Exercise 8

Advanced Methods in Medical Image Analysis, Julia Wolleb

Deadline: 22.04.2024

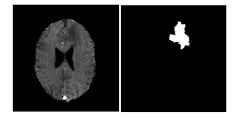


Figure 1: Input brain MR image, and corresponding tumor mask.

Exercise 8: Brain Tumor Segmentation

Implement a segmentation method to segment brain tumors from brain MR images of the Decathlon dataset. Follow the code snippet braintumor-segmentation.py. The code for downloading and preprocessing the dataset is provided.

- \bullet Implement a suitable U-Net architecture for binary segmentation.
- Choose a suitable loss function.
- Report the resulting dice scores on the test set.
- $\bullet\,$ Plot the result for an exemplary image of the test set.