VDAE\_Model\_Train\_Custom\_Loss.R -> Train a VDAE model with the architecture and datasets described in the report. If you wish to train a model on different data you should change the initial part of the script concerned with loading data files, as well as dependent variables.  
  
Encoder\_Sampler\_INLA\_Decode.R -> Emulate a SKIRT simulation using the pipeline described in the report. It assumes ‘VDAE\_Model\_Train\_Custom\_Loss.R’ was ran before hand, and that VDAE model exists in a particular file directory. If you wish to use a different model you should then change the segment of the this script concerned with loading the neural network architecture, as well as dependent variables.

Very\_Statte.R -> Creates SEDs and Residuals files, calculates and produces histograms for metrics to evaluate the quality of the emulations. It assumes ‘Encoder\_Sampler\_INLA\_Decode.R’ was ran before hand and that a particular folder structure exists.

Very\_Plotte.R -> Creates several PDF files with plots regarding emulations residuals.

testing\_norm.R -> Script used to validate the photon flux regularization procedure described in the report.

SA\_lib.R -> Library of functions used in the scripts above to identify different types of spaxels and create index maps based on those.

DAT\_lib.R -> Library of functions used in the scripts above to perform different types of operations, from binning to re-scaling, on data.

For an easier use of these scripts download the whole folder tree into your Desktop. If you prefer to place the folder tree somewhere else, or to arrange the folders in a different manner, you’ll have to adapt all “\*path” variables defined in each script so as to reflect those changes.