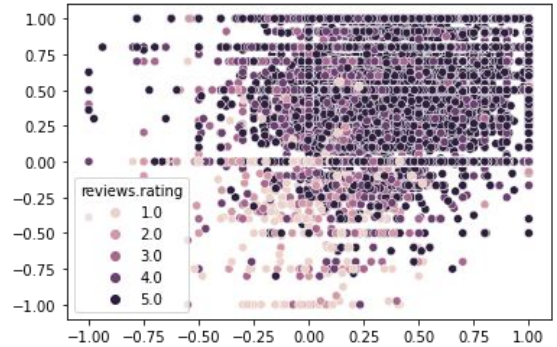
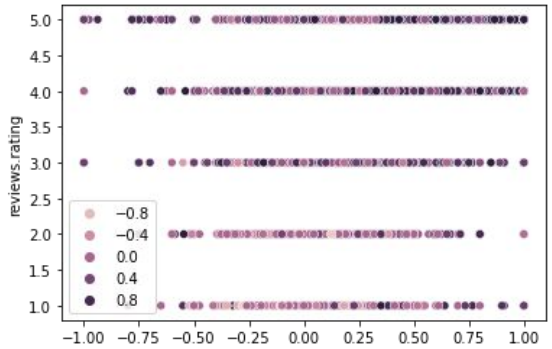
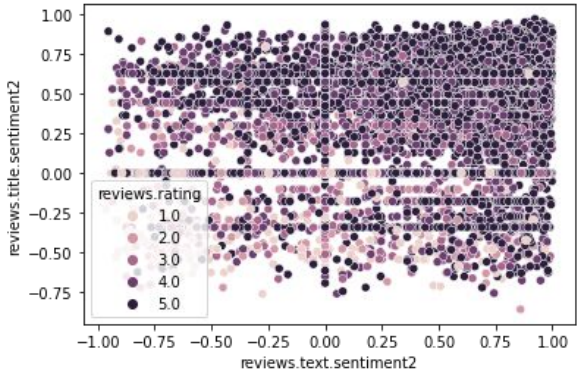
TextBlob vs. Vader Comparison

