Our **trainings** introduce the foundations of data analysis and relevant tools for data scientists. During our sessions, we always keep data-driven use cases in sight. Our modular training concept consists of skill building blocks from introductory to expert level. We emphasize applications and a hands-on approach. All trainings take place in a virtual environment or on-site. Our trainers are senior data scientists with extensive experience in research and industry.

Our **TechTrainings** are geared towards technical users - data scientists, analysts, engineers - building data-driven innovation hands-on.

Our **BusinessTrainings** provide insights for decision makers - shedding light on how to put data science and artificial intelligence to work in the enterprise.

We use our **digital laboratory in the cloud**, thus each participant can work at his workspace independently while the trainer is presenting. We focus on interactivity, hands-on and individual support. This is what we aim with our developed and well tested trainings material in *Jupyter Notebooks*, small group sizes and enough time for practice.
Machine Learning with Python

MLP

Get started with machine learning in theory and practice. Strengthen your analytics skills with setting up your first machine learning pipelines for different use cases with *scikit-learn*.

**Level:** ✨ (Intermediate)

**Duration:** 2 days

**Prerequisites:** DAP (or similar know-how)

**Language:** english, german; materials are in english

1. **Introduction to Machine Learning**
   An overview over the field of machine learning.

2. **ML for Classification**
   Learn about classifiers and how to measure the quality of their decisions.
   - **Building an ML Pipeline for Classification**
     Build a classification model and learn about the building blocks of ML with Python.
   - **Feature Engineering and Selection**
     How to build better features.
   - **Algorithm Selection and Hyperparameter Tuning**
     Learn about classifiers and how to measure the quality of their decisions.
   - **Exercise: Titanic Survival Classifier**
     Build your own classification model from scratch.

3. **ML for Regression**
   Learn about regressors and how to measure the quality of their prediction.
   - **Exercise: Predicting House Prices**
     Apply regression to predict house prices.

4. **Building a Recommender Engine**
   Use machine learning to generate movie recommendations.

5. **Unsupervised Learning: Clustering**
   Apply clustering algorithms to detect structure in the data.