




FROM WORDS TO IMPACT

The Factors That Make Yelp Reviews Useful

06/16/2014 ★★★★★

“ I have yet to find a better store when you need knowledgeable salespeople and fast service. I stopped by here on my way...”

 Kate S.


06/17/2014 ★★★★★

“ Absolutely the best selection in the area! I always recommend this place to my friends. ”

 Jocelyn Y.


06/15/2014 ★★★★★

“ They never fail to deliver. I called on a whim before placing an order on Amazon, and I'm glad I did...”

 Will B.

06/16/2014 ★★★★★

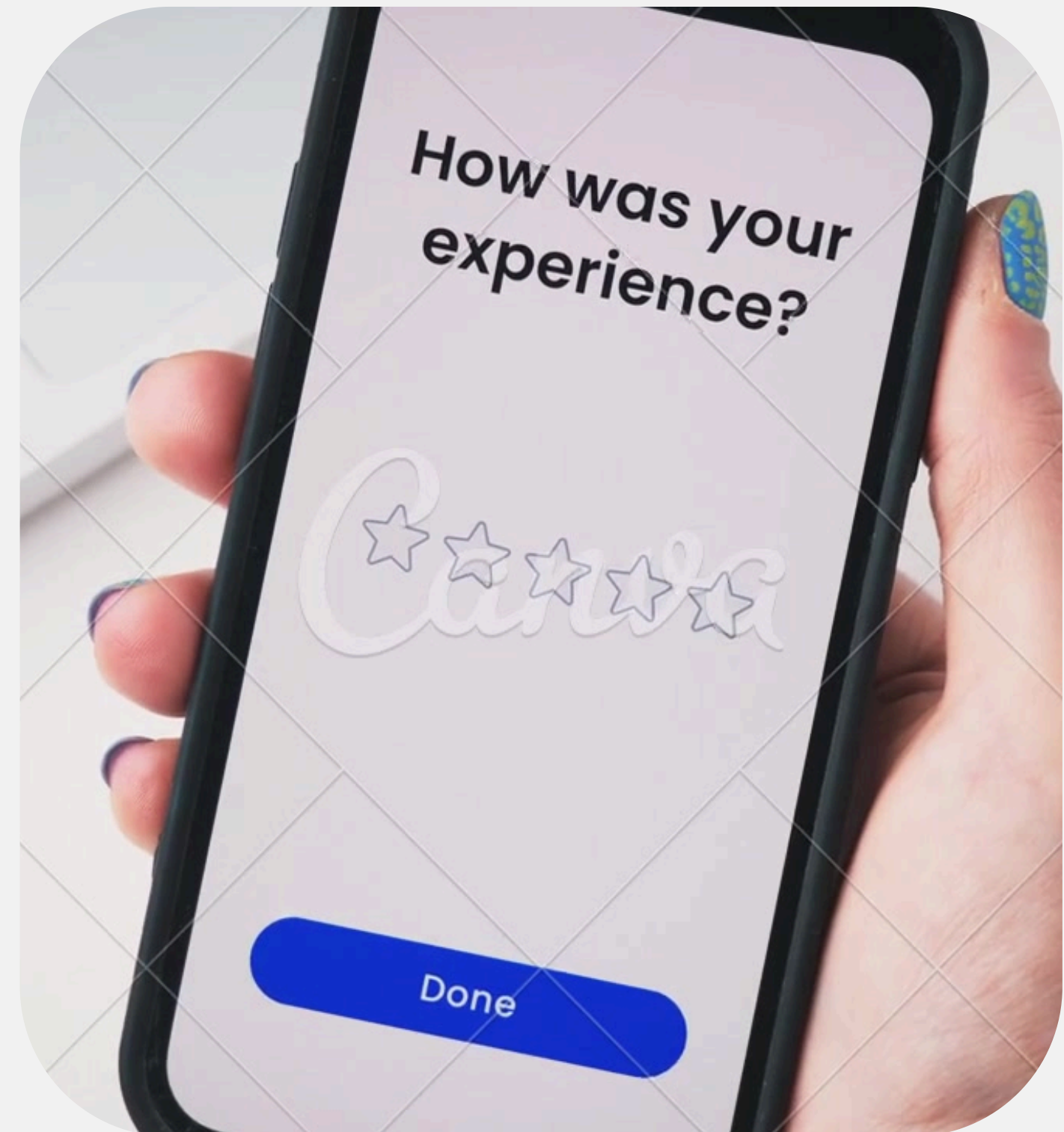
“ I have yet to find a better store when you need knowledgeable salespeople and fast service. I stopped by here on my way...”

 Kate S.

Plutus

business problem

identifying how reviews provide
the most value to users,
businesses, and the platform



key questions

What makes a review useful?
(Text, sentiment, structure)

How can AZ businesses benefit?
(Actionable insights)

What can Arizona business owners learn from top-voted useful reviews?

stakeholders



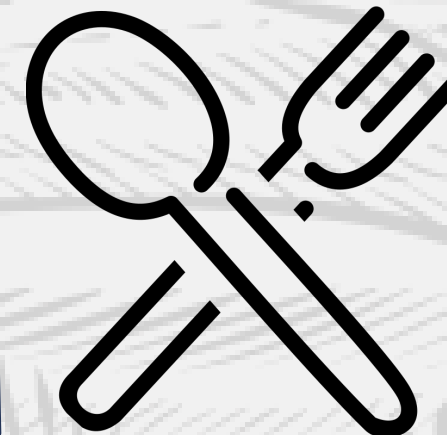
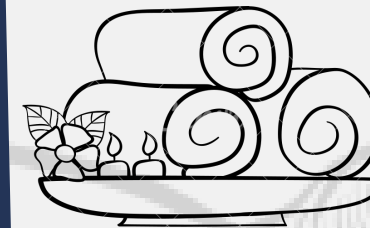
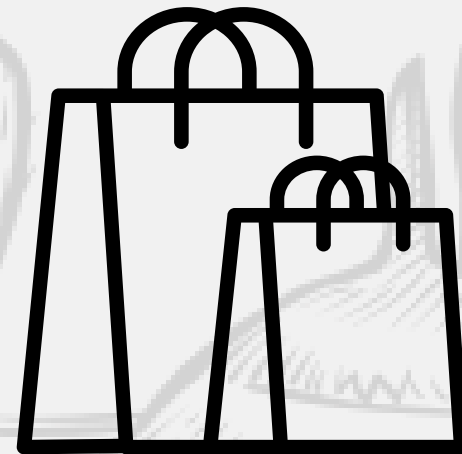
For Yelp	For Businesses	For Reviewers	For Consumers
Enhance ranking algorithms Boost user engagement.	Encourage quality feedback Prioritize actionable reviews Enhance customer insights	Help users find impactful reviews and businesses with valuable content.	making better decisions fueled by higher quality reviews

