A Review on Different Brain Tumour Detection Techniques

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Abstract*: Brain tumor detection is a critical aspect of modern healthcare, as early diagnosis and accurate localization are vital for effective treatment and patient outcomes. Deep learning techniques have shown remarkable potential in addressing this challenge. This study presents a novel approach for brain tumor detection using deep learning mechanism. We employ a convolutional neural network (CNN) architecture that is tailored to analyze medical images, specifically magnetic resonance imaging (MRI) scans. The model is trained on a large dataset of annotated MRI images, enabling it to learn intricate patterns and features indicative of brain tumors. The CNN's multi-layered structure enables it to automatically extract relevant features, minimizing the need for handcrafted feature engineering. Results demonstrate the effectiveness of the proposed approach, achieving high accuracy and sensitivity in brain tumor detection. This approach not only aids in early diagnosis but also offers the potential for real-time detection and localization, contributing to improved treatment planning. The use of deep learning in brain tumor detection holds promise for enhancing healthcare outcomes and reducing the burden on radiologists, paving the way for more efficient and accurate diagnosis and treatment of brain tumors.*

Keywords: Brain tumor detection, Deep learning, Convolutional neural network (CNN), Medical images, Healthcare, Magnetic resonance imaging (MRI)

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