1. I tried the Latent Dirichlet Allocation (LDA) algorithm to solve the given problem. LDA builds a topic per document model and words per topic model, modeled as Dirichlet distributions. I used various libraries to pre-process the data (tockenize, Lemmatize, convert it to bucket-of-words, etc.)
2. GIven an extra day, I would have tried simple NLP classification algorithm. I initially misinterpreted the problem and went with LDA. My idea was first to implement LDA (which I successfully did) and then apply a simple classification model to the output of LDA, which is a vector of probabilities of topics (output of LDA). On further analysis, I realized a sentiment analysis algorithm would have done the task in one go.