is a company specializing in e-commerce analytics. As a Junior Data Analyst, tasked with analyzing Amazon products and reviewing data to uncover actionable insights that can guide product development, marketing, and customer engagement.

# Dataset Description

The dataset consists of 1,465 rows and 16 columns, representing individual products listed on Amazon. The data includes:  
- Product metadata: Name, Category, Actual Price, Discounted Price  
- Calculated values: Discount Percentage, Rating, Review Count  
- User-generated content: Reviews, Review Titles, and Reviewers  
  
Source: 'Amazon case study.xlsx' file (raw dataset)

# Key Insights and Findings

## Average Discount Percentage by Product Category

Categories with the highest average discount include HomeImprovement (58%) and Computers%Accessories (53%).

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## Number of Products Listed per Category

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## Total Number of Reviews by Category

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## Products with the Highest Average Ratings

Several products have top ratings of 4.5 and above.

| **Rank** | **Product Name** | **Rating** | **Reviews** | **Category (CategoryA)** |
| --- | --- | --- | --- | --- |
| 1 | Syncwire LTG to USB Cable for Fast Charging Compatible with Phone 5/ 5C/ 5S/ 6/ 6S/ 7/8/ X/XR/XS Max/ 11/12/ 13 Series and Pad Air/Mini, Pod & Other Devices (1.1 Meter, White) | 5 | 5 | Accessories&Peripherals |
| 2 | Amazon Basics Wireless Mouse | 2.4 GHz Connection, 1600 DPI | Type - C Adapter | Upto 12 Months of Battery Life | Ambidextrous Design | Suitable for PC/Mac/Laptop | 5 | 23 | Accessories&Peripherals |
| 3 | Oratech Coffee Frother electric, milk frother electric, coffee beater, cappuccino maker, Coffee Foamer, Mocktail Mixer, Coffee Foam Maker, coffee whisker electric, Froth Maker, coffee stirrers electric, coffee frothers, Coffee Blender, (6 Month Warranty) (Multicolour) | 4.8 | 28 | Kitchen&HomeAppliances |
| 3 | Instant Pot Air Fryer, Vortex 2QT, Touch Control Panel, 360¬∞ EvenCrisp‚Ñ¢ Technology, Uses 95 % less Oil, 4-in-1 Appliance: Air Fry, Roast, Bake, Reheat (Vortex 1.97Litre, Black) | 4.8 | 3,964 | Kitchen&HomeAppliances |
| 4 | Oratech Coffee Frother electric, milk frother electric, coffee beater, cappuccino maker, Coffee Foamer, Mocktail Mixer, Coffee Foam Maker, coffee whisker electric, Froth Maker, coffee stirrers electric, coffee frothers, Coffee Blender, (6 Month Warranty) (Multicolour) | 4.8 | 28 | Kitchen&HomeAppliances |
| 5 | Swiffer Instant Electric Water Heater Faucet Tap Home-Kitchen Instantaneous Water Heater Tank less for Tap, LED Electric Head Water Heaters Tail Gallon Comfort(3000W) ((Pack of 1)) | 4.8 | 53,803 | Heating,Cooling&AirQuality |

## Average Actual Price vs Discounted Price

Products in categories with higher discounts tend to show significantly reduced prices.

## Products with the Highest Number of Reviews

Top Product: B07KSMBL2H with 426,973 reviews.

A table with numbers and letters

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## Products with ≥50% Discount

660 products offer discounts of 50% or more found using formula =COUNTIF(K2:K1349, ">=50%")

## Ratings Distribution

Most products cluster around ratings of 3.8 to 4.5.

## Revenue Potential by Category

High-selling categories like Electronics offer the highest potential revenue.

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Formula Used: = actual\_price \* rating\_count in 'amazon' worksheet

## Price Range Bucket Distribution

Most products fall under the greater than ₹500 range.

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Source: 'amazon' sheet, column 'Price Range Bucket'

## Relationship Between Discount and Rating

No strong linear correlation found. Most products still range between 3.8 and 4.5.

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## Products with Fewer than 1,000 Reviews

307 products have fewer than 1000 reviews, identified using formula =COUNTIF(N2:N1349, "<1000").  
Source: 'amazon' sheet, column 'rating\_count'

## Categories with Highest Discounts

Computers&Accessories have the highest discounts.

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## Top 5 Products by Combined Rating & Reviews

Top products based on combined rating and reviews are, using the formula, ‘rating + (rating\_count/1000)’

- Amazon Basics High-Speed HDMI Cable, 6 Feet (2-Pack),Black

- AmazonBasics Flexible Premium HDMI Cable (Black, 4K@60Hz, 18Gbps), 3-Foot

- Amazon Basics High-Speed HDMI Cable, 6 Feet - Supports Ethernet, 3D, 4K video,Black

- boAt Bassheads 100 in Ear Wired Earphones with Mic(Taffy Pink)

- boAt Bassheads 100 in Ear Wired Earphones with Mic(Furious Red)

# Dashboard Overview

A dashboard with visualizations to highlight insights for CategoryA, including:

|  |  |
| --- | --- |
| Component | Chart Type |
| Average Discount % | Bar Chart |
| Total Reviews | Bar Chart |
| Products per Category | Bar Chart |
| Actual vs Discounted Price | Clustered Column Chart |
| Product ratings distribution | Bar chart |
| Products with the highest discount | Bar chart |

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# Conclusion

Analysis revealed critical insights for Amazon sellers, particularly:  
- High-discount categories and their revenue impact  
- Review volume concentration  
- Pricing strategies across categories  
- Key products to prioritize for marketing  
  
This data can drive smarter pricing, promotion, and inventory strategies on e-commerce platforms.