

Detecting Mental Health Conditions from Social Media Text using NLP

Chandaluri Rajesh

Department of Computer Science and Engineering, VNR Vignana Jyothi Institute of Engineering and Technology, Hyderabad, India

Peddarapu Ramakrishna

Department of Computer Science and Engineering, VNR Vignana Jyothi Institute of Engineering and Technology, Hyderabad, India

Abstract:

People now a days using social media to express their feelings, this user generated content express individual's ideas, feelings and mental health. This kind of content offers us a scalable way to examine early signs of mental health disorder. This study offers a framework based on Natural Language Processing (NLP) for identifying mental health issues from social media text, particularly anxiety, depression, and suicidal thoughts. A thorough preprocessing pipeline is used by the suggested system to refine and normalize raw textual data. Because of its strong ability to comprehend semantic and emotional nuances in language, a refined BERT model is used for contextual feature extraction and multi-class classification. After determining the mental health category of the input text, the model presents the findings via an interactive interface. According to experimental results, the approach performs promisingly, outperforming conventional feature-engineered and lexicon-based methods in terms of accuracy. The system has potential applications in digital psychological support services and early mental health screening. However, for practical application, ethical use, data privacy, and responsible deployment are crucial factors

Keywords:

BERT, Emotion detection, NLP, SoftMax, Stopword, Matplotlib.