Bahria University
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FINAL YEAR PROJECT REPORT

HEART SOUND CLASSIFICATION USING ARTIFICIAL NEURAL NETWORK

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2019

DECLARATION

We hereby declare that this project report is based on our original work except for Citations and Quotations which have been duly acknowledged. We also declare that it has not been previously and concurrently submitted for any other degree or award at Bahria University or other institutions.

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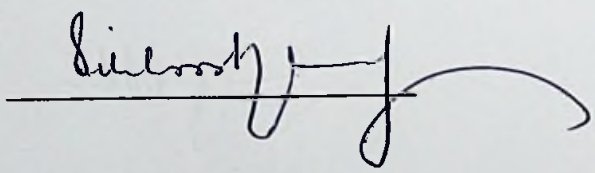
Signature: 

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HEART SOUND CLASSIFICATION USING ACRITICAL NEURAL NETWORK

ABSTRACT

Heart anomalies are many times detected using a stethoscope through a physician. Currently, there are digital stethoscopes and cell gadgets that everybody can use to document their heart sounds, however, besides technical knowledge, it will be difficult for them to understand if there are any anomalies. This project affords a system for classifying these audio heart recordings to five most usually occurring classes: artifact, more coronary heart sound, extra systole, murmur and normal heartbeat. Our research also compares the precision and F-scores of machine studying models, which include Naive Bayes, Support Vector Machines and Decision Trees and CNN. Using the manner outlined in this paper, the results are a significant attraction to the state of the artwork for all classes without for extra systole and normal heartbeats. The paper additionally outlines practicality and subsequent steps to improve audio coronary heart sound classification. The accuracy rate of the ANN system for simulated sounds is matched to the accuracy rate of a group of medical students who were asked to classify heart sounds from the same group of sounds classified by the ANN system.

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