Python Data Visualization

by Rice University

About this Course

This if the final course in the specialization which builds upon the knowledge learned in Python Programming Essentials, Python Data Representations, and Python Data Analysis. We will learn how to install external packages for use within Python, acquire data from sources on the Web, and then we will clean, process, analyze, and visualize that data. This course will combine the skills learned throughout the specialization to enable you to write interesting, practical, and useful programs.

By the end of the course, you will be comfortable installing Python packages, analyzing existing data, and generating visualizations of that data. This course will complete your education as a scripter, enabling you to locate, install, and use Python packages written by others. You will be able to effectively utilize tools and packages that are widely available to amplify your effectiveness and write useful programs.

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Taught by: Scott Rixner, Professor Computer Science



Joe Warren, Professor Computer Science

Taught by:

Basic Info	Course 4 of 4 in the Introduction to Scripting in Python Specialization
⊘ Level	Beginner
① Commitment	This is a four week class with an expected workload of 5-7 hours per week.
::- Language	English, Subtitles: Arabic, French, Bengali, Ukrainian, Chinese (Simplified), Greek, Italian, Portuguese (Brazil), Vietnamese, Dutch, Korean, German, Pashto, Urdu, Russian, Thai, Indonesian, Swedish, Turkish, Azerbaijani, Spanish, Dari, Hindi, Japanese, Kazakh, Hungarian, Polish
How To Pass	Pass all graded assignments to complete the course.
☆ User Ratings	★★★★ Average User Rating 4.6

Syllabus

This module will discuss the importance of using and writing documentation. The Python documentation is a valuable resource for learning about language features you haven't seen yet. 6 videos, 2 readings

- 1. Video: Welcome!
 - 2. Video: Class Structure
 - 3. Video: Using Python Documentation
 - 4. **Video:** Writing Documentation
 - 5. Video: Python Built-in Modules
 - 6. Reading: Code Reuse
 - 7. Video: Installing Packages in Thonny
 - 8. Reading: Practice Project: Drawing a USA Map in matplotlib
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Graded: Documentation

Module 2

This module will teach you about packages and modules in Python, including how to install packages and how to create your own modules. You will also learn to use the Pygal plotting library.

Week 2

6 videos, 3 readings

- 1. Video: Python Packages and Modules
 - 2. Video: Importing Your Own Code
 - 3. Video: Line Plots with Pygal 4. Video: Installing Packages using PIP - Part 1
 - 5. Video: Installing Packages using PIP Part 2
 - 6. **Reading:** Practice Project: Extracting Data from an SVG File
 - 7. Video: Project 1 Video 8. Reading: Project Description: Creating Line Plots of GDP Data

9. **Reading:** OwlTest: Automated Feedback and Assessment

10. App Item: Project Submission History Show less

Graded: Project: Creating Line Plots of GDP Data

Module 3

Week 3

This module will teach you about Python sets. Sets are used to hold unordered collections of data without duplicates. We will also discuss efficiency.

1. Video: Python Sets 2. **Reading:** Hashing

3. Video: Analyzing the Efficiency of Your Code

4 videos, 3 readings

- 4. Video: Comparing Two Methods for Joining CSV Files 5. Reading: Practice Project: Reconciling Cancer-Risk Data with the USA Map
- 6. Video: Project 2 Video 7. **Reading:** Project Description: Plotting GDP Data on a World Map - Part 1
- Show less Graded: Project: Plotting GDP Data on World Map (Part 1)

Module 4

Week 4

3 videos, 3 readings 1. Video: Growing as a Scripter

3. **Reading:** Practice Project: Visualizing Cancer-risk Data on the USA Map 4. Video: Project 3 Video

The final project of the specialization will enable you to demonstrate mastery of the concepts you have learned up to this point.

You will also be able to understand and compare different approaches to reconciling two data sets.

5. **Reading:** Project Description: Plotting GDP Data on a World Map - Part 2

6. Video: Wrapup Video

2. Reading: Version Control

- Show less Graded: Project: Plotting GDP Data on World Map (Part 2)
- How It Works

View Less

General

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Once you enroll,

What do start dates and end dates mean?

Course 4 of Specialization

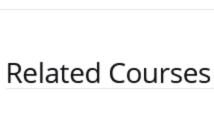
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Python Programming Essentials



Python Data Analysis

Python Developer

Module 1 Week 1