# Python - Introduction to Statistical Analysis

Course code: PYTHON_STAT

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 primarily for mathematical statisticians, data analysts and anyone who wants to use the Python programming language to gain a basic statistical view of the data studied and thus be able to better understand and gain additional added value for their projects.

## Requirements per participant

- Knowledge of Python programming at the PYTHON_INTRO course level

## Teaching methods

- Expert explanation with practical examples, exercises on computers.

## Study materials

- Online presentation of the subject matter and exercises.

## Course syllabus

- Introduction
- Understanding descriptive statistics
- Types of measurements
- Population and sampling
- Outliers
- Selection of Python statistics modules
- We start with Python statistics modules
- Calculation of descriptive statistics
- Calculation of central variance
- Calculation of variability
- Summary of descriptive statistics
- Calculation of correlation between data pairs
- Working with 2D data
- DataFrame
- Data visualization
- Box charts
- Histograms
- Pie charts
- Bar charts
- X-Y charts
- Heat Maps maps
- Conclusion

GOPAS Praha
Kodaňská 1441/46
101 00 Praha 10
Tel.: +420 234 064 900-3
info@gopas.cz

GOPAS Brno
Nové sady 996/25
602 00 Brno
Tel.: +420 542 422 111
info@gopas.cz

GOPAS Bratislava
Dr. Vladimíra Clementisa 10
Bratislava, 821 02
Tel.: +421 248 282 701-2
info@gopas.sk