



Information from Data Conclusions

[case study on how amazon sellers utilize data]

1. - Introduction

1.1. - Research Topic

1.1.1. - Amazon

The Amazon Marketplace is an e-commerce platform allowing third-party sellers to list and sell products through Amazon's website. This expands product options for consumers while giving sellers access to Amazon's global customer base and fulfillment services.

1.1.2. - Customer Satisfaction

Customer satisfaction is central to Amazon's ethos, anchored by its "Earth's most customer-centric company" ambition. They extensively analyze reviews, ratings, and purchase patterns to pinpoint strengths and address pain points. Amazon refines recommendations, site features, and user experiences based on this data

1.2. - Table of Contents

1. - Introduction

1.1. - Research Topic

1.2. - Table of Contents

3. Extracted Insights

3.1. - Negative Reviews are Helpful

3.2. - Factors Affecting Reviews

2. - Raw Data

2.1. - Where to find data?

2.2. - How is it presented?

4. Action Items

5. Suggestions

3. Published Information

3.1. - Total Reviews by Rating

3.2. - Helpful Reviews by Rating

3.3. - Average Rating over Time

2. - Raw Data

2.1. - Where to find data?

Most data can often be found on the internet from a multitude of different sources.

2.1.1. - Public Datasets

Stanford SNAP: <http://jmcauley.ucsd.edu/data/amazon/>

AWS Public Datasets: <https://s3.amazonaws.com/>

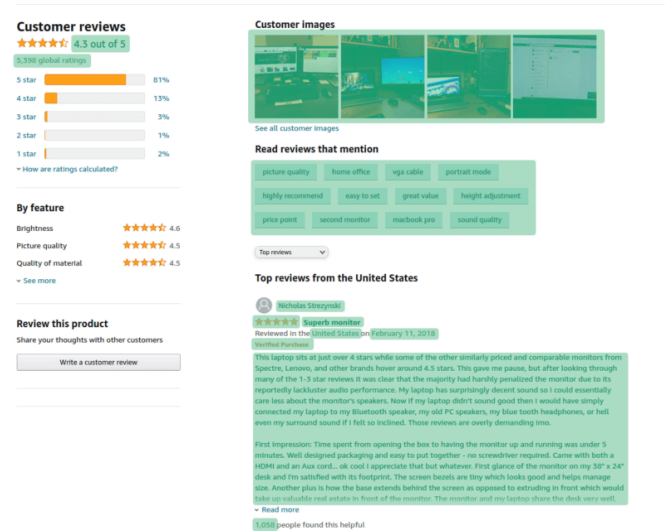
Kaggle Datasets: <https://www.kaggle.com/>

2.1.2. - Private Datasets

There is some data that is only accessible to company employees such as profits, location data, and banking information.

2.1.3. - Web Scraping

Direct from Source:
<https://www.amazon.com/>



2.1.4. - Increase in Data over Time

Year	#Review	#User	#Item	#R_Token	#M_Token	#Domain	Timespan
2013	34.69M	6.64M	2.44M	5.91B	—	28	Jun'96 - Mar'13
2014	82.83M	21.13M	9.86M	9.16B	4.14B	24	May'96 - Jul'14
2018	233.10M	43.53M	15.17M	15.73B	7.99B	29	May'96 - Oct'18
2023	571.54M	54.51M	48.19M	30.14B	30.78B	33	May'96 - Sep'23

2.2. - How is it presented?