83, 325

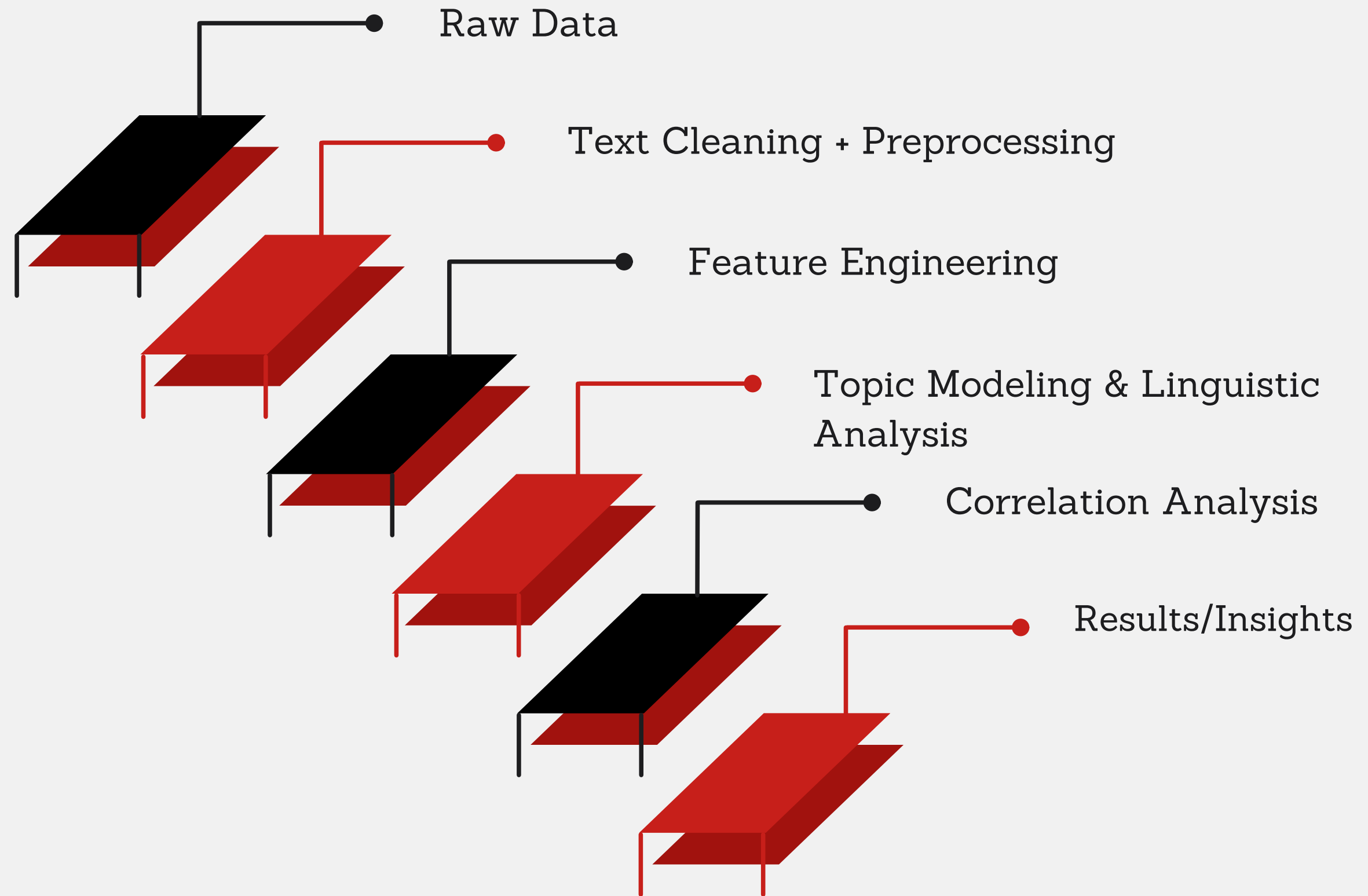
reviews



10 useful votes

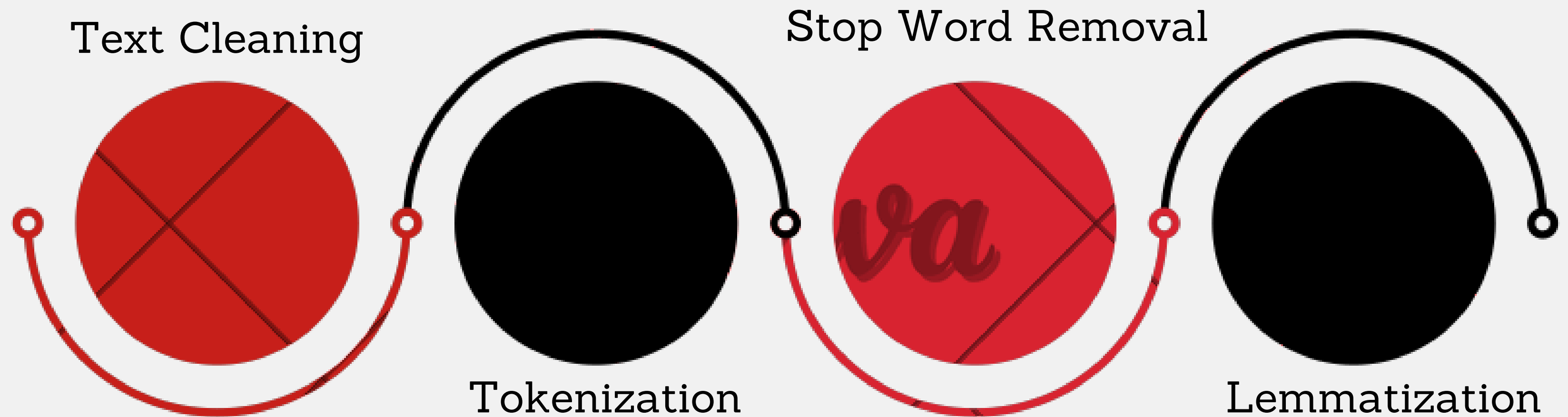


dataset

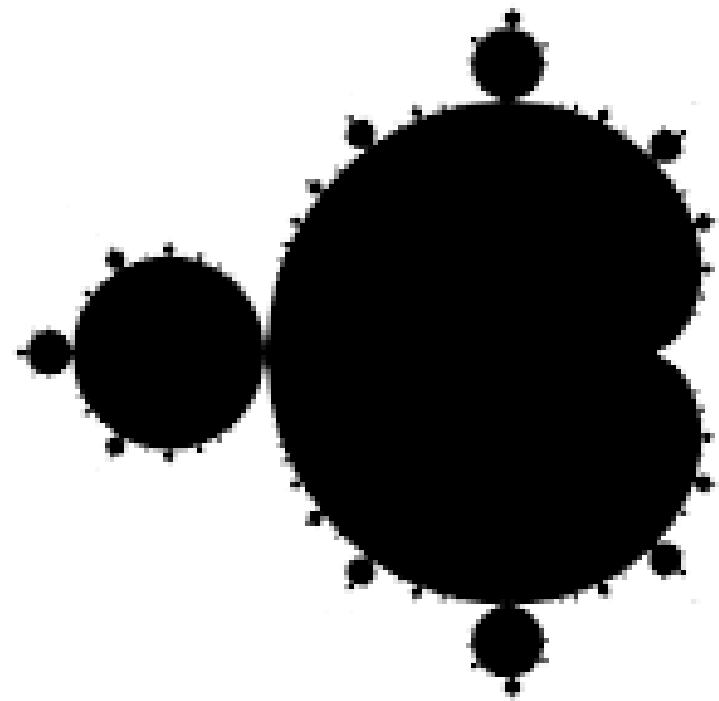


data processing pipeline

feature extraction pipeline



thou might inquire how?



