

Introduction into Machine Learning with Python

Day	Topics
DAY1	<ol style="list-style-type: none">1. Introduction<ol style="list-style-type: none">1. Introduction in the working environment2. Basic ideas of Machine Learning and difference between Artificial Intelligence and Machine Learning.3. Introduction into the module sklearn2. Datasets and Machine Learning<ol style="list-style-type: none">1. Analysing data sets2. Datasets in sklearn3. Artificial dataset generation4. Exercises with Iris and wine data sets and self generated data sets5. Exercises3. k-nearest Neighbor Classifier<ol style="list-style-type: none">1. k-nearest Neighbor Classifier from scratch in Python2. kNN with natural language problems3. kNN with sklearn4. Exercises
DAY2	<ol style="list-style-type: none">4. Naive Bayes Classifier<ol style="list-style-type: none">1. Introduction into Naive Bayes Classifier2. Naive Bayes Classifier with sklearn5. Neural Networks<ol style="list-style-type: none">1. Neural Networks from scratch in Python2. Backpropagation in NN3. Exercises4.5. Neural Networks with sklearn6. Dropout Neural Networks7. Natural Language Processing8. Exercises
DAY3	<ol style="list-style-type: none">6. Neural Networks (Continuation)<ol style="list-style-type: none">1. Neural Networks with sklearn2. Dropout Neural Networks3. Natural Language Processing4. Exercises7. Regression

Participation requirements:

Intermediate Programming knowledges in Python.

Participation in the course „Basic Python Course“ or familiarity with the topics of this course are crucial. The same is true for the course „Python for Data Analysis“. Participation in the course „Python Advanced“ is not crucial but helpful.