**MAKE U-NET PREDICTIONS – 12/01/2021**

**Inputs:**

* A trained U-Net (.hdf5 file), stored in

CellContactNetwork > Unet Master multiclass > models

* Fused RGB input image, e.g. B02\_fused\_RGB.tif, stored in well folder.

**Output:** U-Net prediction (stored in well folder).

**Code:**

* make\_nn\_predictions.py (script to run) found in

CellContactNetwork > Python

* make\_nn\_predictions\_helpers.py (contains functions) found in

CellContactNetwork > Python > helpers

**How to run it:**

* Activate tenv virtual environment with the anaconda prompt:

Conda activate tenv

If you have not yet created the virtual environment, see manual createVirtualEnv.

* Open spyder by typing spyder in the anaconda prompt and pressing enter.
* Open make\_nn\_predictions.py by dragging the file into the spyder console.
* Fill in the parameters:

**w**: the script will divide the fused image into small overlapping tiles that can be predicted by the network, and w is the width/height of one tile. It must be the same as the width/height of the training images. 512 is recommended.

**ol**: overlap between the tiles. 100 is recommended.

**Root:** the output directory where the well folders that contain the processed images are stored. Example:  
M:/tnw/bn/dm/Shared/Lukas/BEP/Experiments/WKS024/20x

**Well\_list**: list of wells you want to process.

**nr\_color\_channels:** must be the same as the training images of your model.

**nr\_classes**: must be the same as the training labels. 2 means 2 classes (background and foreground).

**output\_title**: how you want the output prediction to be stored. Example: fill in ‘\_boundaries.tif’ if you want to store the prediction of well C02 as ‘C02\_boundaries.tif’.

**unet\_folder:** path to the folder Unet Master multiclass.

**model\_name:** name of the model (.hdf5) file stored in

Unet Master multiclass > models

Text

Description automatically generated