

# Brain Tumor Detection Using Deep Learning

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**Abstract:** *The brain tumor is one of the most dangerous, common and aggressive diseases which leads to a very short life expectancy at the highest grade. Thus, to prevent life from such disease, early recognition, and fast treatment is an essential step. In this approach, MRI images are used to analyze brain abnormalities. The manual investigation of brain tumor classification is a time-consuming task and there might have possibilities of human errors. Hence accurate analysis in a tiny span of time is an essential requirement. In this approach, the automatic brain tumor classification algorithm using a highly accurate Convolutional Neural Network (CNN) algorithm is presented. Initially, the brain part is segmented by thresholding approach followed by a morphological operation. The brain MRI is classified using CNN, Inceptionv3, and Xceptionv3 algorithms. The performance of the system is evaluated using precision, recall, F1 score and accuracy parameter.*

**Keywords:** Support Vector Machine (SVM) and K-Nearest Neighbor (KNN)

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