

# What is our plan?

## Gaussian Processes and Bayesian Optimization

1. Introduction into Gaussian Processes (GP)
2. GP based Bayesian Optimization (BO)
3. Bayesian inference (BI)
4. Structured Gaussian Processes (sGP)
5. Hypothesis learning (HL)
6. GP, BO, sGP, and HL: from 1D to 2D

## Variational Autoencoders: principles and applications

7. Dimensionality reduction and clustering: PCA, NMF, ICA, and more
8. Variational autoencoders (VAE): Introduction and invariances
9. Semi-supervised, joint, and conditional VAEs

## Deep Kernel Learning

10. Deep Kernel Learning – 1
11. Deep Kernel Learning – 2
12. Explainable active ML, DKL forensics, and human in the loop interventions