TextBlob

&

textstat



spaCy

linguistic feature: text complexity

Readability Scores

Flesch
Reading
Ease

Flesch-
Kincaid
Grade

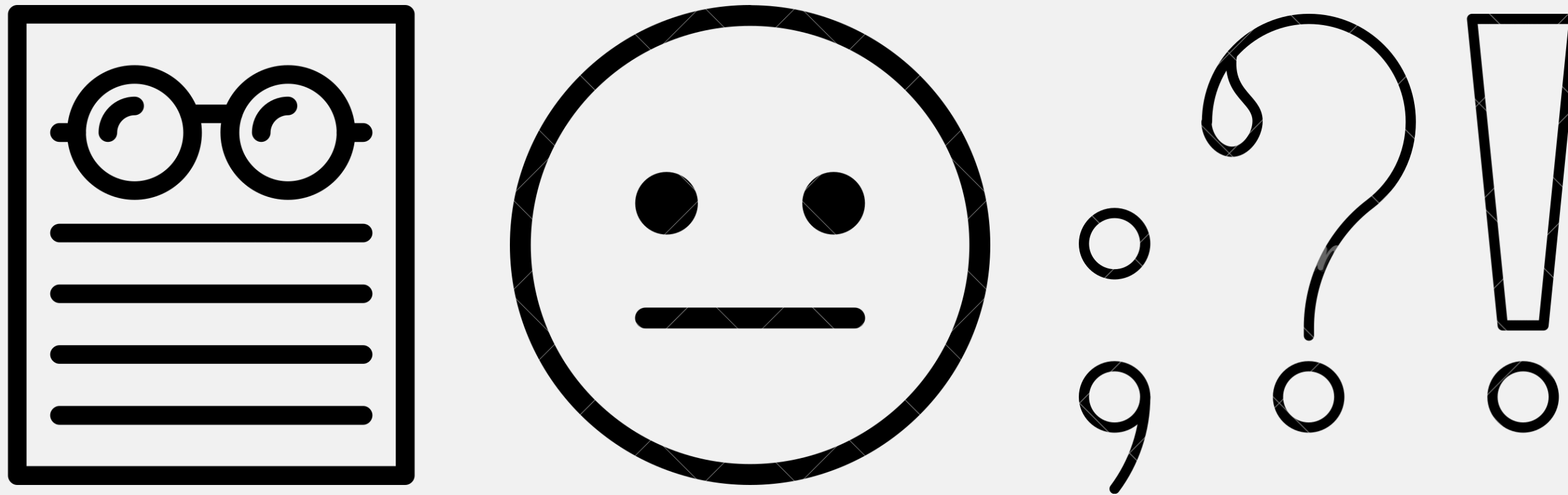
linguistic feature: sentiment analysis

**polarity
&
subjectivity**

linguistic feature: structural

WORD COUNT
PARAGRAPH COUNT
SENTENCE COUNT
PUNCTUATION USE

why these features



readability impacts how easily users understand a review

sentiment influences engagement (neutral vs. strong opinion reviews)

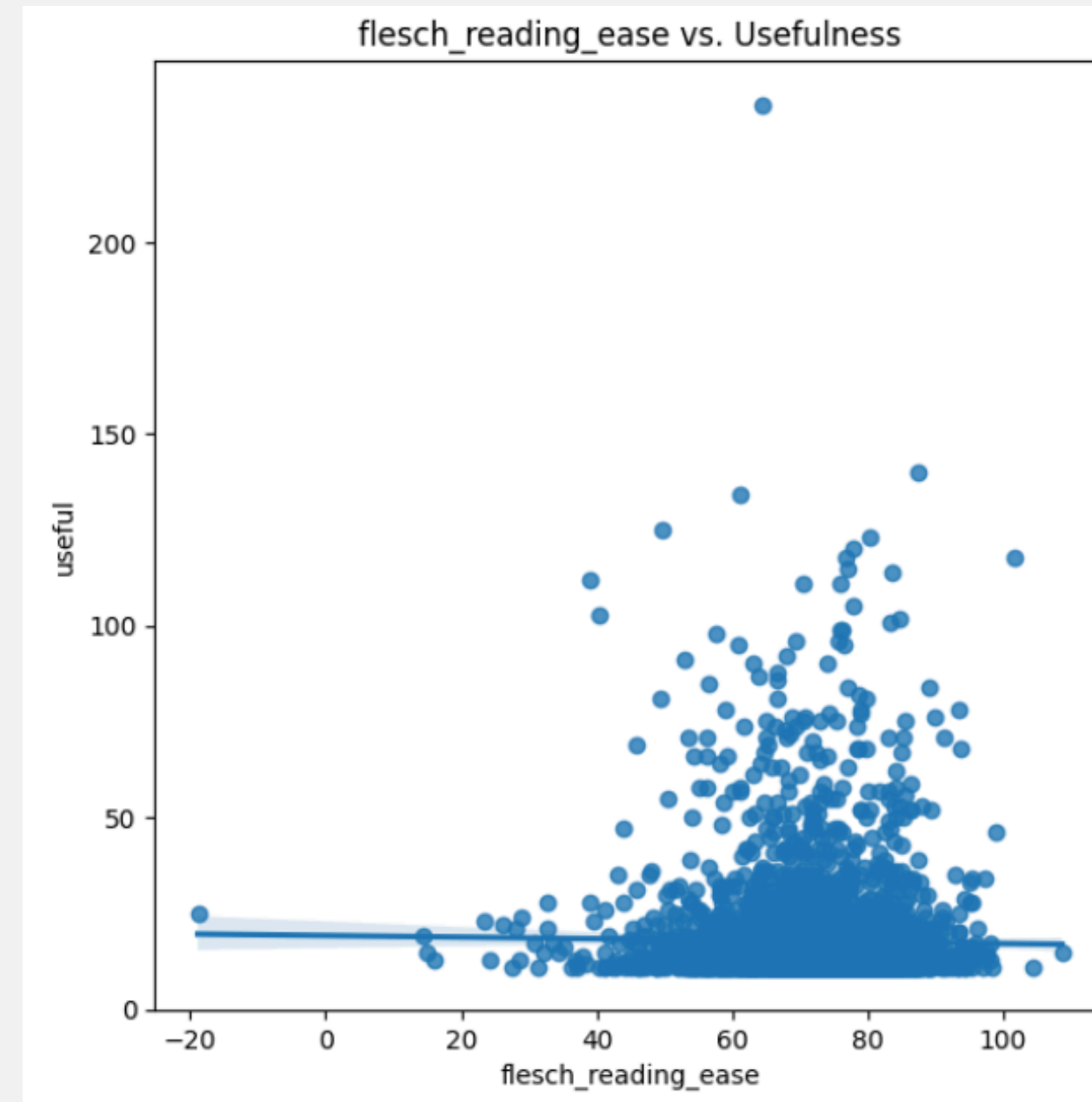
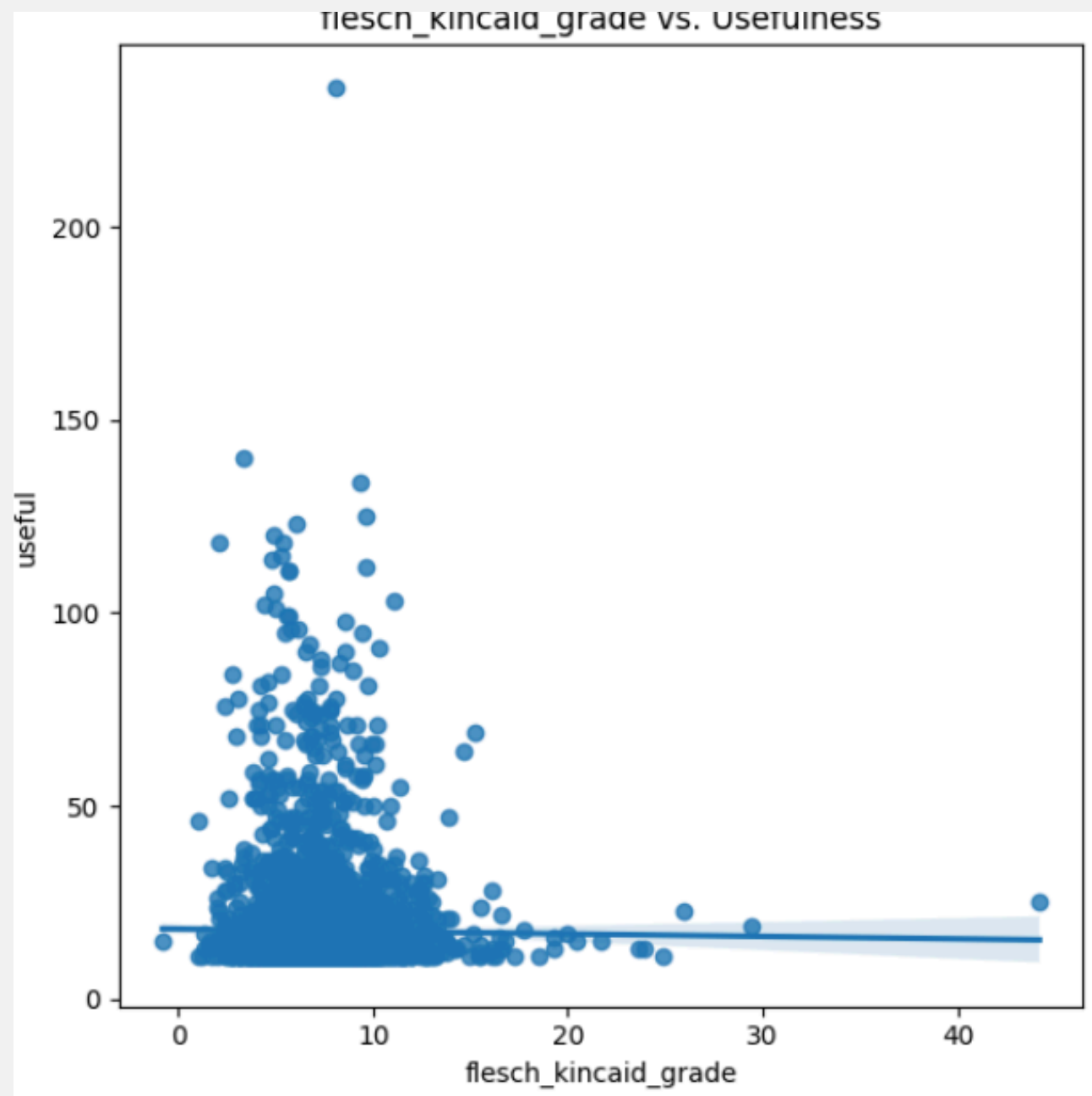
structure (word count, punctuation) correlates with usefulness

