

ABSTRACT

The increased use of digital wallet applications such as DANA has also given rise to the phenomenon of technostress, which is psychological stress caused by negative interactions with technology. This study aims to identify the aspects that trigger technostress in user reviews of the DANA application on Google Play Store, as well as to classify user sentiment using the Support Vector Machine (SVM) algorithm.

A total of 100,000 reviews were analyzed using the Knowledge Discovery in Databases (KDD) approach, which includes data selection, preprocessing, transformation, modeling, and evaluation. The preprocessing stage involved text preprocessing, FastText embedding, and TF-IDF weighting. Topic modeling was performed using BERTopic with the Sentence-BERT, UMAP, HDBSCAN, and c-TF-IDF components. After the topics were formed, Aspect-Based Sentiment Analysis (ABSA) was conducted, and sentiment classification was performed using SVM with three kernels: linear, polynomial, and RBF.

The results show that a training-to-testing data ratio of 75:25 on undersampled data yields the best performance. The linear kernel achieves the highest accuracy of 97%. Out of nine topics, BERTopic clusters four main topics: connectivity & premium services, ease of use, transaction security, and app services. The first two aspects are dominated by positive sentiment, while the latter two are negative. The topic coherence values of 0.51 (training) and 0.44 (testing) indicate that the model is stable and does not suffer from overfitting.

This research contributes to understanding user complaints and supports the development of data-driven application services.

Keywords: ABSA, BERTopic, DANA, FastText, Sentiment, SVM, Technostress, TF-IDF