

## 1. INTRODUCTION

The pre-employment card program is an initiative of the Indonesian government that aims to improve employability skills through online training. The program was launched in 2020 to respond to the economic impact of the COVID-19 pandemic. Which led to rising unemployment and the need for reskilling and upskilling the workforce. The pre-employment card program offers a wide range of online training covering technical and non-technical skills that are expected to help participants find a new job or start their own business. The program has received various responses from the public. These were expressed on the social media platform Twitter. Sentiment analysis of these comments is important to understand the perceptions of Indonesians and to identify areas for improvement by the government.

Social media is a digital platform that allows users to get various information, one of which is on Twitter. has become the largest social media platform in the world. In the implementation of the pre-employment card program, there are still many pros and cons, one of which is on the Twitter social media platform. Sentiment analysis of these comments is important to understand public perceptions of the program, identify problems that may arise, and evaluate the overall effectiveness of the program. Sentiment analysis is the process of identifying and categorizing opinions expressed in a text, especially to determine whether the author's attitude towards a particular topic is positive, negative, or neutral.

The Naive Bayes method is one of the machine learning techniques often used for sentiment analysis due to its simplicity and effectiveness. Naive Bayes works on the assumption that features (words) in text are independent of each other. This method has been proven to perform well in many text analysis applications. However, to understand the extent to which Naive Bayes is effective, the author conducted a comparison with other methods in sentiment analysis, it is necessary to compare the results with several relevant journals. Some studies that use Naive Bayes for sentiment analysis show varying results. For example, research by Dian Nisrina and Kustiyono (2024) used the C4.5 algorithm in analyzing customer satisfaction, which shows that other machine learning methods are also effective in analyzing data and providing valuable insights for service improvement. [1]. In addition, research by Dian Rahmania Hidayati and Kustiyono (2024) developed a decision support system for the recruitment of the best employees using the Weighted Product method, which shows the importance of utilizing data and algorithms in making objective and effective decisions. [2].

Some studies that use Naive Bayes for sentiment analysis show varying results. For example, in the classification study of public sentiment towards the pre-employment card policy in Indonesia with the naive bayes classification method achieved an accuracy of 91.06%. [3]. Analysis of *Twitter* User Sentiment towards the Pre-Employment Card Program in the Midst of the Covid-19 Pandemic Using the *Naive Bayes Classifier* Method this method obtained an accuracy of 81.6%. besides that, Analysis of Public Sentiment towards the Pre-Employment Card Program on Twitter with the Support Vector Machine Method showed an accuracy of 98.34%. [4]. in sentiment analysis on Twitter against the Pre-Employment Card program using the Recurrent Neural Network method with an accuracy of 96%. [5]. Analysis of public sentiment towards the work copyright law with the Naive Bayes algorithm method on twitter social media Achieved 97% accuracy [6]. [6]. Sentiment Analysis on Twitter Social Media to Assess Public Response to Pre-Employment Card Selection with the Cross Industry Standard Process Model for Data Mining (CRISP-DM) method getting 95.67% accuracy [6]. [7]. Implementation of Data Mining Sentiment Analysis of the Pre-Employment Card Program Using the Naive Bayes Algorithm gets an accuracy of 77.58%. [8]. Sentiment Analysis of the Pre-Employment Card Using Text Mining with Support Vector Machine and Radial Basis Function Kernel obtained an accuracy of 85.20%. [9]. Sentiment analysis on pre-employment card policies using the naive bayes method gets 93% accuracy [9]. [10]. The application of sentiment analysis on twitter users using convolution onal neural network and naive bayes methods in the case study of pre-employment cards obtained an accuracy of 75.3%. [9].

This research provides an overview of how the Naive Bayes method compares with other methods in different contexts. However, these 10 journals apply sentiment analysis with varying degrees of accuracy. Naive Bayes performs well, but methods such as SVM, RNN and CNN. Naive Bayes performs well, but methods such as SVM, RNN and CNN perform better in some cases.

The main questions to be answered include:

1. What is the sentiment distribution of comments on the pre-employment card program on twitter?
2. How effective is the Naive Bayes method in classifying comment sentiment?

3. how does the accuracy of the Naive Bayes method perform with other methods used in similar studies?

By answering this question, this research is expected to provide valuable insights into public perspectives on the pre-employment card program and identify the most effective sentiment analysis method to use in this context. The results of this study can also be used by future research.