



Sentiment Analysis of Amazon Customer Reviews

Business Intelligence Project (FA-II) - Amazon
Fine Food Reviews

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Problem Statement

E-commerce platforms face issues of irrelevant search results, poor recommendations, and negative customer experiences which lead to cart abandonment and reduced sales.


Objective

- Use text mining on customer reviews
- Classify sentiment
(Positive/Neutral/Negative)
- Extract common issues and provide BI insights


Web Mining

- We Scraped data from amazon website using React and Stored it in the CSV File
- The data Included the product info and the reviews associated with it
- The code is on github -
<https://github.com/Aaditesh2307/Amazon-Reviews-Scraper.git>

Web Mining Screenshots




Deliver to Aaditesh
Pune 411007

All ▾ Cabbage 


EN ▾

Hello, Aaditesh
Account & Lists ▾

Returns
& Orders

4 Cart

≡ All



Fresh ▾

MX Player

Sell

Gift Cards

Amazon Pay

Buy Again

AmazonBasics

Today's Deals

Kindle eBooks

Gift Ideas

1-48 of 441 results for "Cabbage"

Sort by: Featured ▾

Delivery

☐ All Prime

Delivery Day

☐ Get It Today

☐ Get It by Tomorrow

Customer Reviews

★★★★★ & Up

Price

₹10 – ₹380+

Go

Brands

☐ Fresh

Food Preference

Vegetarian


Prime Now Stores


☐ Amazon Fresh

Discount


Results


Check each product page for other buying options.




Fresh Cabbage, 1 Pc (450g-750g)

50K+ bought in past month
₹27 (₹6/100 g)
Up to 5% back with Amazon Pay L...
fresh FREE delivery starting from
Today 8 pm - 10 pm on orders over
₹249


Add to cart



Fresh Organic Cabbage, 1 Pc

2K+ bought in past month
₹31 (₹31/count) M.R.P: ₹35 (11% off)
Up to 5% back with Amazon Pay L...
fresh FREE delivery starting from
Today 8 pm - 10 pm on orders over
₹249

Add to cart




Naturally Grown Cabbage, 1 Pc

300+ bought in past month
₹29 (₹29/count) M.R.P: ₹39 (26% off)
Up to 5% back with Amazon Pay L...
fresh FREE delivery starting from
Today 8 pm - 10 pm on orders over
₹249


