GoSkills

Python for Automation

GoSkills online course syllabus

Skill level
Beginner

Lessons
30

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Pre-requisites
No prior experience needed

Video duration
1h 16m

Estimated study time
1h 16m

Instructor
Lavanya Vijayan

Introduction

1 ### Automate everything with Python

Python is amazing tool for automation: it simplifies processes, cuts down manual work, and boosts efficiency, making it a top pick for automating all sorts of tasks.

2 ### Check out the course prerequisites

It's important that you're aware of the foundational knowledge that will set you up for success in this course.

3 ### Set up your coding environment and tools

In preparation for the technical aspects of this course, you'll need to make sure you have Python and relevant tools installed.

Automating Data Manipulation and Validation

4 ### Read files with Python

Reading files in Python provides the building blocks for manipulating external data. After this lesson, you'll be able to read text files with Python.

5 ### Write files with Python

Writing files in Python unlocks a new layer of depth by allowing programs to write data that persists after a program is finished executing.

6 ### Use Python's command-line interface

The command-line interface makes it possible for basic automation, such as moving files and allowing a user to enter data while a program is running.

7 ### Organize directories with Python

Organizing directories is a necessary skill, as it allows for more clarity and flexibility in file structure and increased workplace efficiency.

8 Parse data with Python

Parsing allows you to make the data stored in a file more readable and isolate specific pieces of that data.

9 Extract data with regular expressions

Regular expressions are a coding structure that allow you to extract data using patterns in text.

10 Validate inputs with automation

Input validation involves checking that the value entered by a user is formatted correctly.

11 Prepare for error handling

Errors will happen, no matter how experienced you are with Python.

12 Automate error handling

Error handling is a crucial aspect of programming and involves detecting and resolving errors that occur when a program is executed.

Web Scraping with Automation

13 Use BeautifulSoup for web scraping

The BeautifulSoup library in Python provides several functions to support web scraping, which allows you to fetch data from from any website efficiently.

14 Explore HTML structure

Understanding the basis of the HTML system is critical in being able to navigate through a website's information.

15 Inspect your data source

Before starting the process of scraping, it's essential to inspect the data source so you can determine which sections of the page to focus on based on your goals.

16 Request and parse HTML code

Two fundamental steps to web scraping involve creating a request a website, and decoding that response from the website into useful information.

17 Extract data from HTML code

After you receive a response to your request, you'll want to navigate the HTML code to extract specific pieces of data that you need from the larger response.

18 Prepare for scraping multiple pages

In the realm of web scraping, an important skill to gain is creating a scraper that works independent of what page number it’s on.

19 Scrape multiple pages

Time to explore how to scrape information divided onto multiple pages. After this video, you'll be able to scrape multi-paged websites.

Web Browsing with Automation

20 Use Selenium for automating web browsing

Selenium has many useful applications, such as testing website functionality efficiently and automating repetitive browser tasks.

21 Automate basic browser interactions

The most common browser interactions that can be automated are clicking and typing.

22 Automate drag and drop functionality

Some websites have drag and drop functionality, which is a more complex browser interaction.

23 Explore waiting strategies with Selenium

Waiting strategies are pivotal when it comes to interacting with most modern asynchronous loading websites.

24 Implement explicit wait with Selenium

The explicit wait strategy allows you to wait for specific elements to appear on a webpage before automating browser interactions.

Leveraging APIs for Automation

25 Identify the value of APIs

APIs unlock a range of functions that help you automate different processes in Python without having to start building from scratch.

26 Make API requests in Python

Making an API request is the first step to take if you want to use an API.

27 Parse API responses in Python with JSON

After making an API request, the next step is to parse through the response you get back, which is often in JSON format.

28 Use API keys in Python

Many API's are locked behind keys to prevent unwarranted use, so it's critical to understand how to use keys when interacting with APIs.

29 Connect information between APIs

Connecting information between different APIs allows you to create complex software solutions with minimal time investment.

Conclusion

30 Unlock resources and next steps

Congratulations on completing this course!

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