

Title: Integrating AI and Neuroradiology

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Abstract: Integrating AI and Neuroradiology Rapid advancement and transformation of the area of neuroradiography by Artificial Intelligence (AI) is offering creative ideas improving diagnosis accuracy and efficiency. Using AI to detect and segment ischaemic strokes on CT and MRI scans-where it may find major artery occlusions and estimate stroke severity scores-is one of the most important uses for the technology in this field. AI models have also shown good accuracy in identifying and segmenting certain forms of cerebral haemorrhage, therefore supporting radiologists in fast and exact diagnosis. By combining imaging, histologic, molecular, and clinical data to simulate tumour biology, AI helps in the context of brain tumours not only in identifying and segmenting tumours but also in monitoring therapy responses. Moreover, AI is being used to measure white matter hyperintensities and identify trends in disorders such multiple sclerosis. 2-4 It also aids in tracking the development of neurocognitive diseases such Parkinson's and Alzheimer's by screening for and classification.

Keywords: Artificial Intelligence (AI), Neuroradiology, Ischaemic stroke detection, CT and MRI imaging, Cerebral haemorrhage segmentation, Brain tumours, Tumour biology simulation.

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