Add to cart


Subtotal
₹4,637.90

Go to Cart





Limited time
₹850.00
✓prime

1 +




₹495.00
✓prime

1 +




₹699.00
✓prime

Amazon Review Analyzer

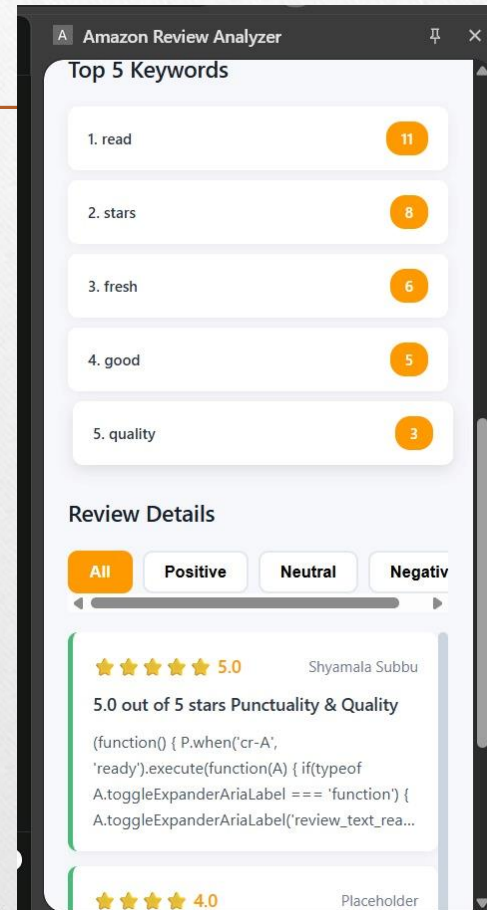
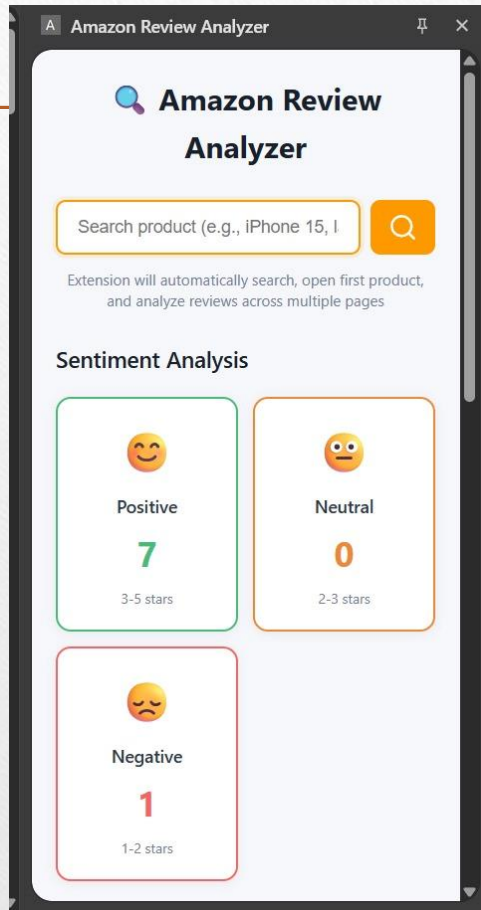
Search product (e.g., iPhone 15, lap) 

Stop Scraping

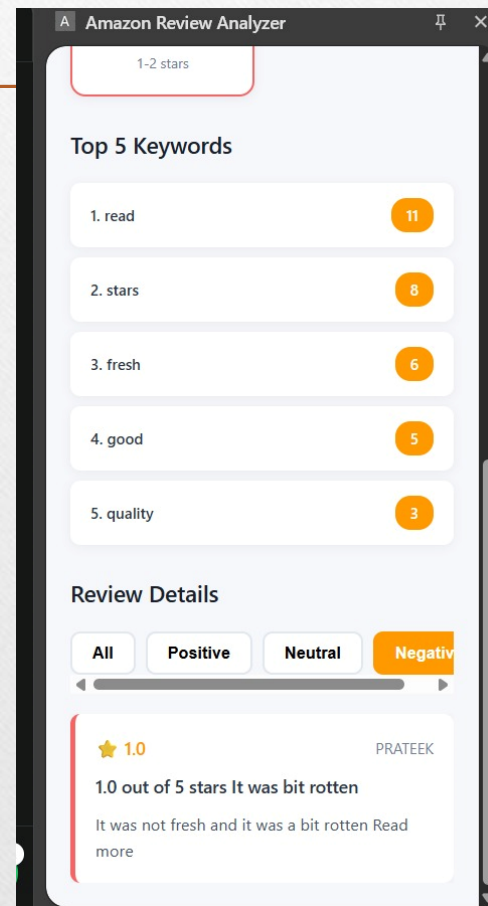
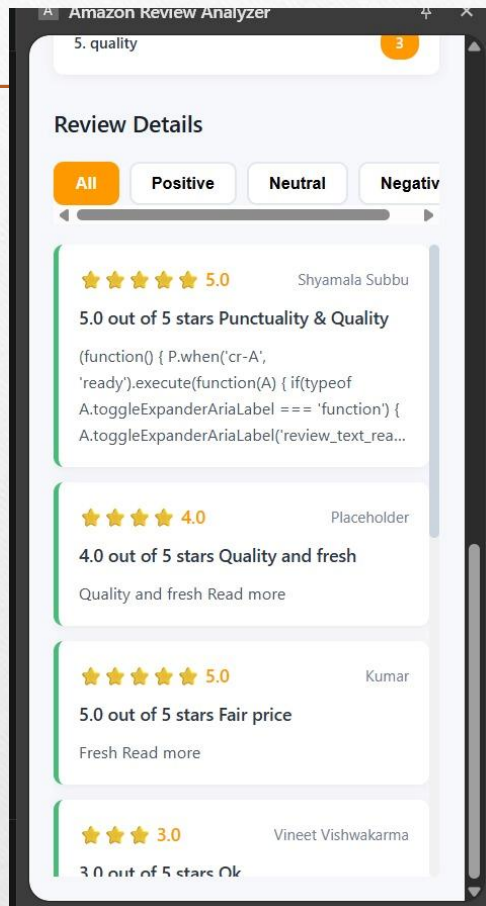
Extension will automatically search, open first product, and analyze reviews across multiple pages.


