Training report for SplineDist (2D) model (SplineDist_Endosomes_STARD3)
Date: 2022-05-07
Training time: 1.0hour(s) 42.0min(s) 29sec(s)

Information for your materials and method:

The SplineDist (2D) model was trained from scratch for 500 epochs on 17 paired image patches (image dimensions: (200, 200), patch size: (64,64)) with a batch size of 4 and a mae loss function, using the SplineDist (2D) ZeroCostDL4Mic notebook (v 1) (von Chamier & Laine et al., 2020). Key python packages used include tensorflow (v file:///tensorflow-2.8.0-cp37-cp37m-linux_x86_64.whl), Keras (v reprocessing==1.1.2), csbdeep (v 0.6.3), numpy (v 1.21.6), cuda (v 11.1.105
Build cuda_11.1.TC455_06.29190527_0). The training was accelerated using a Tesla K80 GPU.

Augmentation: The dataset was augmented by a factor of 2

Parameters

The following parameters were used for training:

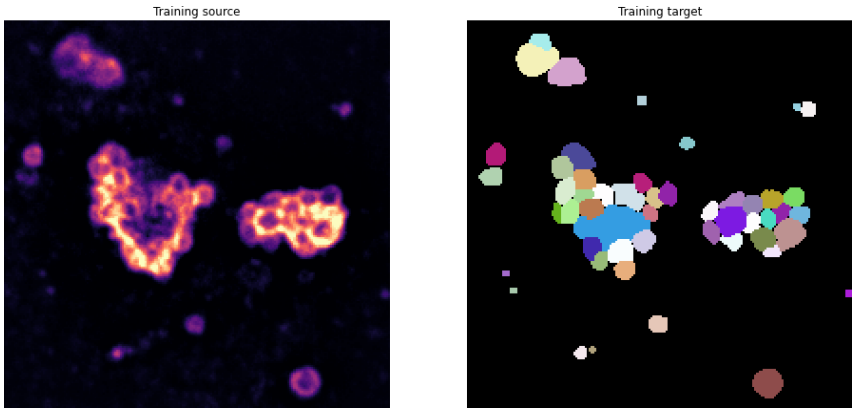
Parameter	Value
number_of_epochs	500
patch_size	64x64
batch_size	4
number_of_steps	100
percentage_validation	0
contoursize_max	79.9
grid_parameter	2
number_of_contour_points	32
initial_learning_rate	0.0003

Training Dataset

Training_source: /content/gdrive/MyDrive/StarDist_Test/Training_Images
Training_target: /content/gdrive/MyDrive/StarDist_Test/Training_Masks

Model Path: /content/gdrive/MyDrive/StarDist_Test//SplineDist_Endosomes_STARD3

Example Training pair



References:
- ZeroCostDL4Mic: von Chamier, Lucas & Laine, Romain, et al. "Democratising deep learning for microscopy with ZeroCostDL4Mic." Nature Communications (2021).
- SplineDist 2D: Mandal et al. "SplineDist: Automated Cell Segmentation with Spline Curves. bioRxiv 2020.

Important:
Remember to perform the quality control step on all newly trained models
Please consider depositing your training dataset on Zenodo