

# Assignment 3

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**1.** The code is included in submission folder.

**2.** The most similar 20 words for good and bad are generally intuitive. The top 20 similar "good" (e.g. decent, great, fantastic, nice) in general have positive connotation whereas the ones similar to "bad" (e.g. horrible, terrible, awful) are vice versa. The reason is that Word2Vec computes a vector of deep features that represent the way these words are used, so the context of "good" and "bad" accommodates positive and negative words respectively. However there are exceptions, for example the top 20 similar words to "bad" involve "good" and "funny", and top 20 similar words to "good" involve "bad" and "horrible". This may be due to several reasons, it could be, for example, because of the commentors who can sometimes be sarcastic, or the fact that linguistically these 20 + 20 along with "good" and "bad" can occur in similar contexts since all of them are adjectives and the corpus that the model inputs contains both negative and positive comments together.