

# Python and Data Science Training – Complete Tour

## **Introduction to the Python and Data Science Course – Block 1**

- Variable types (integer, float, boolean, etc.) and basic operators;
- Data structures (list, tuple, dictionary, etc.);
- Flow control (if-else, try-except-finally);
- Loops (for, while);
- Combining flow control and loops;
- Functions and methods (function(object) and object.method());
- Importing external modules to access additional functions and methods;
- Syntax principles and best practices.

## **Introduction to Python – Block 2**

- Managing modules;
- Administering the operating system;
- Extracting data from the web (web scraping);
- Cleaning and transforming data using the regex module;
- Working with time using the datetime module.

## **Introduction to Data Science**

- Jupyter Notebook, Spyder, and other tools;
- Introduction to NumPy;
- Introduction to Pandas – Series objects;
- Introduction to Pandas – DataFrame objects;
  - Extra: Introduction to Pandas – Instructions;
  - Extra: Tidy Data;
- Groupby operations and aggregations;
- Data collection from Web APIs and analysis;
- Data visualization;
  - Extra: Geospatial visualization.