1. INTRODUCTION

In the ongoing digital era, social media, particularly the social media x, formerly known as Twitter, has become one of the main platforms for sharing public opinions [1]. Twitter is a relevant source for disseminating information and allows for heterogeneous development [2]. On social media x, users have the opportunity to express their sentiments or views, including those regarding the presidential election in Indonesia. General Elections (Pemilu) are mechanisms used to realize the sovereignty of the people and produce a democratic government in accordance with Pancasila and the 1945 Constitution of the Republic of Indonesia. This election aims to choose the President and Vice President, members of the DPR, DPD, DPRD, as well as regional heads and their deputies who are capable of reflecting democratic values and represent the aspirations of the people in alignment with national development [3].

In its implementation, issues often arise related to fraud, political polarization, and diverse public opinions regarding certain candidates or political parties. Their views on the presidential candidates can be analyzed using sentiment analysis methods, where it can be determined whether the public holds positive, negative, or neutral sentiments. Sentiment analysis is a discipline that specifically examines opinions, evaluations, assessments, attitudes, and emotions expressed in text regarding various subjects, including products, services, organizations, individuals, and other entities [4], [5]. The process of sentiment analysis involves detecting the tendencies of individuals through their writings or texts, aiming to extract information related to sentiments commonly expressed on social media [6]. The method involves identifying the positive, negative, or neutral meanings of the text.

Sentiment analysis on this platform has become a very relevant and interesting focus of research, as evidenced by several recent studies. Some recent studies have achieved good results by adopting innovative methods. For instance, research by Nardilasari et al. addressed the low accuracy of the Naïve Bayes algorithm by replacing it with Support Vector Machine (SVM) in sentiment analysis of the 2024 presidential candidates on Twitter [1]. SVM is a machine learning method that can be used for classification and regression. Operates by identifying the optimal hyperplane that can best separate two classes within the feature space [7]. Similarly, another study exploring various word embedding methods such as GloVe, Word2Vec, BERT, and FastText, demonstrated that the choice of embedding method affects the accuracy of sentiment analysis, with GloVe embedding achieving the highest accuracy of 87.94% in sentiment analysis on the IMDB movie review dataset [8]. GloVe, short for Global Vectors, is a word representation method in vector form used in natural language processing. GloVe is designed to capture the meaning of words based on the statistics of their occurrence in a text corpus [9]. Unlike other methods such as Word2Vec, GloVe integrates global statistical information from the entire corpus, not just relying on local context information of the words [8], [10].

Several related studies have also garnered attention, including research on Covid-19 vaccination sentiment on Twitter using the SVM method with Word2Vec feature extraction. This study improved performance by about 4% compared to using TF-IDF features [11]. There is also sentiment analysis on the projection of the 2024 presidential election using SVM, which achieved high accuracy and provided an accurate picture of public support and views towards the 2024 presidential candidates [12]. Research by Xiaoyan et al. explored the GloVe-CNN-BiLSTM model for sentiment analysis on diverse Twitter texts, demonstrating high accuracy in classifying sentiments across complete, long, and short texts [9].

Given the results achieved by previous studies, this research aims to implement the SVM algorithm to analyze public sentiment towards presidential candidates in the 2024 election on social media X. The objectives are to evaluate the performance of the SVM algorithm in classifying positive and negative sentiments towards the candidates, and to compare the effectiveness of GloVe word embedding and TF-IDF methods in improving sentiment analysis accuracy. This research will focus on evaluating and comparing the performance of SVM with GloVe word embedding and TF-IDF methods in sentiment analysis. The comparison is expected to reveal which method provides more accurate results in depicting public sentiment towards presidential candidates in the 2024 election in Indonesia. The limitations of this research include focusing on sentiment analysis in the Indonesian language, using data from social media X, and tweets posted from January 2023 to December 2023, leading up to the 2024 presidential election. Thus, this research will explore in-depth the potential of GloVe and TF-IDF in enhancing the performance of sentiment analysis in this specific political context.