

# Compatibility Notes

## Applying Deep Learning Prediction in 2021.1 with models trained using versions 2019.3-2020.3

### Instructions to maintain compatibility of Deep Learning Prediction with trained models:

Assuming you trained a Deep Learning Model named '*my\_model*' using version 2020.3 or earlier, in order to maintain compatibility of your projects or recipes when executing them with version 2021.1, please do the following:

- Keep your *my\_model.json* (Architecture) and *my\_model.hdf5* (Weights) files as they are,
- Copy the file *Compatibility\_DL\_Before\_2021.1.py* from this folder, to the folder containing your model
- Rename the previous *my\_model.py* file to *my\_model\_Before2021.1.py*
- Rename *Compatibility\_DL\_Before\_2021.1.py* to *my\_model.py*

### Description:

Before 2021.1 version, when the Deep Learning Prediction module is applied on a model, named for instance *my\_model.json* (Architecture) and *my\_model.hdf5* (Weights), it automatically looks for a file named *my\_model.py* to apply specific pre- or post-processing functions which modify its behavior. This file was automatically generated when using the Deep Learning Training module.

With 2021.1, such files are still generated by Deep Learning Training and used by Deep Learning Prediction modules. However, additional options in the *py* file and its usage by the Deep Learning Prediction module make the previous files not fully compatible. One notable change is that the output probability map that used to be an 8-bit field with values in  $[0,255]$ , would now be stored as a 32-bits float map with values in  $[0,1]$ .

In order to maintain a full compatibility when using these models with the Deep Learning Prediction module, please replace the original *.py* file associated with your models, with the file *Compatibility\_DL\_Before\_2021.1.py* provided in this folder.

If you implemented yourself a custom *.py* file, please consult the section *Advanced use for Python programmers*, in the tutorial *Getting started with Deep Learning*, to learn about the new function signatures expected in this file.