**AMLT ITMO 2022**

**Task #3**

1. Select one of the datasets with low-resolution images (for example, you can use tf.keras.datasets API (or tf.examples.tutorials for TF 1.X) for loading *fashion\_mnist*, *cifar10* or *cifar100* datasets);

2. Train conditional variational autoencoder to generate new images of the classes presented in your labeled data. You should update all the necessary hyperparameters in “Conditional VAE MNIST” example in order to fit the characteristics of your dataset (image dimensions, number of images, batch size etc.);

*\*to generate more realistic images you can change the number of layers or even use convolutional type of encoder and decoder.*

3. Plot the learning curves to ensure that the algorithm has been converged and there is no overfitting;

4. Select and plot separately N images for every class in your data which, according to your visual perception, have the best quality (N = Nclasses);

5. Complete a task in a single Jupyter Notebook.