A

Project Report

On

STROKE PREDICTION USING MACHINE LEARNING

Submitted to

Department of
Computer Science and Engineering

By

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2022-2023

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE

This is to certify that the project entitled **"STROKE PREDICTION USING MACHINE LEARNING"** is submitted by BANDI BEULAH(206Y1A0507), RUCHITHA DOMA(206Y1A0583), CHINTHA VENNELA(206Y1A0519) and BHAVIKA BOMMINENI(206Y1A0511) to the department of Computer Science and Engineering during academic year 2022-23.

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Abstract

Stroke is a medical disorder in which the blood arteries in the brain are ruptured, causing damage to the brain. When the supply of blood and other nutrients to the brain is interrupted, symptoms might develop. According to the World Health Organization (WHO), stroke is the greatest cause of death and disability globally. Early recognition of the various warning signs of a stroke can help reduce the severity of the stroke. Different machine learning (ML) models have been developed to predict the likelihood of a stroke occurring in the brain. This research uses a range of physiological parameters and machine learning algorithms, such as Logistic Regression (LR), Decision Tree (DT) Classification, Random Forest (RF) Classification, and Voting Classifier, to train four different models for reliable prediction. Random Forest was the best performing algorithm for this task with an accuracy of approximately 96 percent. The dataset used in the development of the method was the open-access Stroke Prediction dataset. The accuracy percentage of the models used in this investigation is significantly higher than that of previous studies, indicating that the models used in this investigation are more reliable. Numerous model comparisons have established their robustness, and the scheme can be deduced from the study analysis.

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