Sentimental Analysis using Bert Algorithm over LSTM

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Abstract: *Sentiment analysis also referred to as opinion mining, is an approach to natural language processing (NLP) to find out whether the meaning of the given data is positive or negative. There has been a lot of research done in this sector to increase the accuracy of sentiment analysis systems, ranging from basic linear models to complicated neural network models. Other models or algorithms were checked previously but these took longer time for operations and had low accuracy scores overall. So, in this paper, the BERT model, which has been pre-trained on a huge corpus, is offered to address concerns with sentiment analysis systems. Further fine-tuning improves results according to the use cases. The BERT model gives high accuracy, and efficient performance with good predictions as compared to other models in experimental testing. We are particularly interested in performing sentiment mining techniques over transcribed audio recordings to detect the speakers' sentiment using a Google specialised algorithm BERT (Bidirectional Encoder Representations from Transformers), which is a faster and more accurate algorithm for text fields because it can also consider the context of the text. Our study was initially driven by call centre use cases, but it can potentially have applications in other domains such as security and other areas. So in this research project work we will be giving input as an audio file from which the text will be generated, and out of which we will be finding the sentiment of that audio stream by using the BERT model.*

Keywords: LSTM, BERT, Sentimental Analysis, NLP, contextual learning

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