

Amazon Product Rating Analysis

We KANT, but we can

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Goal Statement

Be able to distinguish positive and negative amazon reviews for a product based on key words.

Research Question:

What is the best way to train a model to accurately identify the tone of reviews in online shopping markets?

Narrative

Following the success of Amazon many companies have begun to develop their own digital marketplaces making online reviews more important than ever before. Nandagopal et al found that over 90% of shoppers rely on these reviews to determine quality and credibility. But what constitutes a good review? Is it the choice of words included?

Products through Amazon have a high volume of reviews that make it ideal for training a model that has a higher likelihood of being accurate. We will create a list of words that are common in both positive and negative reviews and quantify their proportions to determine if the product is overall positive or negative. Despite it most likely not going to be able to replace a deep dive of the reviews from a consumer, it can help weed out products that are not worth considering.

Modeling Approach

For our modeling approach we will use a Text CNN in order to classify Amazon reviews as positive and negative. We will use the text-based reviews of a product on Amazon and take key words or phrases such as “absolutely terrible” or “worth every penny” and will classify these into the two categories. Thus the model will be able to learn key phrases and be able to classify them. All of the text-based reviews will have a corresponding star-rating (out of 5) which we will be able to use to check the success of our model.

References

- [1] R. Nandagopal, A. Jayakumar, and G. Manokaran, “Impact of Online Reviews on Consumer Purchasing Decisions.”