Searching on Amazon.in...

Web Mining Screenshots



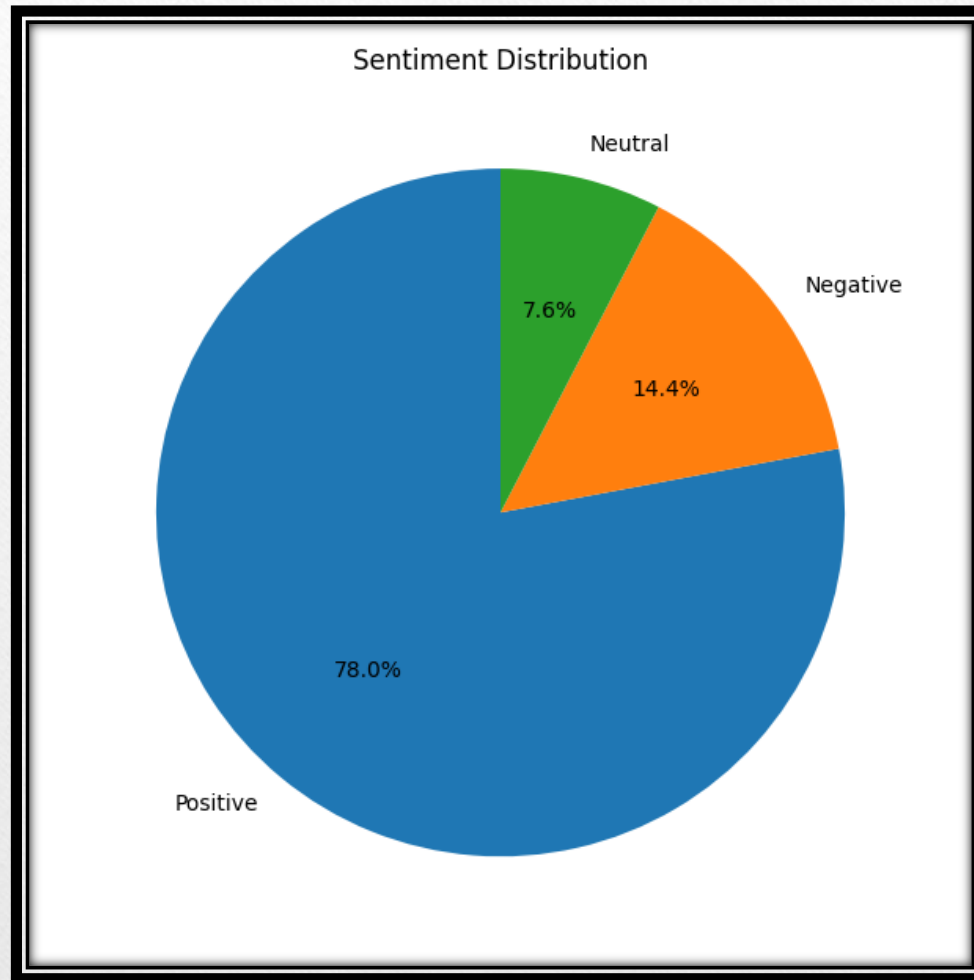
Web Mining Screenshots



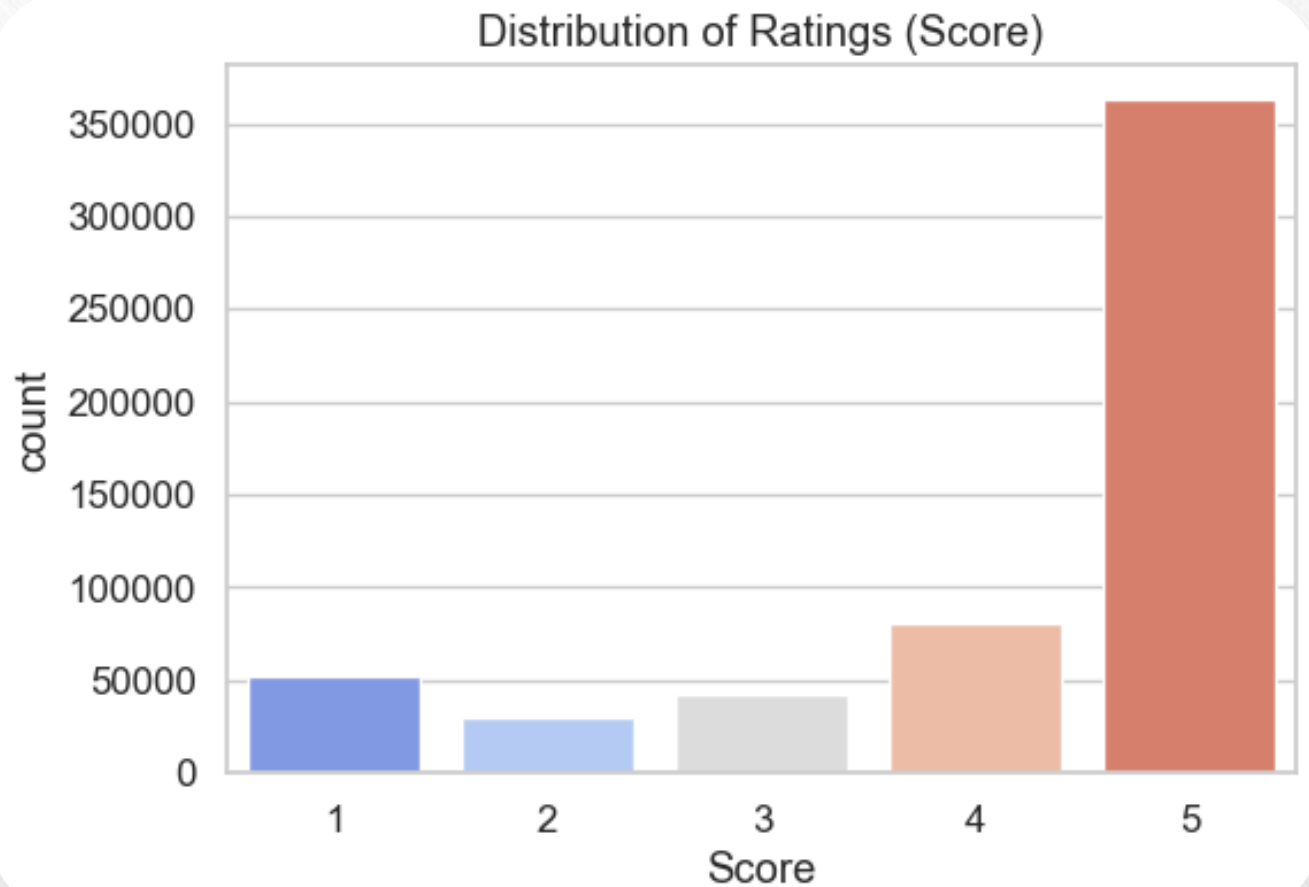
Dataset

- Amazon Fine Food Reviews (Kaggle)
- Fields used: Text, Score, Summary, ProductID
- Link - [Amazon Fine Food Reviews](#)

