

ABSTRACT

Twitter is a popular social media platform for expressing one's opinions. Text-based "tweets" up to 280 characters can be posted and read on Twitter. Due to its open accessibility, many users freely express their views and thoughts, even regarding ongoing trends in their surroundings. With Indonesia's upcoming presidential election in 2024, the topic of presidential candidates is frequently discussed on Twitter. However, not all opinions expressed on Twitter regarding the election are positive and supportive of specific candidates or political parties. Negative views towards opposing candidates or parties can even cause controversies among the supporters. Hence, sentiment analysis related to the election on Twitter is crucial to monitor public opinions, identify positive and negative sentiments, and gain a more accurate understanding of public preferences and needs. This study employs a classification method using the K-Nearest Neighbor (KNN) algorithm, assisted by Particle System Optimization (PSO), and text weighting using Term Frequency-Inverse Document Frequency (TF-IDF) to improve accuracy. The research findings indicate a predominance of positive sentiments in all three datasets of presidential candidates, with the Ganjar and Prabowo datasets having positive label percentages above 80%, while the Anies dataset maintains dominance despite having a lower percentage. The combination of KNN-PSO successfully finds more optimal parameter K, enhancing accuracy and overall model performance. However, the effectiveness of KNN-PSO can be influenced by dataset characteristics and distribution.

Keywords — *2024 General Election, Twitter, Sentiment Analysis, K-Nearest Neighbor (KNN), Particle System Optimization (PSO)*