

Python 3: Web Scraping and Dashboarding

For Business and Finance Professionals

Summary

During this hands-on course, participants will work with Python and several popular packages to create programs that acquire, consolidate, analyze and present large data sets. Whether originated from websites or internal databases, this course will demonstrate core techniques to efficiently manage and explore business data through interactive dashboards.



Prerequisites

A general understanding of programming principles and Python is recommended for this course. The course material will build on the content of “Python 1: Core Data Analysis”. Although, not required, participants will benefit from having taken “Python 2: Visualization and Analysis”. Participants should be familiar with Python packages and their installation. Participants are expected to download & install Anaconda or an equivalent Python distribution in advance of the course.



Timing

This course requires 8 hours.

Learning Topics

1. Acquiring Data from Websites (“Web Scraping”)

- ✓ Automate corporate due diligence and data gathering by designing programs to download publicly available information from websites
- ✓ Aggregate alternative data from industry websites
- ✓ Create programs for competitor analysis and price comparisons
- ✓ Review API’s and Python packages used for web scraping, such as *Requests*, *Urllib* and *Beautiful Soup* to parse downloaded data into a format that can be analyzed and visualized
- ✓ Automate user interactions with websites using the *Selenium* package
- ✓ Extract financial and economic data from Yahoo Finance, EDGAR, FRED and other sources
- ✓ Learn to import data from various types of websites (HTML, JSON, XML, PDFs)

2. Automation, Visualization and Dashboarding

- ✓ Build powerful visualizations using more advanced visualization packages such as *Bokeh*, *Seaborn*, and *Plotly*
- ✓ Create interactive dashboards and charts using *Dash* and *Streamlit* packages
- ✓ Tips for moving and creating folders on the fly and importing data from multiple source files
- ✓ Automate extracting and cleaning tables from PDF files