ABSTRACT

Sentiment analysis on social media comments has become increasingly important in line with the growth of digital engagement among Indonesian users. However, the characteristics of social media text, which tend to be short, informal, and rich in slang, pose significant challenges for automatic classification. This study compares the performance of two modern Transformer-based models, namely IndoBERT-base-p1 and DeBERTa-v3-base, in classifying the sentiment of Indonesian-language comments from Instagram Reels. The dataset consists of 60.000 labeled samples for training, 4.461 samples for validation, and an additional 4.461 scraped comments as the test set. All data underwent preprocessing steps including lowercasing, slang normalization, emoji conversion, removal of non-alphanumeric elements, and tokenization using each model's tokenizer. The research workflow comprises data collection, text cleaning, label encoding, tokenization, three-epoch fine-tuning, and model evaluation using Accuracy and F1-Macro, which are appropriate for multiclass classification with potential label imbalance. The results show that IndoBERT-base-p1 achieved the best performance with an Accuracy of 0,9213 and an F1-Macro of 0,8892 on the test set. Meanwhile, DeBERTa-v3-base attained an Accuracy of 0,7848 and an F1-Macro of 0,6717, indicating that the disentangled attention architecture has not yet surpassed a monolingual Indonesian pretrained model when applied to informal social media text. These findings emphasize that monolingual models are more adaptive to the linguistic characteristics and language variations of Indonesian users. This study provides practical contributions to the development of more accurate automatic sentiment analysis systems for digital industries, public opinion monitoring, and the optimization of communication strategies on social media platforms.

Keywords: sentiment analysis, DeBERTa-v3-base, IndoBERT-base-p1, Instagram comments, Transformer model