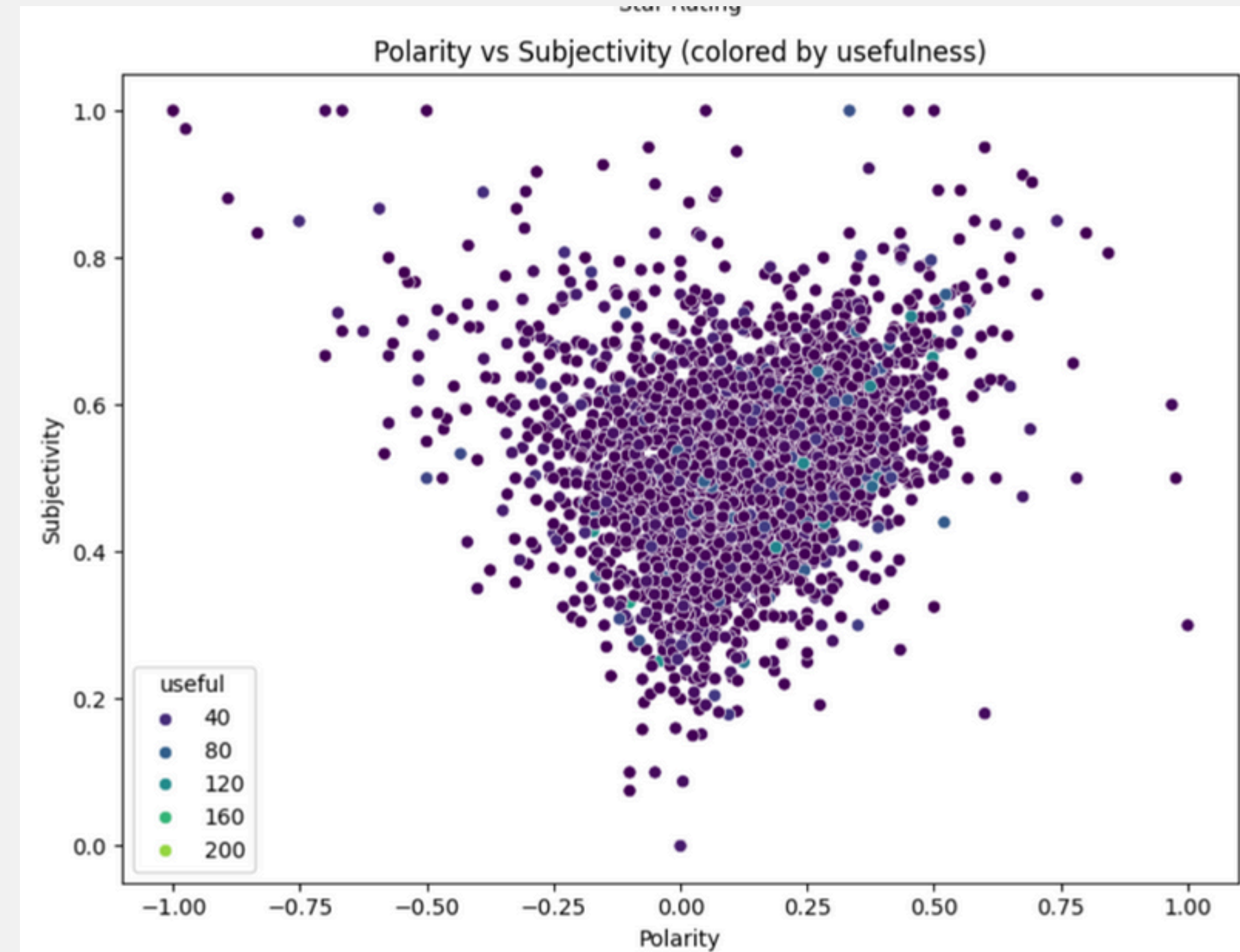
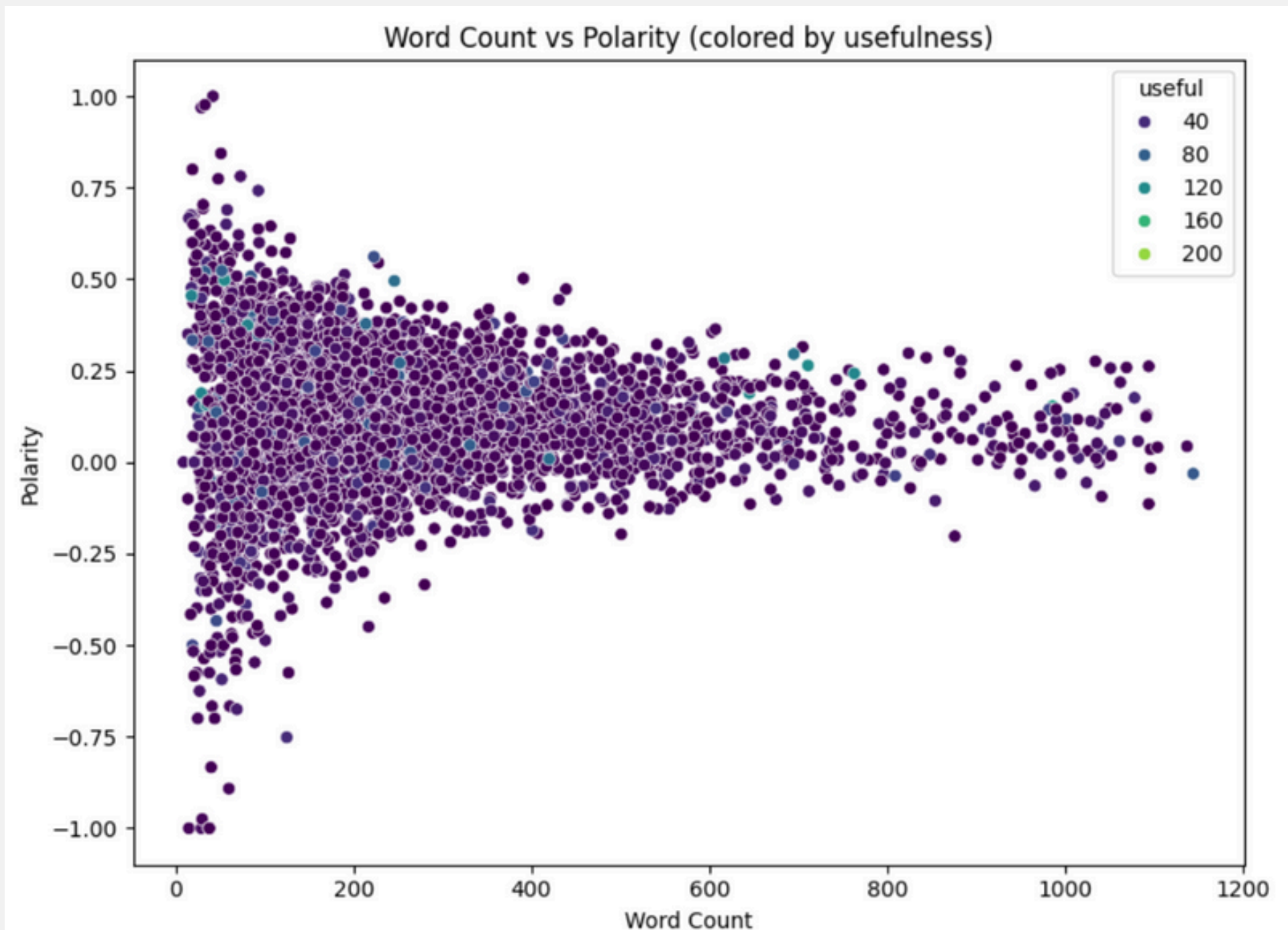
techniques used

