SENTIMENT ANALYIS REPORT

1. The dataset used in this project was taken from Kaggle and holds a list of over 34,000 consumer reviews for Amazon products like the Kindle, Fire TV Stick, and more provided by Datafiniti's Product Database. The dataset includes basic product information, rating, review text, and more for each product. In this project, I was mainly interested in the review section so the rest of the data was unnecessary. This, therefore, required the data to be processed and reduced before any analysis could happen.

2. To begin with, I converted the csv file to a pandas dataframe. Next, I passed this df through the dropna() function stating the name of the reviews columns of data in that function. This essentially scrapes the data in the column and clears any rows that return null which could cause difficulties in processing later on. I now have a single column of data, which has been cleaned and is ready to be moved on for analysis.

3. The processing involved passing the data through spacy's nlp analysis for polarity and sentiment. However, without any direct application for sentiment analysis, I was required to utilise a separated library (TextBlob) which integrates with spacy to perform this form of sentiment analysis, which displays one limitation with the spacy module.

The results are generally very informative and accurate with portraying the general sentiment of the review. Below is an excerpt from the script that was run which iterated through the first ten row (first ten reviews) in the review column, each being subjected to the same analysis. The model is able to make a pretty accurate analysis regardless of the length of the entry, and is able to pick up on reinforced language used to portray the positive/negative sentiment of the reviews. It's also very fast and makes the analysis and judgment a lot quicker than a human could. One limitation was that the spacy module required integration with another package to perform sentiment analysis. Upon research of the model, spacy is a pre-trained ML model which means it's using patterns and data it's been trained with but is not as flexible to pick up original or unique nuances in the data, compared with other models that might be more fine-tuned and able to utilise unlabelled data to achieve better performance in more niche circumstances. Overall, a very impressive model.

Output from the script after running the analysis:

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I thought it would be as big as small paper but turn out to be just like my palm. I think it is too small to read on it... not very comfortable as regular Kindle. Would definitely recommend a paperwhite instead.
Sentiment(polarity=-0.10897435897435898, subjectivity=0.34871794871794864)
Negative
This kindle is light and easy to use especially at the beach!!!
Sentiment(polarity=0.2777777777777778, subjectivity=0.8444444444444444)
Positive
Didnt know how much i'd use a kindle so went for the lower end. im happy with it, even if its a little dark
Sentiment(polarity=0.165625, subjectivity=0.525)
Positive

I am 100 happy with my purchase. I caught it on sale at a really good price. I am normally a real book person, but I have a 1 year old who loves ripping up pages. The Kindle prevents that, it's extremely portable (it fits better in my purse than a giant book), and I have it loaded with lots of books. I finish one and start another, without having to go store. It serves all my needs. I picked this one over the Paperwhite because the price was unbeatable and the only difference that I could see was this one wasn't backlit. A simple book light from the Dollar tree solves that issue. This is my second Kindle (the first being the old Keyboard model, which I put down because I fell out of love with the keyboard. Lol) and it most likely won't be my last.

Sentiment(polarity=0.24049707602339182, subjectivity=0.5445279866332497)

Positive

Solid entry level Kindle. Great for kids. Gifted for a kid of my friend and they love to use it to read more than their iPads. battery is good but higher model is a bit better.

Sentiment(polarity=0.46875, subjectivity=0.5687500000000001)

Positive

This make an excellent ebook reader. Don't expect much from this device except to read basic ebooks. The good thing is it's cheap and good to read in the sun.

Sentiment(polarity=0.5, subjectivity=0.5375)

Positive

I ordered this for my daughter, as I have the black paperwhite, and I love it. I read quite a bit and the larger books were driving me crazy having to hold them up while laying down, or wanting to take a book on vacation and lugging around a thick paperback, with this I can throw it in my bag and read anywhere. Its light weight, easy to use, the battery life lasts for weeks, which makes it an all around awesome device. My daughter is in public school and they offer an online library for E-Readers, so she can now download books for free from school! You can also download your own public library app (if your county offers that) and read free from there as well. You can shop for e-books straight from the device through Amazon.com.

Sentiment(polarity=0.18194444444444446, subjectivity=0.5539930555555556)

Positive

I bought my Kindle about 2 months ago and the battery is already dead and will not charge

Sentiment(polarity=-0.2, subjectivity=0.4)

Negative

amazon kindle is always the best ebook, upgrade every new model

Sentiment(polarity=0.5681818181818181, subjectivity=0.37727272727272726)

Positive

It's beyond my expectation, and it can even show music score. Not fast turning though.

Sentiment(polarity=-0.1, subjectivity=0.6)

Neutral

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