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.
Overview and technical introduction to Data Science, Machine Learning and AI to shed light on how to put data driven use cases to work in the enterprise.

**Level:** ★ (Beginner)

**Duration:** 1-2 days

**Prerequisites:** technical interests for data-driven use cases

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

1. **Data Science basics**
   In an open kick-off lecture, we will discuss what is behind Data Science, how you have to set up your team, and people usually talk about when they say they are "doing AI".

2. **Introduction to Machine Learning**
   An overview of the field of machine learning & AI with related use cases. What is a label? When do I need supervised, unsupervised or reinforcement learning?

3. **Bias, Python and statistic basics**
   We need some basics and we will keep it simple.

4. **ML workflow**
   We get an overview of each step, learn more about problems and pitfalls, and find out that machine learning and AI are not magic. We go through a standard machine learning workflow:
   - From data generation, import and preparation
   - via feature exploration and engineering
   - to model definition, training and validation.

5. **ML run-through**
   Build a classification model and learn about the building blocks of ML with Python.
   - **Getting started:**
     Let’s try out different models in Python and see how well your learner can perform.

6. **Use cases, lessons learned and outlook**
   We go through some additional examples of possible ML applications, and what to do, when you really have Big Data.