# Pre-/Post-Test

- Training and evaluating models
- Convolutional Neural Networks
- Recurrent Neural Networks

# Training and evaluating models

1. List possible approaches for improving model performance
2. In real application of Machine Learning for Data Science, which stage from the following list that often consume most of the time?
    a. Data preprocessing
    b. Model construction and training
    c. Model evaluation
3. What does “underfitting” mean? What are the main causes and how to solve this problem?
4. Likewise, What does “overfitting” mean? What are the main causes and how to solve this problem?

# Convolutional Neural Networks

1. Name 4 Conv Nets architectures that lead the breakthrough of Deep Learning models from 2012 – 2015 ImageNet ILSVRC challenge

2. Given an image as input of Conv Nets with size 7x7x3, what is the output shape of convolutional layer with 3x3 filter and stride = 1?

3. How many parameters learnt by Conv Nets in pooling layer?

# Recurrent Neural Networks

1. Name 5 sequential learning tasks with Recurrent Networks and the example of its application

2. Name 2 variants of Recurrent Networks