

## **Abstract**

**Humans are individuals who have different characteristics from other humans. Such as the shape of the face, fingerprints, corneas, and the sound of footsteps. The difference is then used for a security system or also called biometrics. Therefore, in the discussion of this research, the research was conducted to test the success rate or accuracy value of the two classification methods of the footstep recognition system that can detect more than one person, with the method used Mel Frequency Cepstral Coefficients (MFCC) as feature extraction, Artificial Neural Network (ANN) and Recurrent Neural Network (RNN) as footstep classification methods. From the two classification methods, the authors conducted research to try to build a footstep recognition system with the ANN classification method for the first system and the RNN classification method for the second system. The results of this study indicate that in the first system, using the ANN Classification method, the accuracy is 93.59, val\_accuracy is 88.74, and the loss value is 44.18. Then for the second system, the results of the RNN classification method obtained an accuracy of 96.66, val\_accuracy of 87, and a loss value of 0.84. There are differences in results between the ANN and RNN classification methods, that in this study the RNN classification method has an accuracy value of 3.07 which is higher than the ANN classification method. So in this study, the success rate of the foot tracking system using the RNN classification method is better than the ANN classification method.**

**Keywords: *Footstep Recognition, MFCC, ANN, RNN, Accuracy***