

## Automation with Python

Varighed: 4 Days    Kursus Kode: GK2355

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### Beskrivelse:

The focus of this course is on automating IT work with the Python programming language. This refers to writing simple scripts that perform tasks that were previously performed manually. The training focuses on the core of the python programming language, moving towards practical application as quickly as possible. Time is spent on hands-on implementation of real-world applications; the more abstract parts of the python programming language are not covered here. The training connects well with real-world applications, and specific questions can be adequately addressed during the course.

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### Målgruppe:

The training is aimed at IT professionals who need to automate tasks that are normally performed manually. Think of system and network administrators.

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### Agenda:

- After completing this course, the student will be able to automate work using python scripting. Some possible examples:
    - system administrators: automatically perform installations, set up and configure systems, monitor and search log files, etc.
    - network administrators: configuring IP addresses and routing, interacting with a REST API, monitoring and searching log files, etc.
  - Use of Python data types: string, int, float, boolean, list, dict
  - Using Python control structures: if, for, while
  - Writing Python functions
  - Handling errors using exceptions
  - Writing and executing Python Scripts
  - Using Python classes
  - packages, dependencies and virtual environments
  - Installing and using third-party packages using pip
  - opening, reading and editing files, both text and binary
  - And in practice:
    - Executing external (shell) commands from within python
    - Parsing and searching log files
    - Text formats: CSV, XML, JSON
    - Execution of unix shell commands
    - Remote execution of commands over SSH
    - Communication with REST APIs Regular expressions
    - Web interfaces with Flask
    - Scheduling
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### Forudsætninger:

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## Indhold:

### Day 1: Python Introduction

- Use of Python data types: string, int, float,
- Using Python control structures: for, while
- Opening, reading and editing files, both text and binary
- Writing and executing Python Scripts
- Executing unix shell commands

### Day 2: Python continued

- Using Python data types: boolean, list, dict
- Using Python control structures: if
- Writing Python functions
- Remote execution of commands over SSH
- Text formats: CSV, XML, JSON

### Day 3:

- Handling of errors through exceptions
- packages, dependencies and virtual environments
- Installing and using third-party packages using pip
- Web interfaces with Flask
- Scheduling

### Day 4:

- Using Python classes
- Handling of errors through exceptions
- Communication with REST APIs
- Parse and search log files
- Regular expressions

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## Additional Information:

Course participants should have their own laptop with the rights to install software on it. During the course, we will use at least the following software: Python 3.x Pycharm (JetBrains)

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## Flere Informationer:

For yderligere informationer eller booking af kursus, kontakt os på tlf.nr.: 44 88 18 00

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