

Deep Learning Lab

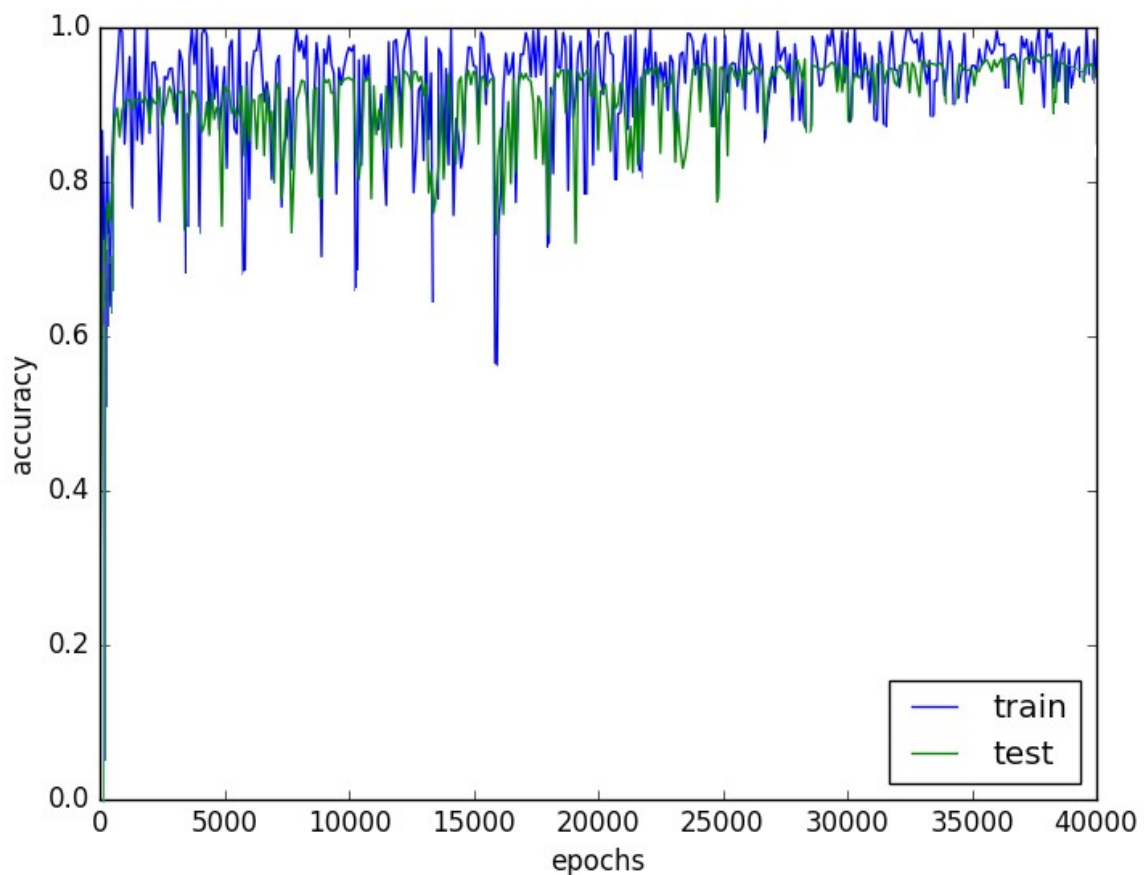
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Exercise 4

In this exercise we train a U-net for cell segmentation. , implemented in Tensorflow.

- U-net Architecture

We have 4 down-sampling layers with increasing number of 3×3 filters followed by RELU activations and a max pooling layer, without padding. Afterward we have 2 convolutional layers and then 4 up-sampling layers, where the input image is cropped and concatenated with the output image from the corresponding down-sampling layer.

The learning curves for 40000 epochs using the Adam optimizer with the setting (0.0001, 0.95, 0.99) and batch size of one can be seen in the figure below.



Below are plotted 2 segmentation examples of the network using the test data.

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