<u>ACKNOWLEDGEMENT</u>

<u>ABSTRACT</u>

In the human body, the brain is the most central and multi-faceted organ. It is built up of more than 100 billion nerves that can communicate with trillions of associations in the human body. In a recent technology scenario, numerous efforts and promising results are obtained in healthcare systems. The brain tumor is the most complex and challenging disease and cannot get a cure quickly.

The two forms of brain tumor are benign and malignant. The most distressing state of the tumor is malignant, whose patient survival rate is still tricky. Malignant happens because the brain is a critical and complex part of the body. Early detection and diagnosis of tumors increase the patient's survival rate. Distinct techniques and algorithms have been developed to detect and diagnose the tumor. However, still, it is a challenging task to recognize and predict in earlier stages accurately.

This project represents a new methodology to handle the challenges that occur during brain tumor detection using machine learning algorithms. The problems of brain tumor identification and evaluation have been addressed in the study. It is time-consuming to limit the current system, and the accuracy is not efficient. In the proposed treatment model, the random forest classifier technique identifies the tumor with measured precision in less machine time. Our findings concluded that the proposed system has a high tumor detection accuracy rate, disease diagnosis rate, and disease diagnosis time has been measured in less computational time for tumor detection.

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