

Title: Observation of Heart Attack Patients Utilizing Machine Learning with Monarch Butterfly Optimization and IoT(Conference Paper)

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Abstract

Heart attack is a significant reason of human's death and disability and required emergency medical help which makes it a major global health issue. Previously, various models have been developed to accurately predict the heart attack utilizing non-invasive and portable technologies but very few of these works have used feature optimization method. Thus, the present work proposed a novel method by employing cutting-edge techniques like ML and IoT to predict the heart attack possibility accurately by analyzing vital signs of a human. This work has two stages (ML heart attack stage and an IoT monitoring framework) for predicting the heart attack possibility. Many steps build the ML prediction stage, including building a dataset, employing feature optimization algorithm to the dataset, prediction of heart attack through ML algorithms. The proposed work focused on human vital signs to diagnose and predict heart attack accurately. The proposed framework utilized the Monarch Butterfly Optimization algorithm to discover the best features from the dataset. The suggested framework acquired 100% accuracy by using the performance analysis of the models in predicting the possibility of

occurring heart attack. In addition, an IoT-based monitoring system integrated with a smartphone app is proposed to collect the user's physiological data. The monitoring system will be connected to the cloud for data processing and prediction. The system can also be beneficial to getting help in emergency critical situations after happening a heart attack. © 2023 IEEE.

Author keywords

and Feature ExtractionHeart AttackInternet of Things (IoT)Machine Learning ClassifiersMonarch Butterfly Optimization

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