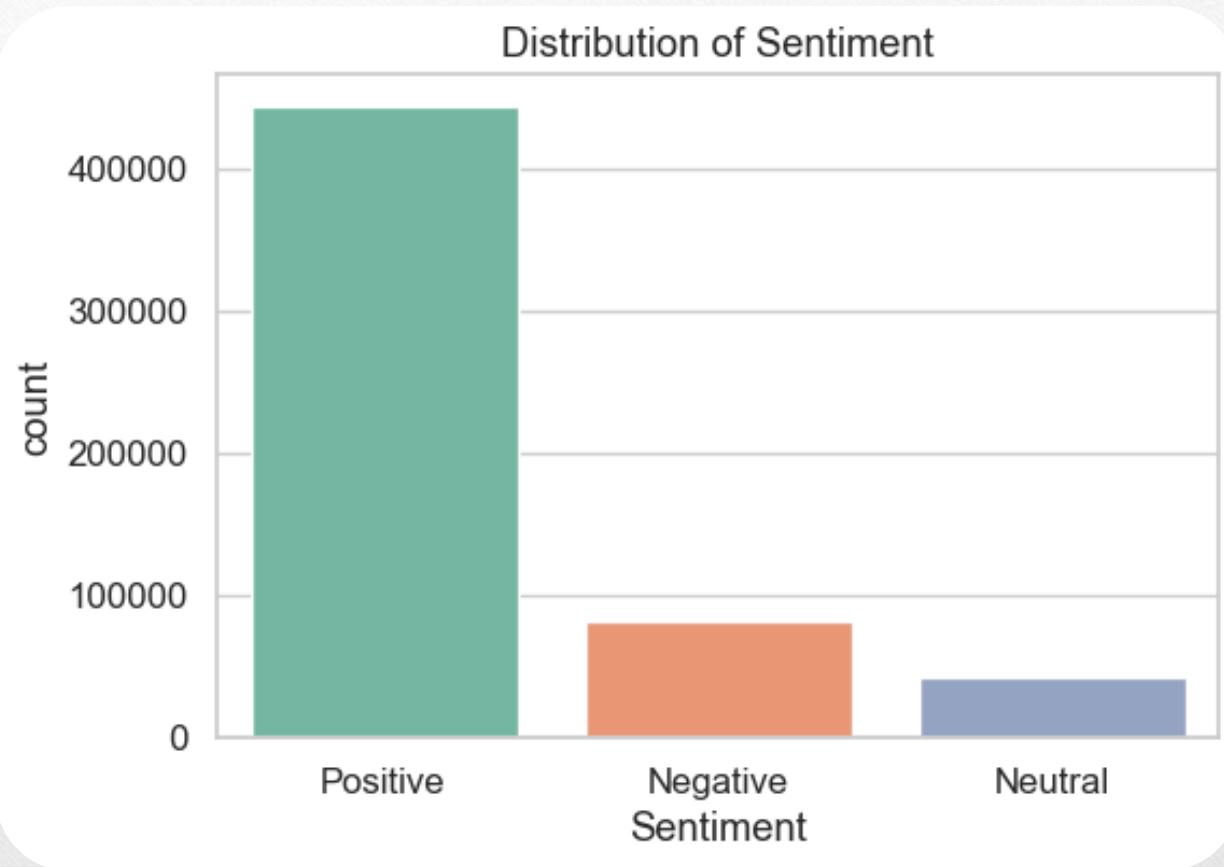
Sentiment Distribution



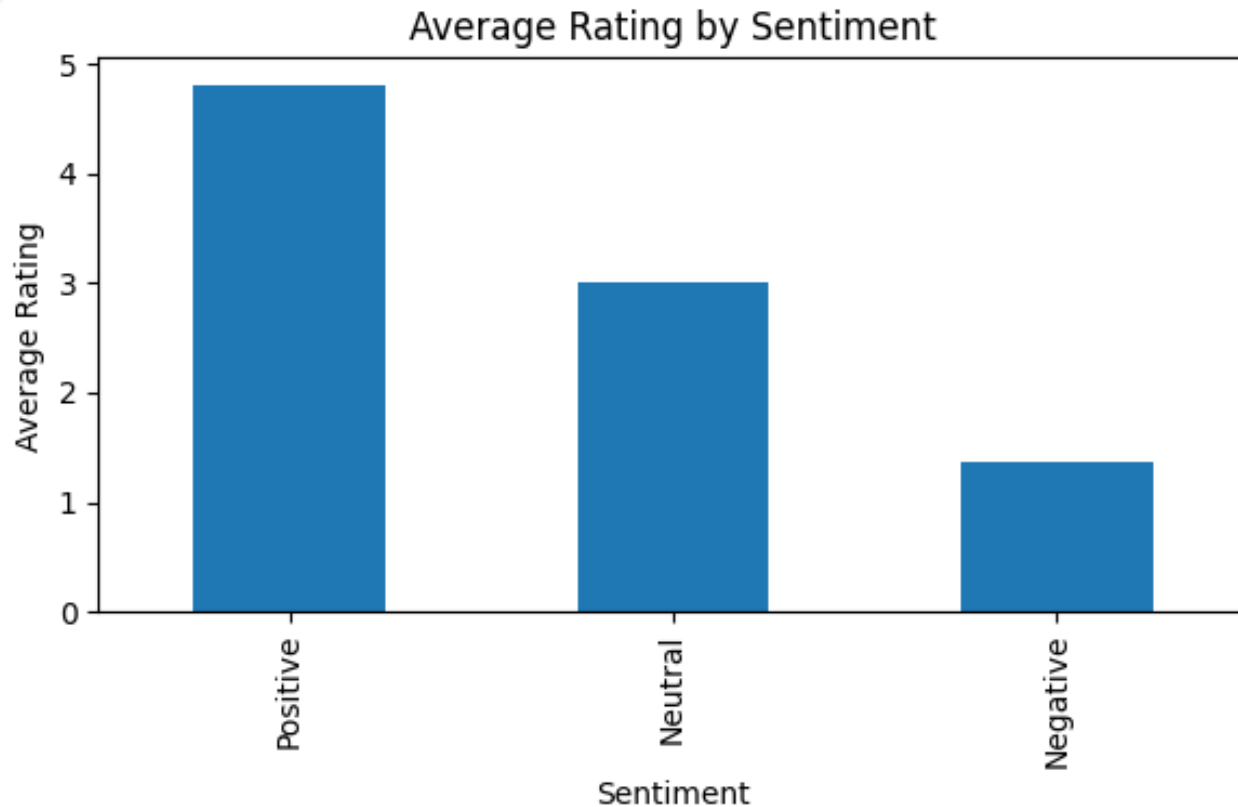
Distribution of Ratings



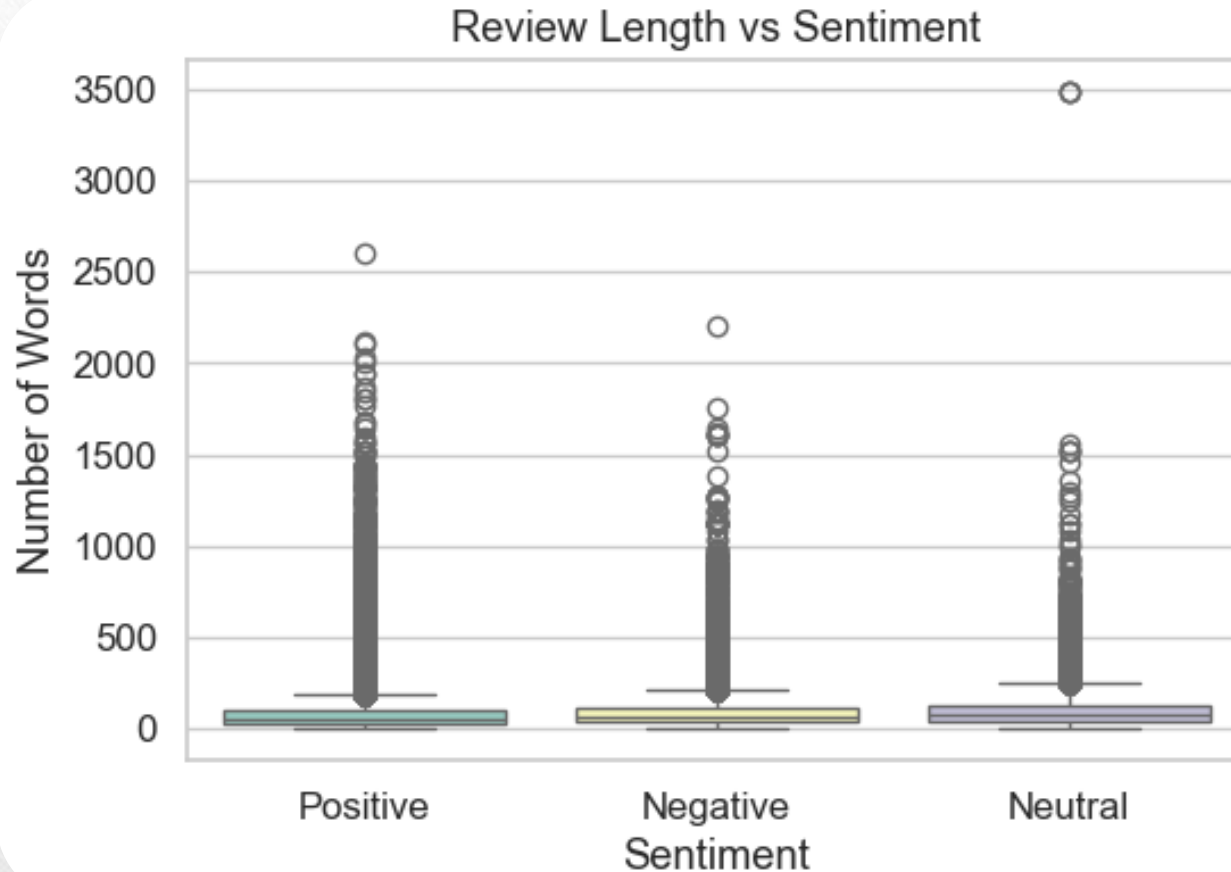
Distribution of Sentiment



Average Rating by Sentiment



Review Length by Sentiment



Common Issues in Negative Reviews



Improving Search & Recommendations

Problem: Customers face irrelevant search results and poor product recommendations, leading to a negative experience.

Insight: The vast majority of reviews are positive (78.0%), indicating a strong signal for product quality.

- Solution 1: Prioritize and rank products with a higher volume of positive reviews in search results to improve relevance.
- Solution 2: Enhance recommendation engines by personalizing suggestions based on a user's past behavior combined with the sentiment of reviews for potential products

Resolving Common Customer Issues

Problem: Negative customer experiences related to product and delivery lead to frustration and lost sales.

Insight: A word cloud analysis of negative reviews shows that common complaints are related to "flavor," "taste," "product," "package," and "box".

➤ **Solution:** Proactively identify and address recurring issues with product quality (taste/flavor) and fix delivery or packaging problems that are frequently mentioned in negative feedback.

BI Insights

- Rank products with positive reviews higher in search
- Personalize recommendations using review sentiment + behavior
- Fix delivery/packaging issues identified from negative reviews
- Monitor sentiment trend to measure improvements

Conclusion & Future Work

- Text mining + BI gives actionable insights to improve UX and sales.
- Future: Use advanced models (BERT), multilingual analysis, integrate with dashboards.