

## **Abstract**

**Depression is a major mood illness that causes patients to experience significant symptoms that interfere with their daily activities. As technology has developed, people now frequently express themselves through social media, especially Twitter. Twitter is a social media platform that allows users to post tweets and communicate with each other. Therefore, detecting depression based on social media can help in early treatment for sufferers before further treatment. This study created a system to detect if a person is indicating depression or not based on Depression Anxiety and Stress Scale - 42 (DASS-42) and their tweets using the Classification and Regression Tree (CART) method with TF-IDF feature extraction. The results show that the most optimal model achieved an accuracy score of 81.25% and an f1 score of 85.71%, which are higher than baseline results with an accuracy score of 62.50% and an f1 score of 66.66%. In addition, we found that there were significant effects on changing the value of the maximum features in TF-IDF and changing the maximum depth of the tree to the model performance.**

**Keywords: depression, tweet, depression anxiety and stress scale 42, classification and regression tree**