

## ABSTRACT

One of the current advances in technology is in the field of sensing, which can be used gradually to monitor various matters related to health, one of which is heart rate. Most people deal with stress as a standard part of everyday life. High-intensity or long-term stress can impact our safety and disrupt our lives. This can be avoided by developing a stress detection system based on heart rate using the Neural Network method. The data from 7 research subjects from Telkom University students with dataset parameters including heart rate and footsteps using a Fitbit Charge 3 smartwatch. In this study, the results of system testing were to measure the accuracy of the Artificial Neural Network Algorithm. in stress detection or not from the data that has been examined. The experiment results showed that the performance of the Neural Network algorithm in performing stress detection reached an accuracy of 93,93%.

**Keywords:** heart rate, stress detection, neural network, fitbit