View Reviews

Paper ID
44

Paper Title
Holistic network for quantifying uncertainties in medical images

Track Name
QUBIQ: Quantification of Uncertainties in Biomedical Image Quantification Challenge

Reviewer #1

Questions

1. Summary and comments on technical contributions
The author proposed a computationally efficient holistic network which consists of N encoders and N decoders for QUBIQ challenges.
The author claimed that the proposed model could get good results without transfer learning and data augmentations.

2. Constructive comments to authors
Some major concerns from my side:
1. The advantages of the proposed holistic network (e.g. without transfer learning and data augmentations when training from scratch) are not shown in the experiments.
Minor issues:
1. The provided dataset is relatively small. Maybe the proposed model can achieve better performance with some data augmentations.
2. It would be helpful if the figure 2 could be better organized.

3. The rating of the manuscript
Weak Accept

Reviewer #2

Questions

1. Summary and comments on technical contributions
The authors present a holistic architecture to model the segmentation uncertainty.
However, the motivation behind can be better illustrated.

2. Constructive comments to authors
1. Too many typos and wrong statements in the manuscript. Some are as follows:
x. Page 2, "Less number of data samples lead to data imbalance problem" - this is data availability problem, not data imbalance problem. Even there are lots of training samples, there still can be imbalance problem.
x. Page 2, 'previously unseen data'
x. Page 2, 'sometime'
x. Page 2, 'Generally', it should be 'Recently'?
x. Page 2, 'few datasets', should be 'a few'?
x. Page 2, 'Apart from medical images, natural images are usually segmented via semantic segmentation [14]'.
They are all semantic segmentation problems.
Please consider polishing it by proofreading.

2. Experiment results are too few compared to the other part of the paper. A few comparisons such as

comparing with normal U-Net would be great.

3. The rating of the manuscript

Weak Reject