lexicon based approach
aspect based sentiment
contextual polarity
fine grained sentiment metrics

key findings; neutral, mixed, and consistent sentiment reviews are rated most useful. Extreme reviews are less useful.

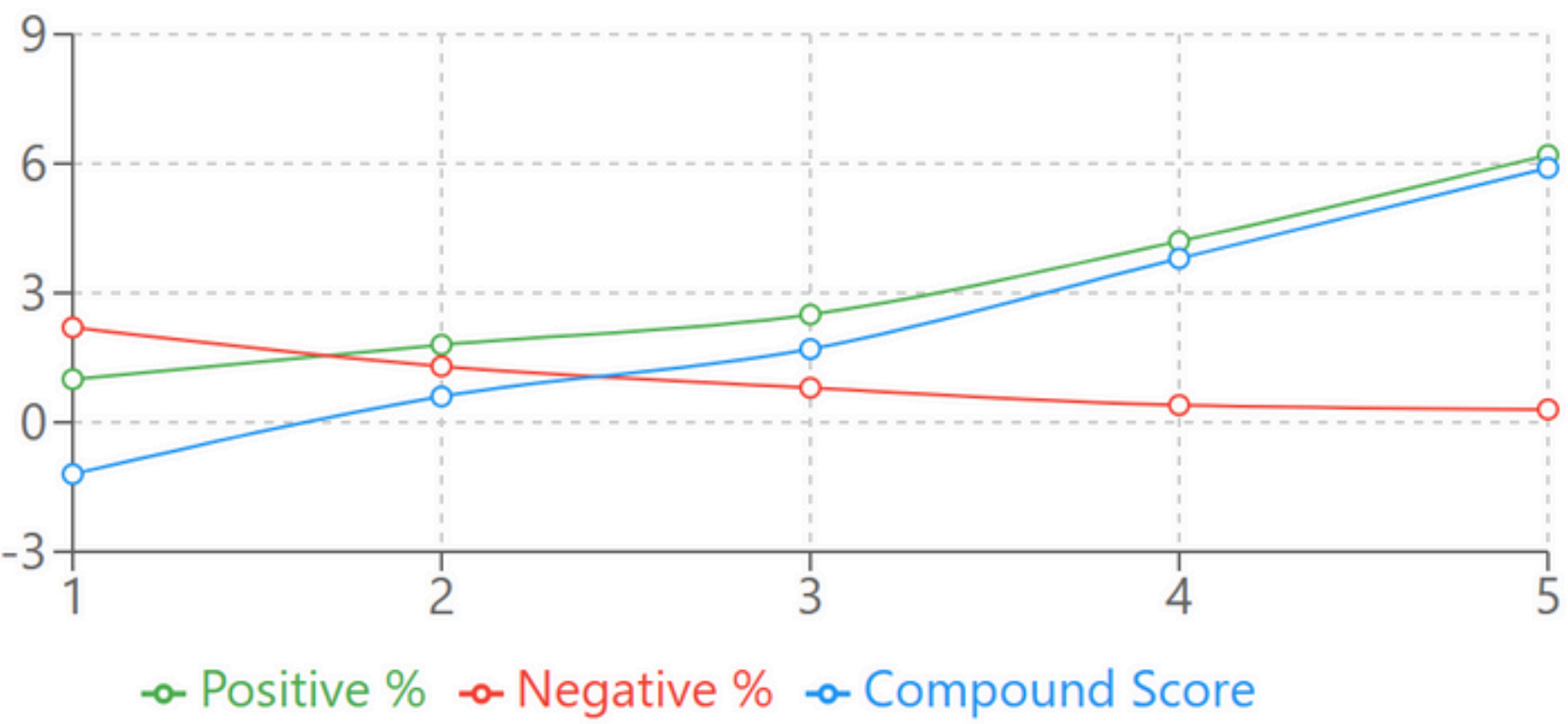
linguistic patterns





content polarity

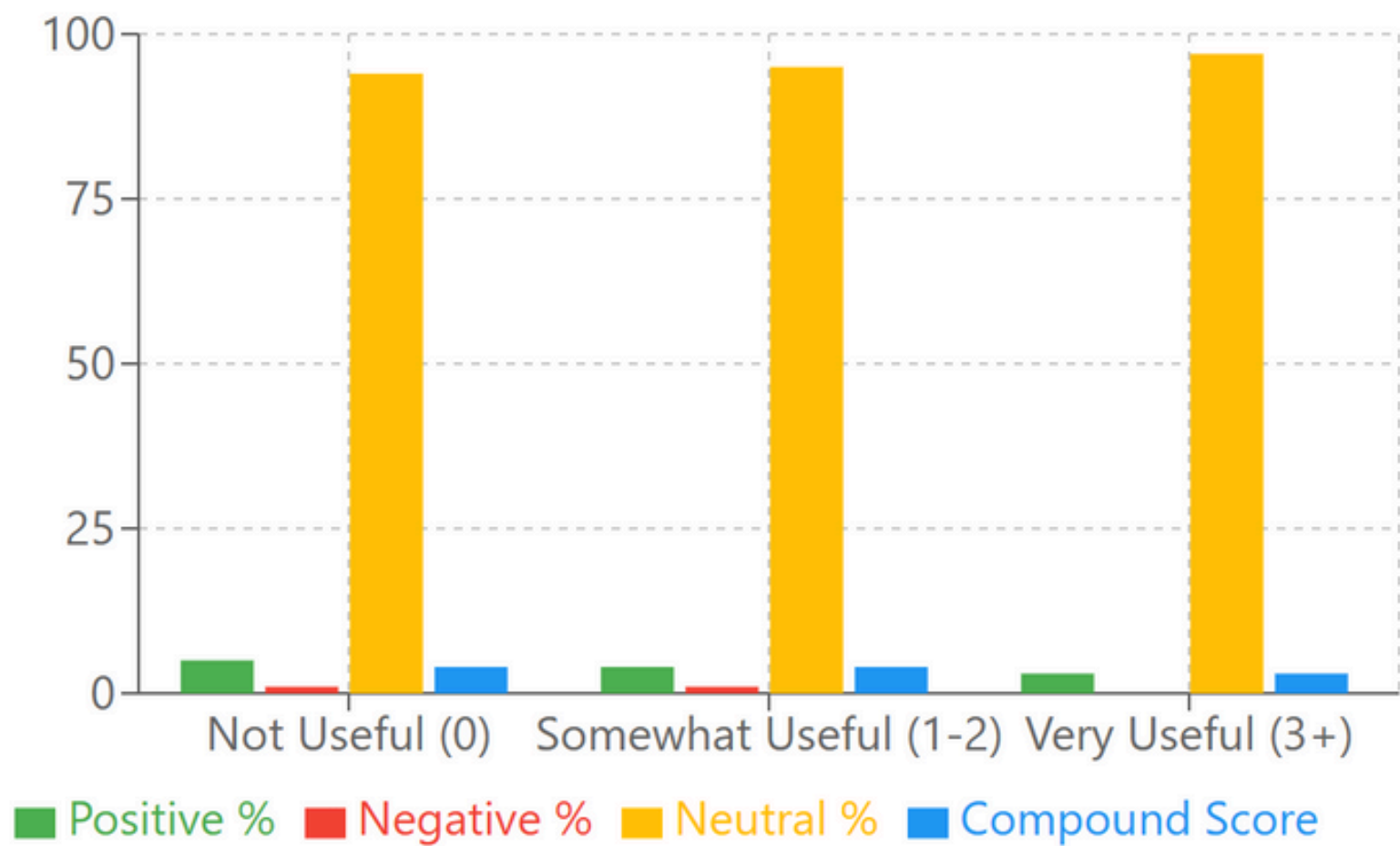
Sentiment by Star Rating



