Python for Test Automation with AI-Assisted Learning - Face-to-Face Training

This 3-day course is designed for testers and QA engineers who want to leverage Python for test automation. Using AI-assisted learning techniques throughout, you will learn Python fundamentals, explore standard and third-party libraries, and dive into test automation frameworks. The training focuses on practical, hands-on experience to build ePective test automation skills.

Objectives

Throughout this training, AI-assisted learning techniques will be used to enhance the learning experience, provide real-time coding assistance, and help generate test cases. By the end of the course, you will have a solid foundation in Python for test automation, hands-on experience with key libraries and frameworks, and the skills to develop ePicient maintainable test suites.

Participants

QA engineers and testers looking to automate their testing processes, software developers interested in improving their testing skills, IT professionals wanting to transition into test automation roles

Requirements

Basic understanding of programming concepts

Familiarity with software testing principles

No prior Python experience required, but helpful

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Content

Day 1: Python Language

Module 1: Introduction to Python
 - Why Python?
 - History and Python releases
 - Python implementations
 - Python 2 vs Python 3
 - Coding style guidelines (PEP 8)
 - Python package management and virtual environments

Module 2: Python Fundamentals
 - Keywords and operators
 - Basic data types and data structures
 - Control structures
 - Exceptions
 - Built-in functions

Module 3: Advanced Python Concepts
 - Functions, classes, modules, and packages
 - Lambda functions
 - List comprehensions
 - Generators
 - Decorators
 - Data classes

Day 2: Python 3 Standard Library

Module 4: Core Standard Library Features
  - Runtime features
  - Application building blocks
  - File system operations
  - Text processing and regular expressions

Module 5: Data Handling and Analysis
  - Dates and times
  - Data persistence and exchange
  - Data compression and archiving
  - Cryptography
  - Mathematics and data analysis

Module 6: Advanced Standard Library Topics
  - Concurrency with processes
  - Networking and Internet/Web services
  - GUI frameworks (brief overview)

Day 3: Python Test Frameworks

Module 7: Basic Testing Concepts
  - Source code verification
  - Unit testing with pytest
  - Property-based testing with hypothesis

Module 8: Advanced Testing Techniques
  - Mutation testing
  - Behaviour-driven testing with behave
  - Keyword and data-driven testing with Robot Framework

Module 9: Practical Application - Crafting Your Own Test Automation Tool
  - In this final module, you will apply the knowledge and skills acquired throughout the course to develop a practical test automation tool of your choice. This hands-on project integrates Python programming, testing frameworks, and AI-assisted development.
  - Choose a project that excites you, adds value to your testing workflow, or addresses a specific challenge in your work environment.

Example Project Ideas:
  - AI-Enhanced Test Case Generator
  - Automated API Testing for Web Applications
  - Behaviour-Driven Development (BDD) Test Automation Framework

FACE-TO-FACE TRAINING

Price *	Duration
-	3 days

Training code: E-PYTH-TA
* Price per attendee, in Euro plus VAT

Face-To-Face - German

Duration

3 days

Coaching

Our coaching services offer a major advantage: our specialists introduce their expertise and experience directly in your solution process, thus contributing to the success of your projects.

We will be happy to provide you with further information or submit a quotation tailored to your requirements.