

Depression Prediction using Machine Learning Algorithms

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Abstract: *Depression affects millions worldwide, emphasizing the need for early detection. Leveraging machine learning, our research introduces a novel deep learning model merging text and social media data for depression prediction. Comparative analysis with state-of-the-art methods demonstrates promising results. As heightened social media use correlates with increased depression rates, our study targets probable depressed Twitter users through machine learning. By analyzing both network behavior and tweets, we develop classifiers utilizing diverse features extracted from user activities, revealing that incorporating more features enhances accuracy and F-measure scores in identifying depressed users. Our data-driven approach offers a predictive tool for early depression detection and other mental illnesses. This paper contributes insights into depression detection using machine learning and proposes innovative strategies for improved diagnosis and treatment.*

Keywords: Depression, Machine Learning, Deep Learning, Text Analysis, Social Media, Early Detection, Twitter, Network Behavior, Mental Health, Diagnosis, Treatment