Positive sentiment increases with star rating, while negative sentiment decreases, as expected.

sentiment analysis

Sentiment Analysis by Usefulness Category



Highly useful reviews tend to maintain a more neutral tone with balanced sentiment.

content and structure analysis

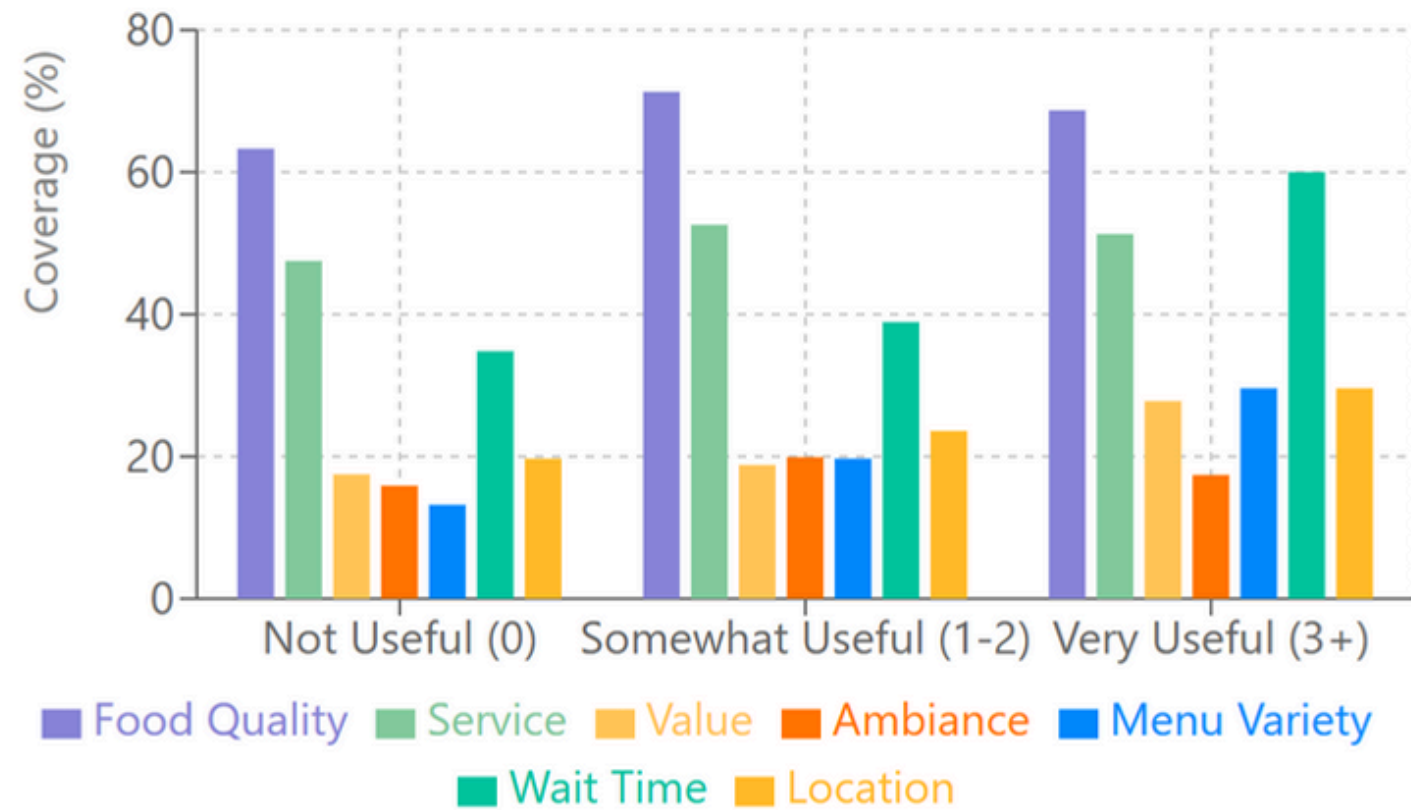
understanding what makes a review useful:

