

Medical image segmentation is very useful in imaging diagnosis. In clinical diagnosis, doctors need to segment the focus from the medical image, confirm the size of the tumor, and evaluate the effect before and after treatment. At present, the clinical image segmentation mainly depends on the manual operation of doctors, which depends on the experience of operators, and brings heavy workload to individual doctors. Considering the outstanding achievements of deep learning in optical image segmentation, we are ready to find a suitable neural network to achieve automatic segmentation of medical images.

In order to make the results credible, the data of training network use the open medical data set, and the ROC curve and dice coincidence rate which are commonly used at present are used as the evaluation criteria.

Considering the characteristics of medical image, we plan to use U-net to realize automatic segmentation, and adjust the structure of U-net according to the actual segmentation results. The final goal is that the automatic segmentation results can be compared with the traditional segmentation results. If time permits, we will try other types of networks for automatic segmentation and compare the results of different networks.