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(57) Abstract:

The present invention relates to an AI-driven system and method for brain tumor detection, diagnosis, and treatment planning. The system integrates advanced MRI image analysis with patient-reported symptom data using deep learning algorithms and natural language processing techniques. It accurately classifies tumor types, predicts tumor characteristics, and provides personalized recommendations for specialized medical centers based on tumor type and location. Additionally, the system generates automated, user-friendly diagnostic reports that include tumor visualizations and treatment options. By incorporating real-time data integration and adaptive recommendations, the invention ensures continuous updates to the diagnostic process, offering a holistic, efficient, and patient-centric solution for brain tumor management.

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