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## Anti-Semitic Speech Detection and Classification in Online Social Network using Deep Learning

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Abstract: Every individual possesses the entitlement to freedom of speech. However, in the guise of free expression, this privilege is being abused to discriminate against and harm other people. This prejudice is referred to as hate speech. A clear definition of hate speech is language that expresses hatred for an individual or a group of individuals based on traits including race, religion, ethnicity, gender, nationality, handicap, and sexual orientation. Hate speech has become increasingly widespread, both in physical spaces and on the internet, in recent years. Thus, recent studies used a range of machine learning and deep learning techniques with text mining method to automatically recognise the hate speech messages on real-time datasets in order to address this developing issue in social media sites. This project's goal is to examine comments on social networks using Natural Language Processing (NLP) and a Deep Learning method called VADER method. In order to identify the text as positive or negative, VADER neural networks are used to extract the keywords from user generated content. If it's negative, immediately block the comments in accordance with the user's preferences and block the friends in accordance with pre-established threshold values. The proposed framework was deployed in a real-time social networking site with an improved notification system, according to experimental findings

**Keywords:** NLP (Natural Language Processing), Deep Learning Models, Sentiment Analysis, Online Social Networks Keyword Extraction, Text Mining, VADER (Valence Aware Dictionary and Sentiment Reasoner) Algorithms

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