

# Sentiment Analysis Using Machine Learning Model

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**Abstract**—Sentiment analysis detects the emotion or intent behind a piece of text or speech or any mode of communication. These emotions give additional information about the attitude of the writer of the text towards the object of the text. These emotions can be of various types – positive, negative, neutral, angry, happy, sad, etc. The intensity of these emotions is determined by a polarity score, which is beyond the scope of this study. We use sentiment analysis to detect human emotion from speech or text so that we can understand the depth of a situation using machine learning model. By doing this we can get ahead of the situation. Various public and private organizations use sentiment analysis to find the sentiment of the users about their products and services which can help them to feed the machine learning model to get the best results. However, performing sentiment analysis is a challenging task for the researchers in order to find the users' sentiments from the large data-sets, because of its unstructured nature, slang's, misspells and abbreviations. To address this problem, a new proposed a few systems and tried to find the best among them. Those models are Support Vector machine(SVM), Naive Bayes and decision tree. In this comparative study we find Support Vector Machine(SVM) is better and efficient than other two models(Naive Bayes, Decision tree).