

DL-LAB-10-Activities

*Demonstrate the working of **Variational AutoEncoders (convolutional autoencoders)** for image generation using MNIST / Equivalent dataset on Keras/TensorFlow.*

1. Key terms for Image Generation using **VAE**: MNIST/equivalent dataset for training Encoder, Convolution, upsampling (transposed convolution), Latent dimension, Reparameterization trick, Decoder, Loss functions.

Quick References:

➤ **Theory:**

https://deeplearningwithpython.io/chapters/chapter17_image-generation/

➤ <https://keras.io/examples/generative/vae/>

➤ <https://www.kaggle.com/code/esraameslamsayed/generate-images-by-variational-autoencoder-vae>

➤ <https://huggingface.co/blog/RDTvlokkip/when-ai-learns-to-dream>
