

ABSTRACT

The development of artificial intelligence (AI) technology has brought ChatGPT to prominence as one of the most popular chatbot applications in Indonesia. The high adoption rate of ChatGPT has prompted the need for analysis of public opinion to determine whether perceptions of it are positive or negative. This study aims to analyze the sentiment of social media users on X toward ChatGPT and compare the performance of the K-Nearest Neighbors (KNN) method with Naive Bayes in sentiment classification. Data was collected through web crawling of 1,200 Indonesian-language tweets from January 2023 to June 2025, which were then manually labeled into two classes: positive and negative. The preprocessing process included cleansing, case folding, stopword removal, stemming, and tokenization. Two feature representation techniques were used: Bag of Words (BoW) and Word2Vec. The test results showed that the combination of KNN with BoW provided the best performance with an accuracy of 78.33%, outperforming Naive Bayes, which achieved 75.00% with BoW. Conversely, the use of Word2Vec in both algorithms resulted in a significant decrease in accuracy. The conclusion of this study is that the KNN method with BoW is the most optimal configuration for sentiment classification in this study and can serve as a reference for the development of public opinion analysis systems in the future.

Keywords: Sentiment Analysis, ChatGPT, Social Media X, K-Nearest Neighbors, Naive Bayes.