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(57) Abstract :
A New Novel Framework to Analyze and Detect the MRI based Brain Tumors and Alzheimer's by using Convolution Neural Network Abstract: Brain tumors are the prevailing and highly malignant condition, often associated with a relatively limited life span in their most advanced stage. Therefore, the process of devising a treatment plan is a crucial measure in enhancing the overall well-being of patients. A brain tumor is a malignant neoplasm and a potentially fatal illness. Therefore, timely identification is vital in the therapy procedure. The health industry's medical diagnosis has greatly benefited from the significant advancements made in the field of deep learning. Convolutional neural networks (CNNs) have been extensively employed as a deep learning method for the detection of brain cancers utilizing MRI data. In order to address the limitations of the dataset, it is necessary to enhance the performance of deep learning algorithms and convolutional neural networks (CNNs) to achieve greater efficiency. Data Augmentation is a widely recognized approach used to enhance the performance of models. This research provides an extensive analysis of several Convolutional Neural Network (CNN) structures and emphasizes the distinguishing features of certain models, such as ResNet, AlexNet, and VGG. Subsequently, we present a highly effective approach for identifying brain malignancies by utilizing magnetic resonance imaging (MRI) datasets, employing convolutional neural networks (CNN) and data augmentation techniques. The evaluation metrics demonstrate that the proposed solution has successfully contributed to prior studies in terms of its sophisticated architectural design and its high success rate in detection.

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