A

Major Project Report

on

DETECTION OF BRAIN TUMOR IN MRI IMAGES USING COMBINATION OF FUZZY-C MEANS AND THRESHOLDING

Submitted to

Jawaharlal Nehru Technological University, Hyderabad

in partial fulfillment of the requirements for the award of Degree of

Bachelor of Technology

in

Computer Science & 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 "**DETECTION OF BRAIN TUMOR IN MRI IMAGES USING COMBINATION OF FUZZY-C MEANS AND THRESHOLDING**" is submitted by ***B.Poojitha (196Y1A0510), K.Arishma (196Y1A0554), Ch.Sangeetha (196Y1A0526)*** *and* ***G.Anuhya (196Y1A0543)*** in the partial fulfillment of requirement for the award of degree of Bachelor of Technology in Computer Science and Engineering during academic year 2022-23.

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ABSTRACT

The identification, segmentation, and detection of the infected area in brain tumor is a tedious and a time-consuming task. The different structures of the human body can be visualized by an image processing concept, an MRI. It is very difficult to visualize abnormal structures of the human brain using simple imaging techniques. An MRI technique contains many imaging modalities that scan and capture the internal structure of the human brain. This project concentrates on a noise removal technique, followed by improvement of medical images for a correct diagnosis using a balance contrast enhancement technique (BCET). Then, image segmentation is used. Finally, the Canny edge detection method is applied to detect the fine edges. The experiment results achieved nearly 98% accuracy in detecting the area of the tumor and normal brain regions in MRI images demonstrating the effectiveness of the proposed technique.

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