

Analysis of data in Python (code: LC-PYTHON-ANALYSIS)

Overview

The ability to find and analyse phenomena in large data sets is a must in today's world. Efficient data processing allows you to make effective and competitive decisions – and this guarantees success in business.

Not every company is able to use the potential hidden in data. In order to analyse large amounts of, often incomplete information, you need statistical methods and knowledge of the relevant technologies. You will gain these skills on our course!

Python is one of the most popular languages for data analysis thanks to its wide background of tools.

Pandas , **NumPy** , **matplotlib** and other popular packages represent a mature ecosystem of ready-to-use modules, and the versatility of Python allows, apart from data analysis, to extract, process and export data both as reports and as input files for other applications.

On our course, participants can broaden their knowledge on issues related to data analysis, as well as learn about the most popular tools used for this purpose.

This course covers topics related to data analysis using Python, as well as using any skills acquired during the course to train models used in machine learning.

Duration

80h

Agenda

1. Analyst working environment
 - Anaconda
 - Conda package manager
 - Pip Manager
 - Creating a virtual environment
 - Jupyter notebook
 - Markdown
 - Elements of Latex notation
2. Data processing
 - Introduction to NumPy
 - Creating vectors and matrices
 - Transformations, operations in NumPy
 - * Selection
 - * Vectorisation
 - * Broadcasting
 - Elements of arithmetic and algebra using NumPy
 - * Solving linear equations
 - Introduction to Pandas
 - Series and data frames
 - Retrieving data from different sources
 - * Files
 - * Online resources
 - * Databases
 - Data preparation and cleaning - Operations and transformations DataFrame

Ask for details

Phone +44 203 608 6289

info@alx.training

- Deleting columns and rows
 - Dimensional changes - reshaping
 - Pivoting
 - Ranking and sorting data
 - Combining frames (concatenate, merge, join)
3. Data analysis
 - Visualizations
 - Introduction to matplotlib
 - Graph generation from within pandas
 - Seaborn and other tools for data visualization in Python
 - Basics of statistical analysis
 - Statistical inference
 4. Introduction to machine learning.
 5. Overview of machine learning methods and algorithms
 - Breakdown of machine learning methods
 - Supervised learning
 - Unsupervised learning
 6. Machine learning process
 - Data mining
 - How to choose the best model for the task
 - Data preparation
 - Learning dataset
 - Test dataset
 - Model training
 - Model validation
 - Model overfitting
 - Techniques for data-dimensionality reduction
 7. Overview of machine learning methods
 - Regression
 - Linear regression
 - Polynomial regression
 - Logistic regression
 - Classification
 - Data grouping
 - Dimension reduction
 - Artificial Neural Networks
 8. Combining classifiers
 9. Visualizing the results

Ask for details

Phone +44 203 608 6289
info@alx.training

Target audience and prerequisites

A course for people who know the basics of Python, who want to broaden their knowledge about issues related to data analysis, as well as learn the tools used for this purpose.

There are no requirements, this is a course from scratch. However, basic knowledge of Python will be an additional asset.

Certificates

Course participants receive completion certificates signed by ALX.

Locations

- Online (English) – your home, office or wherever you want
- Warsaw (English) – Jasna 14/16A

— any other location (London, UK, EU) on request

Price

1190 EUR

The price includes:

- course materials,
- snacks, coffee, tea and soft drinks,
- course completion certificate,
- one-time consultation with the instructor after course completion.

Ask for details

Phone +44 203 608 6289
info@alx.training