topics, content elements, and structure

useful topics

Topic Coverage by Usefulness Category

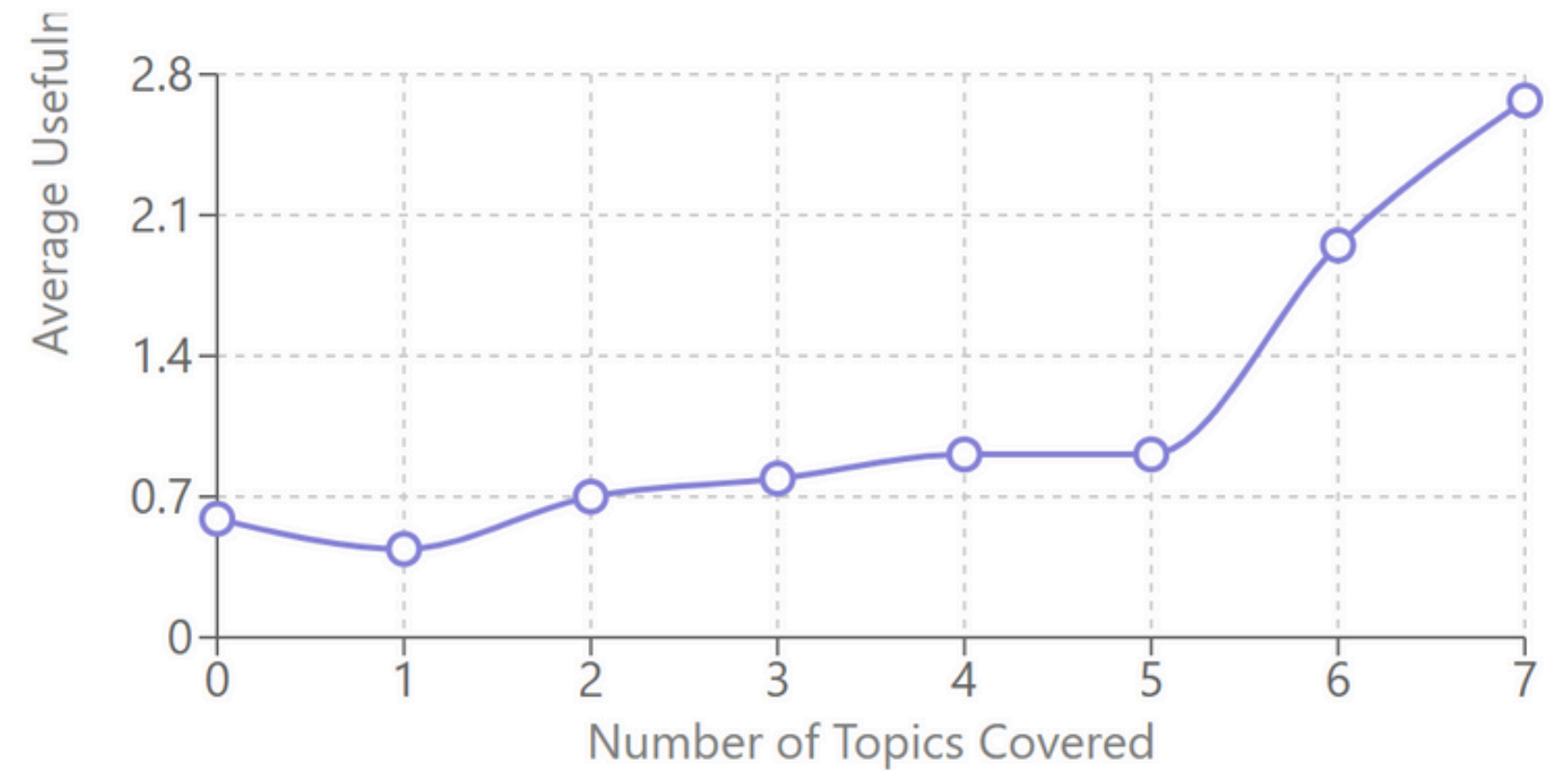
Percentage of reviews in each usefulness category that mention each topic



Very useful reviews have much higher coverage of Wait Time (60%) and Menu Variety (30%) compared to non-useful reviews

