

## Hate Speech Detection Using Deep Learning and Machine Learning Models

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**Abstract :** Social media has accelerated our ability to engage with others and eliminated many communication barriers. On the other hand, the widespread use of social media resulted in an increase in online hate speech. This has drastic impacts on vulnerable individuals and societies. Therefore, it is critical to detect hate speech to prevent innocent users and vulnerable communities from becoming victims of hate speech. We investigate the performance of different deep learning and machine learning algorithms on three different datasets. Our results show that the BERT model gives the best performance among all the models by achieving an F1-score of 90.6% on one of the datasets and F1-scores of 89.7% and 88.2% on the other two datasets.

**Keywords :** hate speech, machine learning, deep learning, abusive words, social media, text classification

**Conference Title :** ICDIS 2023 : International Conference on Data Intelligence and Security

**Conference Location :** Paris, France

**Conference Dates :** August 24-25, 2023