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 [1].

    - Alec Radford et al. "Unsupervised representation learning with deep convolutional neural networks", 2015, arXiv:1511.06434 [2]

- 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?

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[1] https://papers.nips.cc/paper/5423-generative-adversarial-nets.pdf
[2] https://arxiv.org/abs/1511.06434