

Abstract

This segmentation result comes from the method proposed by [1], and the algorithm will be my base line of my research and paper with MRI prostate segmentation method. This submission result comes from changing some detail of my algorithm.

1. Data Preprocessing

First, we need to get the image crop by experienced doctor. In other words, the algorithm need to get a bounding box of prostate which does not to be precise. Then when training and testing steps, the cropped image will be scale to allow the CNN to extract both low-level information and semantic information better. Second, we don't use any data augmentation method like random rotations, shifts, zooms and so on.

2. Network architecture

We use the network architecture in paper [1] and changed nothing in our experiment for now. We will restructure the network later and resubmit the script when the work finished.

3. Implementation

The result of this base line was implemented in Python language with PyTorch deep learning framework backend. The training and testing environment was Ubuntu 16.04 with two GeForce GTX 1080 Ti, 22GB RAM memory totally.

References

- [1] L. Castrejon, K. Kundu, R. Urtasun, and S. Fidler. Annotating object instances with a polygon-rnn. In CVPR, 2017.