```
#bonus
I did this first in the code and then saw the pdf comment.
    #1.
    Both the FFNN neural network and the Logistic Regression classifier performed around 65%. Specifically, the best the classifier could do was an accuracy of 64% and
    the neural network 67.15%. The difference in accuracy is pretty small. Both models were quite simple but the logistic regression classifier was the simplest. The only
    extra parameter other than using a tfidf vectorizer for feature extraction was that I noticed a class imbalance so I added the parameter balance = weighted. On the other hand, the neural network
    was a bit more complex because it required the use of a library of word embeddings and quite more computation. Specifically, the model I trained had 2 hidden layers,
    300 neurons,30 epochs and pretty small learning rate. I used softmax as the output layer function, sigmoid for activation as the RELU function gave lower results,
    and a SGD as an optimizer and an nn.LLoss function. Removing stop words didn't really help and as I understand it's very common to keep them in sentiment analysis.
    The neural network did perform better overall but the computational cost I believe in such a simple model and task is far greater in contrast to the results.
```