# Hands-on Machine Learning Training

### Session 9 – Generative Adversarial Networks

## Preparation

In this session, you will learn how generative adversarial networks work and how they are implemented.
Preparation consists of the following tasks:

- Read and understand the following literature:

  - Goodfellow et al., "Generative Adversarial Networks", NIPS 2014.
  - Alec Radford et al. "Unsupervised representation learning with deep convolutional neural networks", 2015, arXiv:1511.06434

- Based on this literature you should have an understanding of

  - What is a generative adversarial network (GAN)?
  - What is the function of the Generator and Discriminator, respectively?
  - How are GANs trained?
  - How many networks are trained?
  - What is the training objective?
  - What is the difference between a GAN and a DCGAN?