Decoding Review Impact: A Study on Sentiment, Length, and Readability in Movie Reviews

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Introduction

Online consumer reviews, especially on platforms like Amazon and IMDb, significantly influence purchasing decisions. Despite their importance, the factors determining a review's perceived helpfulness are underexplored. Features like review length, sentiment, and readability are believed to affect helpfulness ratings. Longer reviews may offer more detail but risk overwhelming readers, while strong sentiments may engage readers more than neutral ones. This study investigates how these factors interact in movie and TV show reviews to uncover patterns in consumer engagement within the entertainment industry.

Research Question and Hypothesis

What factors influence the likelihood of receiving a higher overall voting/perceived helpfulness in movie and TV show reviews?

Hypothesis -

1. The readability of a review has a curvilinear relationship with perceived helpfuless, i.e. reviews with less readability score have less vote count. But as this score increases, the vote count increases as well. However, after a certain threshold value, the increase in readability score results in a decrease in vote count.

2. The length of a review has a curvilinear relationship with perceived helpfuless.

3. The two extreme sentiments of a review, i.e. strongly positive and strongly negative, correspond to higher vote count, compared to neutral sentiment reviews.

Data

The dataset used for this project is the Amazon Review/Product Dataset (https://nijianmo.github.io/amazon/index.html), provided by Julian McAuley and Jianmo Ni, University of California, San Diego (UCSD). It includes data reviews for the range May 1996 - October 2018. It has a total number of 233.1 million reviews of several different categories. In this project, I will be working on the "Movies and TV shows" category with 10,654 rows.

Word Cloud

Results

1. Readability enhances review helpfulness by making it clearer and more engaging. Low readability due to errors reduces perceived usefulness, while moderate readability attracts more votes as it improves clarity and engagement. However, high readability beyond a certain point may feel too simplistic or formulaic, diminishing authenticity and reducing engagement.

2. The curvilinear relationship between review length and votes suggests that moderate-length reviews receive more votes due to increased detail and informativeness. Shorter reviews lack sufficient content, while excessively long reviews may become repetitive or disengaging. Striking a balance between detail and readability is key to maximizing perceived helpfulness.

3. Extreme sentiments, whether positive or negative, provide clearer guidance to users, making them more likely to upvote. Positive reviews suggest enjoyable movies, while negative reviews warn against disappointing ones. Neutral reviews, lacking emotional direction, are less engaging and tend to receive fewer votes, as they fail to evoke a strong response.

LDA model
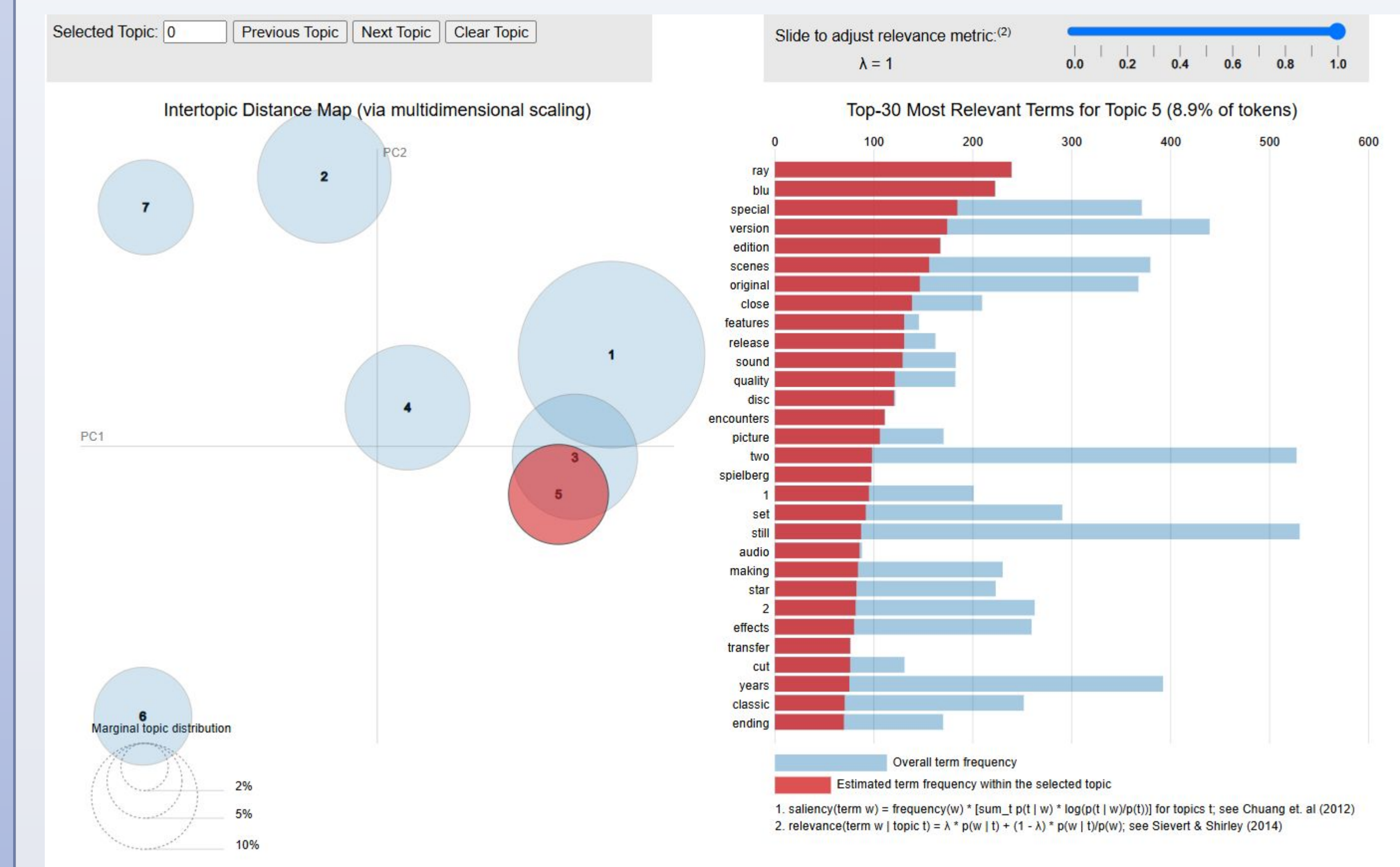
Visualization of Results

References

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