

# Python - Introduction to Machine Learning

Course code: PYTHON\_ML

The training provides the necessary introduction to the issue of machine learning in the Python programming language. During five days we will take over the issue of machine learning in practical cases with and without a teacher (supervised and unsupervised learning). The course takes the form of live coding and is therefore extremely intensive. We recommend the candidate to take the previous courses PYTHON\_DATAAN and PYTHON\_STATS. The course is intended for anyone who is interested in machine learning technology, has the ambition to become a data scientist (Data Scientist) and address the issue of advanced analytics. Training can also be a good source of information for project managers and decision-makers who face the challenge of deploying machine learning for the analysis and interpretation of company data and thus gain additional added value to support business activities or to support business managers.

## Requirements per participant

- Knowledge of Python programming at the PYTHON\_INTRO course level
- Knowledge of the basics of data analysis at the level of the course PYTHON\_DATAAN
- Knowledge of the basics of statistical processing in Python at the level of the PYTHON\_STATS course

## Teaching methods

- Expert explanation with practical examples, exercises on computers.

## Study materials

- Online presentation of the subject matter and exercises.

## Course syllabus

- Introduction
- Data collection
- Data preparation
- What is machine learning
- Supervising learning
- Un-supervising learning
- Scikit-Learn module
- Hyperparameters and model validation
- Classifications
- Regression models
- Decision trees
- Clustering - data clustering
- Deep learning
- Conclusion

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