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Table : II

Analyzing Brain Tumor Detection using VGG-16 and  
VGG-19 for Enhanced accuracy.

AIM:-

The primary objective of this experiment is to comprehend, investigate and analyze the efficacy of integrating VGG-16 clustering and VGG-19 algorithms in the brain tumor detection. The specific aims are as follows:

Introduction:-

In the field of neurology, the urgency of swift and accurate brain tumor detection has prompted a shift towards advanced machine learning. Traditional manual methods, face limitation, pushing the exploration of algorithms like

VGG-16 and, VGG-19. This paper delves into the collaborative potential of two local navigations from the global need of for timely diagnoses through the fundamental of each algorithm. The aim is to uncover the surgery could revolutionize neurology offering a feature automation and precision in the realm of brain tumors.

Related works:

Defecting Brain tumor using h-mos clustering and morphological operations.

Published: 01 Jan 2019.

Brain tumor. Defection. using Color-Based NGrG=16  
clustering segmentation.

Published: 12 December - 2017.

Brain tumor Segmentation based on Extra Tree  
Random forest with high level feature

Published: 14 - September - 2023

Materials:

Data:

specify the dataset used in the study includes.  
the detail MRI Image of the human brain so.  
Categorize whether the brain is healthy. and unhealthy  
brain. No. of Groups: 2 Sample size per sample = 980 Sample size = 1960

Software and Tool

Data analysis and modelling were conducted using python programming language the following libraries and framework were employed.

- Tensorflow: is used for Image Recognition
- Keras is used for the implementation of neural networking

## Results and Discussion:-

### Methods

Proposed System: Random forest

The Random forest method operates by creating multiple decision trees and its prediction is determined as the average of prediction from these individual trees. In constructing each tree a sample is drawn from training dataset with the remaining data used to assess the trees error. The selection of independent variables for node splitting is done randomly.

## Results and Discussion:-

This research endeavors to ascertain the accuracy rate of VGG-16 has the accuracy rate an estimation accuracy of 94.3%. surpasses other models. In contrast, the previous research accuracy rate was

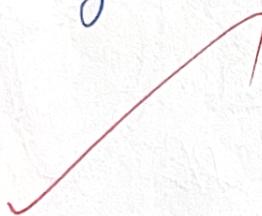
The significant improved underscore the models precision in predicting the Brain tumor in the Various MRI Images.

∴ In the Comparison of VGG-16 and VGG-19,

The VGG-16 Fig(2) has the highest accuracy of - 94.3% and the VGG-19 Fig(2) has the accuracy of 90.62%.

## Conclusion:

In Conclusion, the combination of R-VGG-G-16, and R-VGG-19 algorithms offers a promising direction for improving the brain tumor detection in neurology. This integration holds the potential to automate and enhance precision in Diagnoses. Navigation through the significance of early detection and the collaborative power of these algorithms, it is clear that their synergy is the key to seamlessly integration accuracy across drugness into neurology practice.



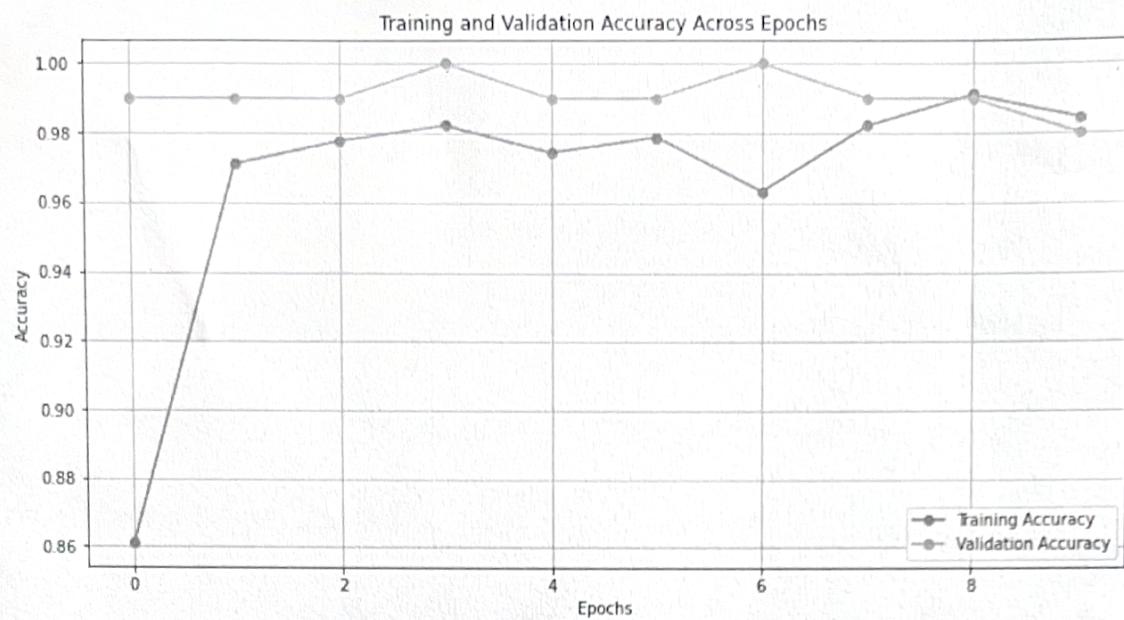


Fig 2.1 - show the accuracy and loss of VGG-16 )

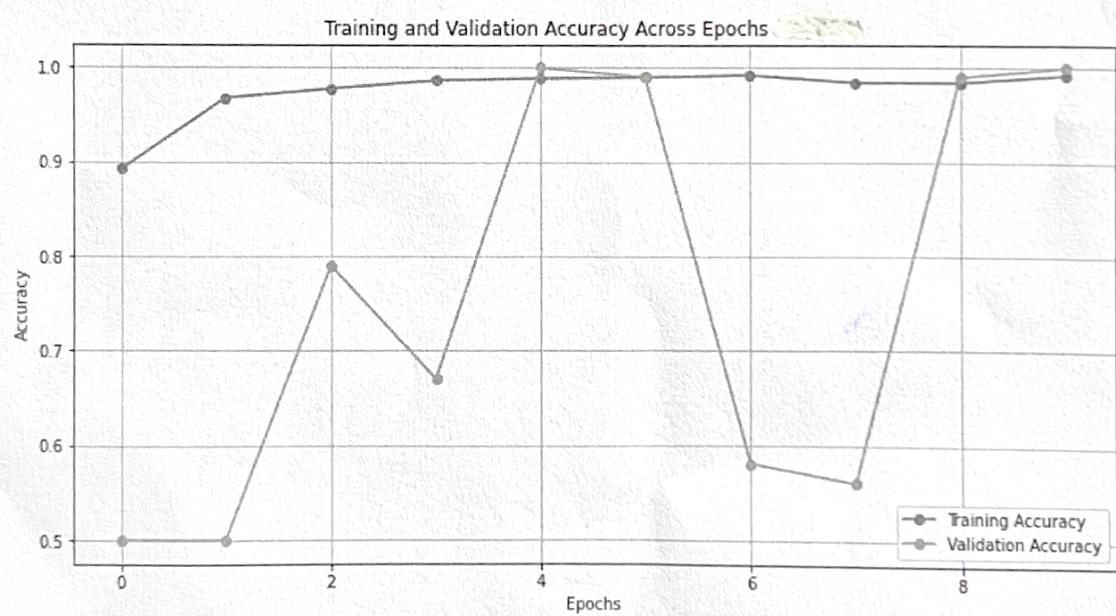


Fig 2.2 - show the accuracy of VGG-19.