# I. Introduction

Digital banking transactions in Indonesia grew by 158% between April 2018 and April 2023, driven by advancements in digital technology that foster innovation and competition between digital and conventional banks to offer customers greater convenience, speed, comfort, and security, with transactions reaching IDR 4,264.8 trillion, or nearly IDR 4.3 quadrillion, in April 2023 [1]. Digital banks are financial institutions that offer banking services entirely through digital platforms without the presence of physical branch offices, except for the head office. Every banking activity, such as opening an account, making transactions, to taking care of administration, is done online through applications or digital devices [2]. Based on the regulations issued by the Financial Services Authority No.12/POJK.03/2021, it states that "Digital Bank is an Indonesian Legal Entity Bank (BHI) that provides and carries out business activities mainly through electronic channels without physical offices other than the Head Office (KP) or uses limited physical offices [3]".According to a McKinsey survey [4], digital banking in Indonesia is growing twice as fast as in other developing Asian countries, driven by internet and mobile adoption. Platforms like Raya Digital Bank, launched in January 2022 by the BRI Group, offer services such as transfers, e-wallet top-ups, and payments. User reviews on platforms like Google Play Store help improve app performance, guide feature development, and assist users in selecting digital banking services [5]. The overwhelming number of reviews on the internet makes it difficult for users to find relevant information. However, with effective processing of review data, quality information can be generated, one of which is through the Sentiment Analysis method.

Sentiment analysis, also known as opinion mining, is a field that examines people's opinions, emotions, assessments, attitudes, and feelings toward different entities, such as products, services, organizations, individuals, issues, events, topics, and their characteristics [6]. Opinions play an important role in individual and organizational decision-making, with businesses actively seeking public and consumer opinions through various methods [7]. Sentiment analysis can be done with various algorithms including Naïve Bayes, K-Nearest Neighbor (KNN), Support Vector Machine (SVM), and so on.

The use of sentiment analysis in the digital transformation of commercial banks, which enables a deeper understanding of customer emotions and opinions, and their impact on their loyalty and experience [8]. Multiple algorithms can be utilized in sentiment analysis. Research [9], comparing the combination of Support Vector Machine with three weighting methods including tf.idf, tf.rf, and tf.bin-icf produced the best combination with an accuracy of 88% between Support Vector Machine and tf.idf, then followed by tf.bin-icf and finally tf.rf. In research [10], chose to use the word2vec weighting method because the method has advantages in achieving better accuracy. The classification method used is SVM because the method is effective in handling complex data and has many features, even in high dimensional space, so it can overcome the problem of overfitting and underfitting. The accuracy result obtained from the combination of the two methods is 87%.