**Documentation**

**1) An overview of the function of the code (i.e., what it does and what it can be used for).**

The project’s goal is to perform sentiment analyses using amazon reviews on electronic products. The objective is find out which Amazon product has lower reviews and which ones are the highly rated products. The dataset contains 30000 samples containing details such as product name, id, reviews.dorecommend, reviews.text, rating (https://www.kaggle.com/datafiniti/consumer-reviews-of-amazon-products).

**2) Documentation of how the software is implemented**

Customer provided ratings between 1 through 5. 3 was considered neutral rating. Any rating above 3 was considered positive rating and ratings below 3 are considered negative rating. An overview of the statistics of data revealed that mean of review is 4.58. The dataset was then split into training and testing set. All the NaNs were removed. SciKit-Learn's CountVectorizer was used to implement bag of words strategy**.** A classifier was built to determine the review’s sentiment. TFIDF transformer was used to reduce the effect of longer documents. Then, a pipeline was constructed from the extracted feature using Multinomial Naïve Baiyes classifier. Then we tested our model for accuracy. Several other models such as logistic regression classifier, decision tree classifier, random forest classifier were also tested. The highest accuracy was achieved by logistic regression classifier, which was further fine-tuned by fitting gridsearch to the training dataset.

**3) Brief description of contribution of each team member in case of a multi-person team.**

I am working alone in this project.

**4)** **Have you completed what you have planned? Have you got the expected outcome?**

Yes, I have accomplished what I was hoping to achieve through this project. The code is running and the model performance is 93.95%. The video is embedded in the last slide of powerpoint deck.

References:

https://github.com/sukilau/amazon-sentiment-analysis

<https://github.com/mick-zhang/Amazon-Reviews-using-Sentiment-Analysis>