

## 1. Introduction

Technology, communication, and information are growing rapidly along with the times.. Technological advancements are designed to make everyday life easier, both in doing work and getting information. Among the various sectors affected by the 4.0 era, it seems that the healthcare sector has the most to gain from the merging of physical, digital, and biological systems, although this field may be the least prepared to welcome it [1]. Digital health services are growing rapidly in the past 2 years, some digital services have been integrated with health institutions [2].Of course, going to a health institution to see a doctor can treat the pain we suffer, but if we do not have enough free time or the distance of the health institution is far away, especially with the current conditions that force us not to visit crowded places [3].

Sentiment analysis is a type of analysis that uses linguistic computing, text mining and natural language processing with the aim of analyzing sentiment or ratings on a particular product or service [4]. In sentiment analysis, opinions in a text are categorized into categories such as positive, negative, or neutral. [5]. A positive category means that the comments given against the application have good value. Whereas, a negative category means that the comments given against the application have a less good value. However, there is also a neutral category which means that the application has a value that is not too good and not too bad. Through sentiment analysis, people get help in choosing the right health app. By analyzing positive or negative sentiments in reviews, people can gain insights into other users experiences. This research also aims to understand the extent to which sentiment analysis algorithms and techniques are effective in processing health app review data.

Sentiment analysis has many algorithms that can be used. In this research, the feature extraction used is Word2Vec, Word2Vec is good to use as feature extraction because it can represent each word with a vector. Thus, when using Word2Vec the polarity of the score of each word has an important role in the results of sentiment analysis [6]. In research [6] by Ardhian Fahmi Sabani in 2022, explained that Word2Vec feature extraction as a very good feature extraction is used because it represents each word into a vector.

There are several classifications that can be used in conducting sentiment analysis, in this study the classification used is K-Nearest Neighbor. This classification is used because according to research [7] the KNN method is considered a high-quality approach in behavior analysis, especially in sentiment analysis. In research [7] conducted by Imam Prayoga in 2023, it was explained that, the KNN method used in sentiment analysis of Indonesian movie reviews had an f1-score value of 86.98% which means it has accurate results for performing sentiment analysis.