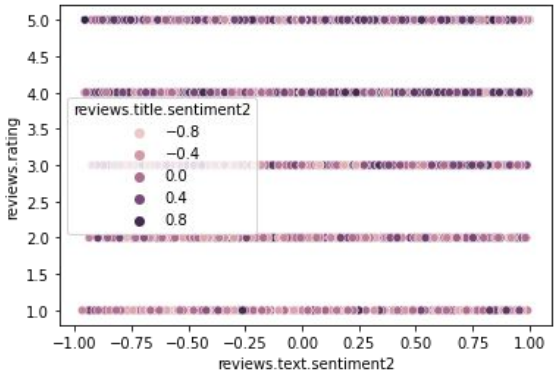
TextBlob Sentiment Analysis vs. Rating





Vader Sentiment Analysis vs. Rating

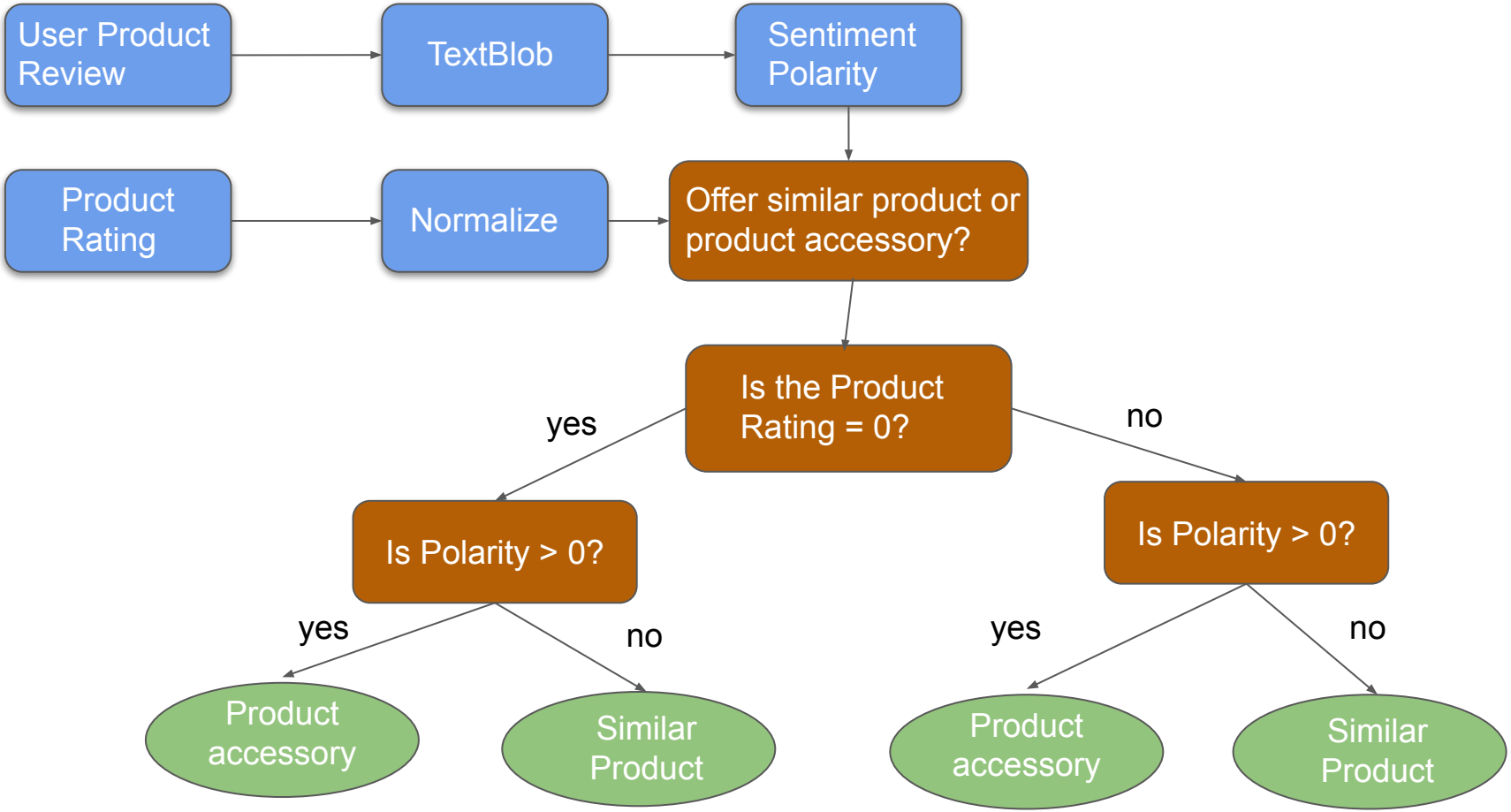




TextBlob sentiment analysis algorithm gives polarity scores more closer correlated to the ratings given by the reviewers.

Two things will have to be done to use a decision tree model for recommendation.
1) Normalize ratings between -1 and 1
2) Results data will have to be synthetically created based on parameters for training model

However, after learning about logistic regression model during this due date, we might be inclined to use this model instead. Further exploration will need to be done.


User Product Review
TextBlob
Sentiment Polarity
Product Rating
Normalize
Offer similar product or product accessory?
Is the Product Rating = 0?
yes
no
Is Polarity > 0?
Is Polarity > 0?
yes
no
yes
no
Product accessory
Similar Product
Product accessory
Similar Product

Model Function Breakdown

Step 1: Review text is input into TextBlob sentiment analysis
Result: Polarity Value

Step 2: Polarity value combined with normalized Product Rating is used in decision tree model
Result: Product Recommendation

Note: as we do not have access to the full list of Amazon Products results of the decision tree will be either “Similar Product” or “Accessory Product” in place of the actual Amazon products.