

# Exercise 2 – Practical Tasks

## Transfer Learning from ImageNet

- **AlexNet, CIFAR10, seed = 42:** Test accuracy = 14.180
- **...pretrained:** Test accuracy = 86.550
- In the second run the network is initialized with weights resulting from previous training on ImageNet, instead of being initialized from scratch according to the definitions of the model. Due to common elements in the two image data-sets, this previous training has generated relevant information also for the application on CIFAR10, why the pre-trained model starts, and ends up with, a performance that is better than that of the previously untrained model.

## Transfer Learning from MNIST

- **CNN\_basic, SVHN, seed = 42:** Test accuracy = 14.920
- **CNN\_basic, MNIST, seed = 42:** Test accuracy = 88.400
- **CNN\_basic - pretrained on MNIST, SVHN, seed = 42:** Test accuracy = 28.834