2.2.1. - JSON FILES

The data received is structured using a JavaScript Object Notation used for easy reading. The specific values can be extracted from these files that are downloadable from the sources above.

```
.....
{
  "main_category": "All Beauty",
  "title": "Lurrose 180Pcs Full Cover Fake Toenails Artificial Transparent Nail Tips Nail Art for DIY",
  "average_rating": 3.7,
  "rating_number": 35,
  "features": [
    "The false toenails are durable with perfect length. You have the option to wear them long or clip them short, easy to trim and file them to in any length and shape you like.",
    "ABS is kind of green environmental material, and makes the nails durable, breathable, light even no pressure on your own nails.",
    "Fit well to your natural toenails. Non toxic, no smell, no harm to your health.",
    "Wonderful as gift for girlfriend, family and friends.",
    "The easiest and most efficient way to do your toenail tips for manicures or nail art designs. It's fashion, creative, a useful accessory brighten up your look, also as a gift."
  ],
  "description": [
    "Description",
    "The false toenails are durable with perfect length. You have the option to wear them long or clip them short, easy to trim and file them to in any length and shape you like. Plus, ABS is kind of green environmental material, and makes the nails durable, breathable, light even no pressure on your own toenails. Fit well to your natural toenails. Non toxic, no smell, no harm to your health.",
    "Feature",
    "Color: As Shown.- Material: ABS.- Size: 14.3 x 7.2 x 1cm.",
    "Package Including",
    "180 x Pieces fake toenails"
  ],
  "price": 6.99,
  "images": [
    {
      "hi_res": "https://m.media-amazon.com/images/I/41a15j7Q2bL._SL1085_.jpg",
      "thumb": "https://m.media-amazon.com/images/I/31d1Gd7H5L._SL540_.jpg",
      "large": "https://m.media-amazon.com/images/I/31d1Gd7H5L.jpg",
      "variant": "MAIN"
    }
  ],
}
```

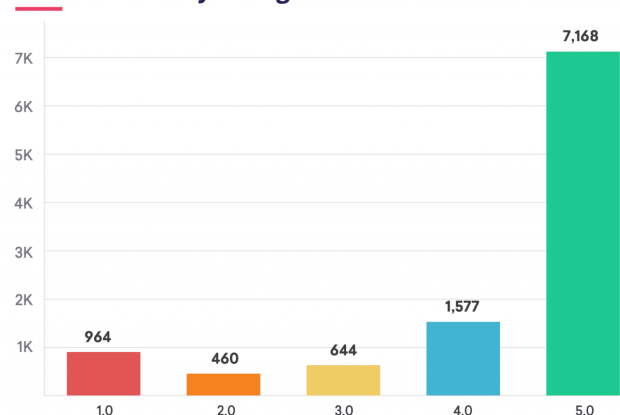
3. - Published Information

Data is the raw material for conveying information through graphs: by plotting numbers and categories as visual elements, patterns and insights emerge that might otherwise remain hidden. The data below is taken from the reviews of external monitors from brands like Dell, HP, and LG from US and UK amazon webstores. Source: [link](#)

3.1. - Total Reviews by Rating

Here we can see how reviews are distributed across the 5 stars using the data collected from all reviews. By visualizing it on a chart, we can see the ratios at which customers have voted for the products.

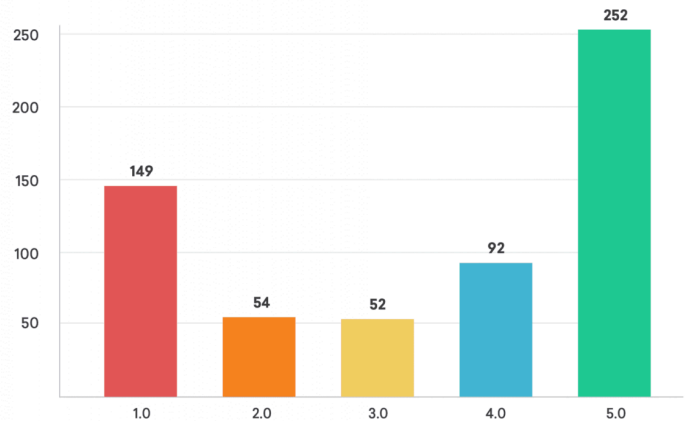
Total reviews by rating



3.2. - Helpful Reviews by Ratings

Here we can see how helpful the ratings are from each star category. This is done by potential buyers by “liking” the rating given by customers that are reviewing the product.

