

## ABSTRACT

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Advancements of MRI-Based Brain Tumor Segmentation from Traditional to Recent Trends- A Review.

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**BACKGROUND:** Among the brain-related diseases, brain tumor segmentation on magnetic resonance imaging (MRI) scans is one of the highly focused research domains in the medical community. Brain tumor segmentation is a very challenging task due to its asymmetric form and uncertain boundaries. This process segregates the tumor region into the active tumor, necrosis and edema from normal brain tissues such as white matter (WM), grey matter (GM), and cerebrospinal fluid (CSF).

**INTRODUCTION:** The proposed paper analyzed the advancement of brain tumor segmentation from conventional image processing techniques, to deep learning through machine learning on MRI of human head scans.

**METHOD:** State-of-the-art methods of these three techniques are investigated, and the merits and demerits are discussed.

**RESULTS:** The prime motivation of the paper is to instigate the young researchers towards the development of efficient brain tumor segmentation techniques using conventional and recent technologies.

**CONCLUSION:** The proposed analysis concluded that the conventional and machine learning methods were mostly applied for brain tumor detection, whereas deep learning methods were good at tumor substructures segmentation.

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