# Sentimental Analysis Report for Practical Task 1 on T26

## 1. Description of the data set

Original File: Datafiniti_Amazon_Consumer_Reviews_of_Amazon_Products.csv

File Size: 97222 KB

Rows: 5000

Columns: 24

## 2. Details of the preprocessing steps

For studying the reviews, only reviews.title and reviews.text should be meaningful.

And we drop all records with NA value in reviews.text, in this dataset, no records had been dropped.

For the preprocessing function, it will remove the stopwords, punctuation from the sentence, and also reduce the lemmatized form of the words.

After that we use the function by calculating the sentiment, polarity, subjectivity by spacy with spacytextblob by feeding the preprocessed reviews text.

## 3. Evaluation of results

List of top 10 positive reviews and top 10 negative reviews will be displayed below and we can review the accuracy of the sentiment one by one by human's understanding and remark with red color

For the Positive feedback, 9 out of 10 are accurate.

For the Negative feedback, 7 out of 10 are accurate.

---------------- Show Positive Review ----------------

Index:3736

Positive Review: I use this while underway and it's a perfect size to travel with

Preprocessed Text: use underway perfect size travel

Sentiment: Positive

Polarity: 1.0

Subjectivity: 1.0

Accuracy: True

Remark:


Index:372

Positive Review: This is an awesome device, but it isn't life changing. It is basically the same as the Echo. I don't use the video much.

Preprocessed Text: awesome device life change basically Echo use video

Sentiment: Positive

Polarity: 1.0

Subjectivity: 1.0

Accuracy: True

Remark:

Index:239

Positive Review: It has been wonderful. I bought it for my boyfriend but I get more use out of it then he does

Preprocessed Text: wonderful buy boyfriend use

Sentiment: Positive

Polarity: 1.0

Subjectivity: 1.0

Accuracy: True

Remark:

Index:1370

Positive Review: No issues perfect works as advertised........................

Preprocessed Text: issue perfect work advertise

Sentiment: Positive

Polarity: 1.0

Subjectivity: 1.0

Accuracy: False

Remark: Got wrong meanings from the sentence by negative prefix

Index:2793

Positive Review: The Fire HD8 strikes an excellent balance between performance and price. It has many of the features you'd want in a tablet for a fraction of the cost. Works flawlessly for reading and video

streaming.

Preprocessed Text: Fire HD8 strike excellent balance performance price feature want tablet fraction cost work flawlessly reading video streaming

Sentiment: Positive

Polarity: 1.0

Subjectivity: 1.0

<span style="color:red">Accuracy: True</span>

<span style="color:red">Remark:</span>

Index:4726

Positive Review: Got this tablet for my spouse who has never had one before and it's perfect for him!

Preprocessed Text: got tablet spouse perfect

Sentiment: Positive

Polarity: 1.0

Subjectivity: 1.0

<span style="color:red">Accuracy: True</span>

<span style="color:red">Remark:</span>

Index:4160

Positive Review: Got this for the kids for Xmas...was the BEST gift.

Preprocessed Text: got kid Xmas best gift

Sentiment: Positive

Polarity: 1.0

Subjectivity: 0.3

<span style="color:red">Accuracy: True</span>

<span style="color:red">Remark:</span>

Index:1909

Positive Review: It's perfect for me when I'm doing homework or just surfing the web when I'm at a Starbucks or just at home.

Preprocessed Text: perfect homework surf web Starbucks home

Sentiment: Positive

Polarity: 1.0

Subjectivity: 1.0

Accuracy: True

Remark:

Index:3614

Positive Review: My son wanted a tablet just for his books. We looked at e-readers and tablets, this was so much better and the price was perfect.

Preprocessed Text: son want tablet book look e reader tablet well price perfect

Sentiment: Positive

Polarity: 1.0

Subjectivity: 1.0

Accuracy: True

Remark:

Index:2821

Positive Review: Tablets are excellent for Youth Sunday School class.

Preprocessed Text: tablet excellent Youth Sunday School class

Sentiment: Positive

Polarity: 1.0

Subjectivity: 1.0

Accuracy: True

Remark:

---------------- Show Negative Review ----------------

Index:2424

Negative Review: Too proprietary, the apps my daughter liked I could not install on it for her so basically it was worthless for me and I returned it.

Preprocessed Text: proprietary app daughter like install basically worthless return

Sentiment: Negative

Polarity: -0.8

Subjectivity: 0.9

Index:4275

Negative Review: Too proprietary, the apps my daughter liked I could not install on it for her so basically it was worthless for me and I returned it.

Preprocessed Text: proprietary app daughter like install basically worthless return

Sentiment: Negative

Polarity: -0.8

Subjectivity: 0.9

Index:4322

Negative Review: Too proprietary, the apps my daughter liked I could not install on it for her so basically it was worthless for me and I returned it.

Preprocessed Text: proprietary app daughter like install basically worthless return

Sentiment: Negative

Polarity: -0.8

Subjectivity: 0.9

Index:4091

Negative Review: I'm disappointed that it doesn't have a mirror display mode.

Preprocessed Text: disappointed mirror display mode

Sentiment: Negative

Polarity: -0.75

Subjectivity: 0.75

Index:4430

Negative Review: This is not like other android tablets in a bad way.

Preprocessed Text: like android tablet bad way

Sentiment: Negative

Polarity: -0.6999999999999998

Subjectivity: 0.6666666666666666

Accuracy: True

Remark:


Index:4169

Negative Review: I had to return my device due to WIFI signal dropping, maybe I just had a bad unit.

Preprocessed Text: return device WIFI signal dropping maybe bad unit

Sentiment: Negative

Polarity: -0.6999999999999998

Subjectivity: 0.6666666666666666

Accuracy: True

Remark:


Index:4671

Negative Review: This is not like other android tablets in a bad way.

Preprocessed Text: like android tablet bad way

Sentiment: Negative

Polarity: -0.6999999999999998

Subjectivity: 0.6666666666666666

Accuracy: True

Remark:


Index:2332

Negative Review: I got this because it is almost impossible to break

Preprocessed Text: get impossible break

Sentiment: Negative

Polarity: -0.6666666666666666

Subjectivity: 1.0

<span style="color:red">Accuracy: False</span>

<span style="color:red">Remark: It can be positive for showing the impossible to break</span>

Index:3672

Negative Review: Just lock the card out and let the kids go crazy!!

Preprocessed Text: lock card let kid crazy

Sentiment: Negative

Polarity: -0.6

Subjectivity: 0.9

<span style="color:red">Accuracy: False</span>

<span style="color:red">Remark: the locking feature let the kids go crazy can be the feature that the parent need.</span>

Index:2395

Negative Review: Goog tablet the only bad part is that you have to be creating a profile and thats where it gets complicated because when they sell u the tablet they saw its for kids

Preprocessed Text: goog tablet bad create profile s get complicated sell u tablet see kid

Sentiment: Negative

Polarity: -0.5999999999999999

Subjectivity: 0.8333333333333333

<span style="color:red">Accuracy: False</span>

<span style="color:red">Remark: the only bad part can be positive feedback.</span>

## 4. Insights into the model's strengths and limitations

From part 3 result, there is observation that the model can't comprehend the deeper meaning of the sentence. For example, "the only bad part" can be positive feedback as it can be just skeptic comment or

humor comment from the users. And also in other comment with "impossible to break" , it can reflect that the model has its limit for understanding the sense of humor from human.

For the strength, in general the model is strong in identifying positive words, which can save a lot of time to target the negative comment and handle them only.