Helpful reviews by ratings

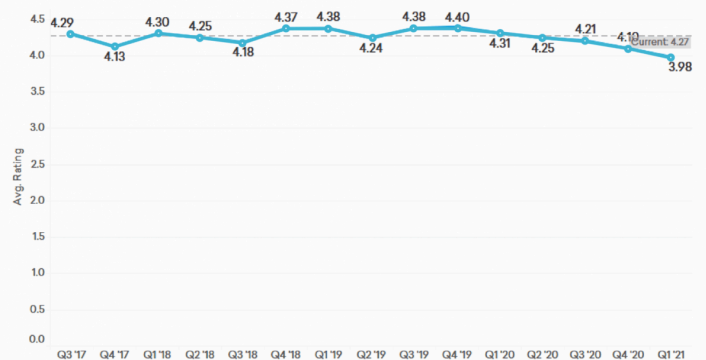


3.3. - Average Rating over Time

Here we can see how the average rating of the products change over time in this external display product category.

The data collected started from Q3 of 2017 and ends in Q1 of 2021.

Average rating over time

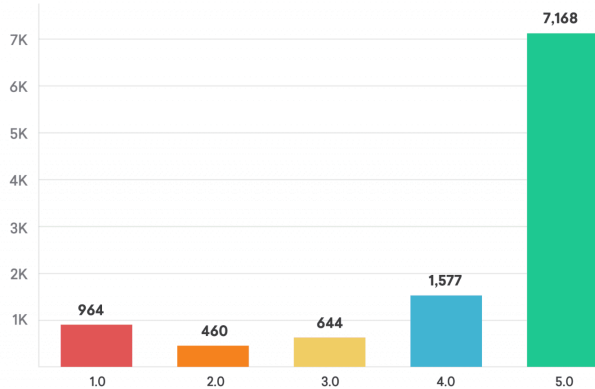


4. - Extracted Insights

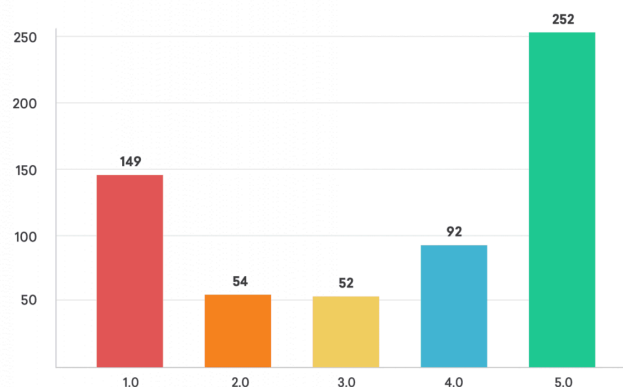
4.1. - Negative Reviews are More Helpful to Customers

Comparing the two graphs of “total reviews by rating” and “helpful reviews by ratings” we can see how potential customers valued each rating on the 5 star scale. Visually comparing these two charts, it is evident that shoppers find negative reviews more helpful than positive ones.

