

ABSTRACT

The significance of mental health issues such as depression and anxiety has become an increasingly prominent global concern, with Indonesia showing an increasing prevalence of these conditions. Social media platforms, such as Facebook and TikTok, provide valuable data sources for detecting mental health problems as their users often share their emotional state on these platforms. This study proposes a BERT-based deep learning approach, utilizing the IndoBERT model, capable of providing multi-label text classifications of depression and anxiety using text contents from Facebook and TikTok in the Indonesian language. The study follows the CRISP-DM process as a methodological framework, which includes stages such business understanding, data analysis, data preparation, and modeling, evaluation, and deployment. This approach supports a structured and thorough investigation involving data handling and model fine-tuning. The final IndoBERT model showed strong results, with an overall macro F1-score of 0.7516, overall accuracy of 0.7863, and a Hamming Loss of 0.1158, while Per-label performance showed that the model identified anxiety more effectively compared to depression. The F1-Score for Anxiety was 0.8064, while for Depression it was 0.6969. To support practical use, the model was deployed as a web-based dashboard which can input Indonesian text and receive predictions of depression and anxiety.

Keywords: Anxiety, CRISP-DM, Depression, IndoBERT, Text Classification