

## ABSTRACT

Electromyographic signal (EMG) is an electrical signal that comes from muscle contraction. EMG signals are widely used for medical purposes, namely for the rehabilitation process either due to amputation or stroke. EMG signals are also used to analyze muscle which is a decrease in muscle capacity to generate force. There are several general stages in disaster management using EMG signals, namely determining, feature extraction, feature selection and signal classification. Algorithms have a big influence on the handling of muscle errors. However, the study of classification algorithms to solve problems gives a low score, this is because muscle research has not found the best algorithm to handle the problem. So this study aims to improve the accuracy of corruption prevention by comparing 2 classification algorithms, namely the decision algorithm and the k-nearest neighbor (KNN). The method used in this final research assignment is a comparison analysis of the performance of the classification algorithm using 3 test metrics that are accurate, sensitivity and specificity. The test data used were from 10 men aged 20 to 25 years. The experimental results show that the KNN algorithm is superior to 3 test metrics, which is accurate, is superior to 2.65% and a specificity of 4.62% and a sensitivity of 1.49%.

**Keywords:** *EMG, muscle fatigue, classification.*