Total reviews by rating

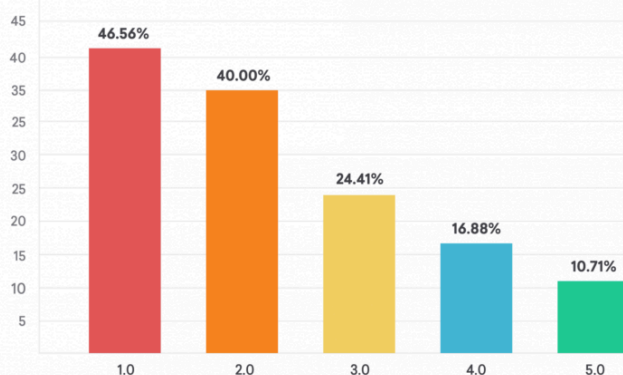


Helpful reviews by ratings



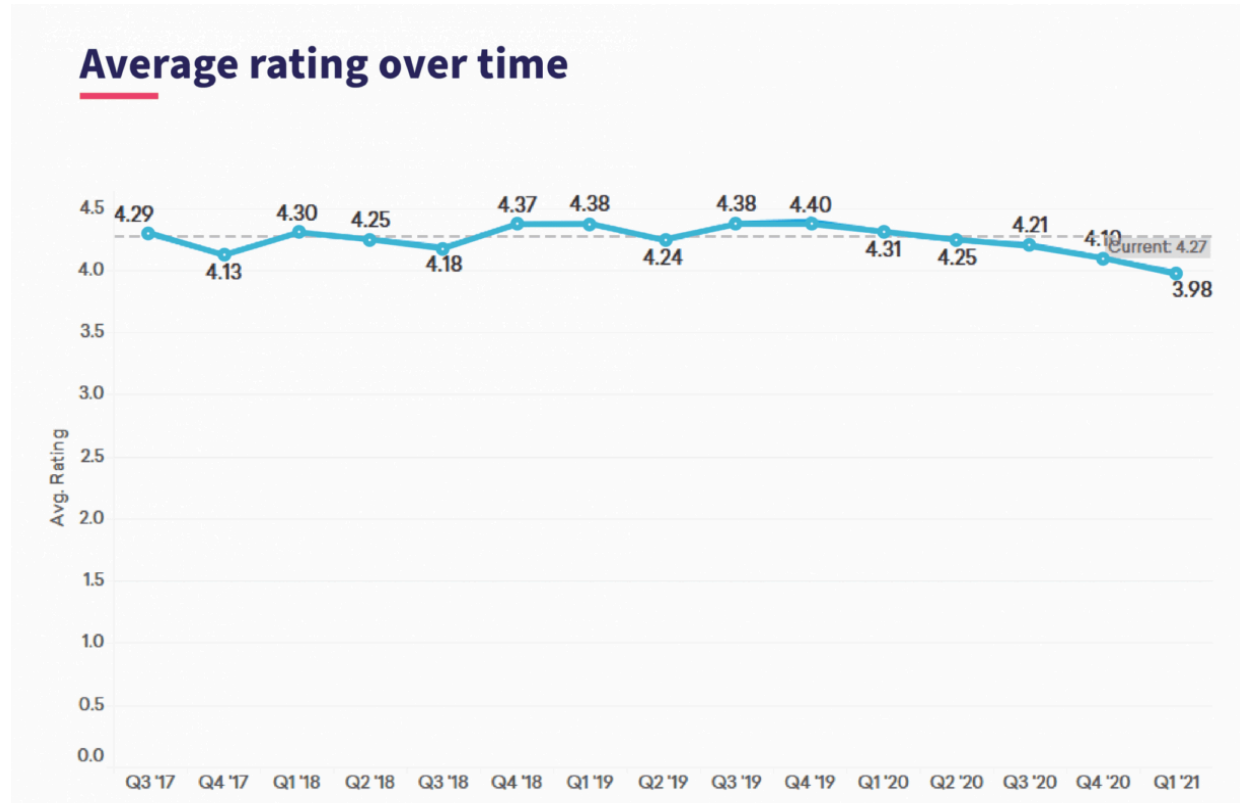
To validate our extracted insight. In the chart below, derived from the two above, we can see that the percentage of helpful reviews are higher when the rating is lower on the scale of 1 to 5. Calculated as number of reviews marked helpful * 100 / total reviews for that rating.

Helpful reviews percentage



4.2. - Current Ratings May Affect Future Ratings

In the chart below, we can see the average rating of the product has dropped over time. This could be due to the compounding increase in negative ratings or from newer technologies being introduced that depreciates the current value of the product.



5. - Action Items

Using the data collected it was discovered that customers find negative reviews to be more helpful - impacting the potential buyer's decision to get the product. And so, it is in the best interest for sellers to quickly act on the feedback given by these buyers having a negative experience with the product.

If the feedback from the negative reviews have been fixed, sellers should put a note in the review that the issue has been resolved to reduce chances that other customers might miss out on a potential purchase.

6. - Suggestions

If action has been taken to fix the issues highlighted by dissatisfied customers and that fix has been conveyed to potential buyers, the data should be filtered to reflect that for us to get better insights from charts, diagrams, or tables. If the seller wants to gain better insights, they could create a map of all the functionalities and pain points that their competitions have - then visualize it by size.

