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Paper Title:	A Method for Brain Tumor Segmentation Using DeeplabV3+: Learning Rate Optimization
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Abstract

Glioma is one of the most common types of brain tumor and is very dangerous. For diagnosis and treatment planning, the tumor area in every MRI image must be labeled. Maximizing the performance of the brain tumor segmentation method is a challenge for researchers. In this paper, we propose a method for brain tumor segmentation using the DeeplabV3+. The output node is set to three classes: tumor pixel, background pixel, and brain pixel. The learning rate is fine tune to maximize the accuracy rate. To evaluate the performance of the proposed method, 474 images were used for testing and training the network. The learning rate was adjusted from 0.001 to 0.006 to maximize the performance. The learning rate of 0.005 achieved the highest performance, with an IoU of 0.5062, a precision rate of 0.5762, a recall of 0.8575, and an F1-Score of 0.6464 for tumor segmentation. It shows the satisfactory results.
