

Ensembles of Modalities Fused Model for Ischemic Stroke Lesion Segmentation

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Abstract. ISLES (Ischemic Stroke Lesion Segmentation) challenge aims to automatically recognize the ischemic stroke lesion region of brain MRI (Magnetic Resonance Imaging). The challenge provides seven modalities (CBF, CBV, CT, DPWI, MTT, Tmax), which contain different information. In this paper, we proposed a 2.5-D deep learning framework to effectively extract and fuse information from different modalities. The proposed framework is an ensemble of multiple backbone networks, e.g. U-net, which can yield more robust segmentation results. Furthermore, we explored several data augmentation approaches and found some of them are beneficial for framework performance. 6-fold cross validation is conducted on ISLES 2018 dataset. The experimental results demonstrate the competing performance of our framework.

References