Brain Tumor Segmentation with Random Forest and U-Net

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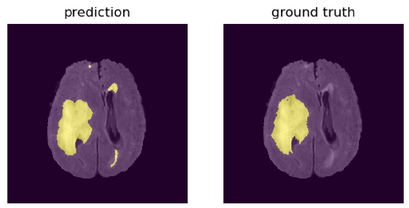
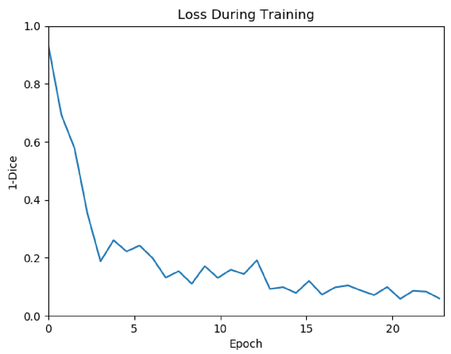
U-Net: Results



Results



Methods

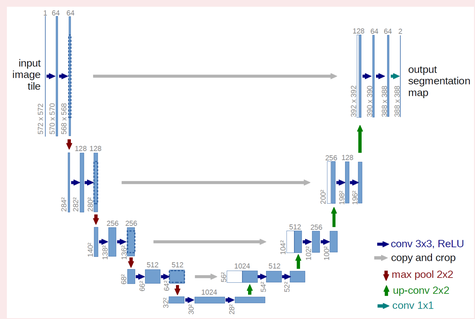
U-Net

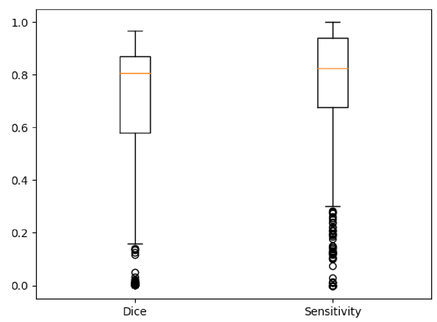
U-Net[2] (commonly used for segmentation of biomedical images)

input image size: 240x240

modifications: depth = 4, loss = 1 - Dice, padding

Training: 2 batches, 30 epochs





Important Result

	Dice [%]	Sensitivity [%]
Random Forest	65.9	77.1
U-Net	63.2	73.1

Conclusion

Additional Information

References

[1] M. Ristin, M. Guillaumin, J. Gall, and L. Van Gool. Incremental learning of random forests for large-scale image classification. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 38(3):490–503, March 2016.

[2] Olaf Ronneberger, Philipp Fischer, and Thomas Brox. U-net: Convolutional networks for biomedical image segmentation. In *International Conference on Medical image computing and computer-assisted intervention*, pages 234–241. Springer, 2015.

Acknowledgements