Conference Proceedings 6th Iraqi International Conference on Engineering Technology and its Applications, IICETA 2023 Pages 447 – 451

Heart Arrhythmia Classification Using Deep Learning: A Comparative Study

Abstract

Heart arrhythmia is an irregular heartbeat that causes heart problems. It can be classified by their seriousness into serious and non-serious arrhythmia. Mainly to diagnose heart arrhythmias, we use Electrocardiogram (ECG). In this paper, the authors compared three different models of classifiers: Convolutional Neural Network, Dense Neural Network and Long Short-Term Memory to classify cardiac arrhythmia into two types normal and abnormal, using the MIT-BIH database. The results show that CNN and DNN have the best result of the models with 99% accuracy while LSTM shows 60 accuracy percent.

Keywords

Arrhythmia Classification; CNN; DNN; Heart Arrhythmia; LSTM; Neural Network