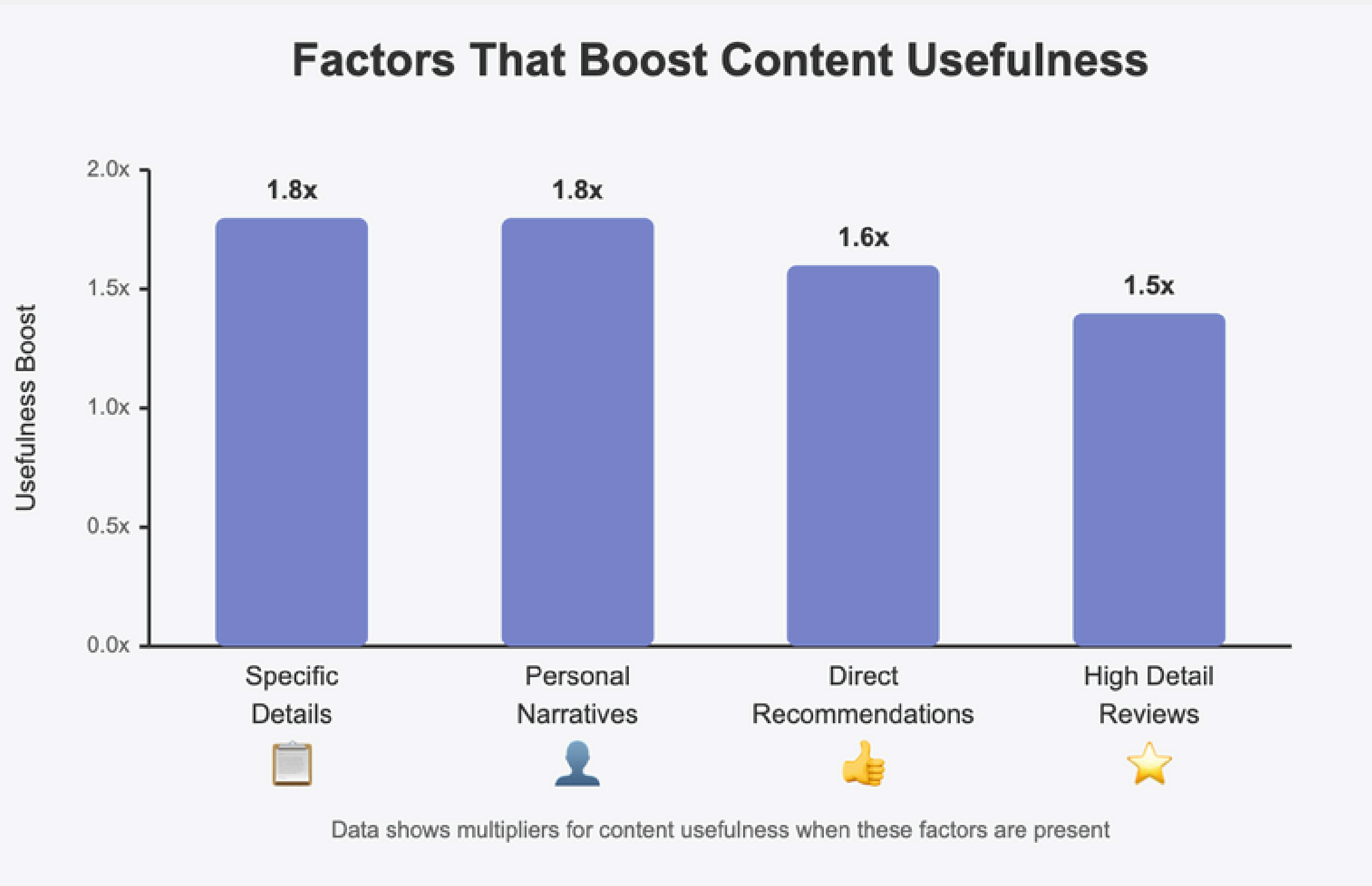
Topic Variety and Usefulness

How the number of topics covered affects review usefulness



Reviews covering 6-7 topics receive dramatically higher usefulness scores ($\approx 2\times$).

key topic insights



96%

Multi-paragraph reviews (3+)



54%

Bullet points/lists boost



72%

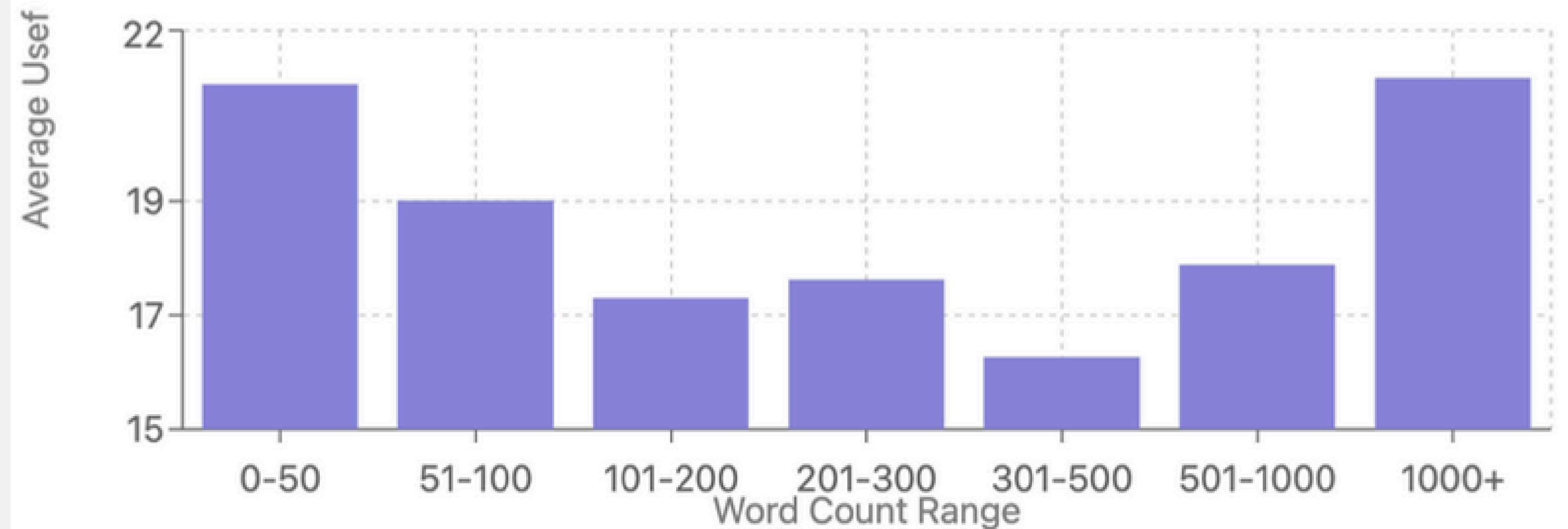
Clear conclusions



structural insights:

Structured reviews (score 7+) get 4x more votes.

Average Usefulness by Word Count Range





Example: Content Elements in Useful Reviews

Highly Useful Review (Usefulness Score: 5)

"I visited Sakura Sushi last weekend with my family. *We ordered the Dragon Roll (\$14.95) and Spicy Tuna Combo (\$18.50).* The Dragon Roll was beautifully presented with fresh avocado and perfectly seared eel on top. *Our server, Michael, was extremely attentive and recommended the house sake which paired perfectly. If you're going on a Friday night, make sure to arrive before 7pm to avoid the 45-minute wait. Would definitely recommend the Dragon Roll and the green tea ice cream for dessert!*"

- Price Mentions: Specific prices (\$14.95, \$18.50)
- Staff Mention: Names specific server
- Personal Experience: First-person narrative
- Questions Addressed: Addresses wait time concerns
- Recommendations: Specific items to try

Less Useful Review (Usefulness Score: 0)

"This sushi place is pretty good. The rolls are tasty and fresh. Service was decent. The restaurant has a nice atmosphere and is clean. It can get busy sometimes. The food is a bit expensive but worth it. Would go back again."

- Lacks Specificity: No menu items, prices, or details
- Generic Language: Vague descriptions ("pretty good", "decent")
- No Personal Story: Lacks first-person narrative
- No Specific Recommendations: Doesn't suggest what to order
- No Practical Information: Missing details on wait times, etc.

tech implementation

optimal review structure based on findings

Introduction (1 paragraph)

Overview of visit (when, why, with whom). Set expectations for the reader.

Food & Drinks (1-2 paragraphs)

Specific menu items ordered with prices. Detailed descriptions of taste, presentation, portion size.

Service & Atmosphere (1 paragraph)

Wait time, staff interactions, ambiance, cleanliness, noise level.

Value & Logistics (bullet points)

- Price range and value assessment
- Parking information
- Best times to visit
- Special considerations (dietary options, etc.)

Conclusion & Recommendations (1 paragraph)

Summary of experience, specific recommendations, who would enjoy this restaurant.

final thoughts

stay neutral
cover more
get specific
tell a story
keep it organized

thankyou