

Sentiment Analysis on Twitter Data Related to Online Learning During the Covid-19 Pandemic

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Abstract - With the outbreak of the Corona Virus Disease (COVID-19), nearly all educational associations throughout the world have been working tirelessly to supply online education. Students with opportunities for ongoing learning ensure their well-being. This study is being conducted to learn more about real community experiences with online learning facilities during the pandemic situation and the adaptation of online learning around the world following the pandemic circumstances. The Twitter API has been used to collect tweets for this study and a suitable result was produced after pooling the tweets. Out of the 8976 tweets, 4486 were positive, whereas 4490 were negative. After completing the pre-processing process of tweets, extract the feature vectors using the Term Frequency-Inverse Document Frequency (TF-IDF) vectorizer. Then, the dataset was loaded into supervised machine learning techniques such as Support Vector Machine (SVM) and Artificial Neural Network (ANN) to construct a forecast paradigm for predicting the probability of the society using the online learning procedure. According to the results, ANN beat SVM and achieved an accuracy of 81.97% with higher precision, recall, f-measure values, and lowest error values. The unexpected outbreak of the pandemic caused significant disruptions to students' educational practice. They have a lack of access to technology gadgets, bad internet connectivity, and improper learning conditions. This effort also identifies the peculiarities of current technical techniques knowledge? in the development of distance learning theory. Additional financing and feasible strategies were determined to be required for the development of an efficient teaching-learning procedure for the aforementioned technique in the context of education across the globe.

Keywords - ANN, COVID-19, Machine Learning, online learning, SVM