

Python Data Visualization

by Rice University

About this Course

This is 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



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[Joe Warren](#), Professor
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	Basic Info	Course 4 of 4 in the Introduction to Scripting in Python Specialization
	Level	Beginner
	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

Module 1
<p>Week 1</p> <p>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.</p> <p> 6 videos, 2 readings</p> <ol style="list-style-type: none">Video: Welcome!Video: Class StructureVideo: Using Python DocumentationVideo: Writing DocumentationVideo: Python Built-in ModulesReading: Code ReuseVideo: Installing Packages in ThonnyReading: Practice Project: Drawing a USA Map in matplotlib <p>Show less</p> <p> Graded: Documentation</p>
Module 2
<p>Week 2</p> <p>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.</p> <p> 6 videos, 3 readings</p> <ol style="list-style-type: none">Video: Python Packages and ModulesVideo: Importing Your Own CodeVideo: Line Plots with PygalVideo: Installing Packages using PIP - Part 1Video: Installing Packages using PIP - Part 2Reading: Practice Project: Extracting Data from an SVG FileVideo: Project 1 VideoReading: Project Description: Creating Line Plots of GDP DataReading: OwlTest: Automated Feedback and AssessmentApp Item: Project Submission History <p>Show less</p> <p> Graded: Project: Creating Line Plots of GDP Data</p>
Module 3
<p>Week 3</p> <p>This module will teach you about Python sets. Sets are used to hold unordered collections of data without duplicates. We will also discuss efficiency.</p> <p> 4 videos, 3 readings</p> <ol style="list-style-type: none">Video: Python SetsReading: HashingVideo: Analyzing the Efficiency of Your CodeVideo: Comparing Two Methods for Joining CSV FilesReading: Practice Project: Reconciling Cancer-Risk Data with the USA MapVideo: Project 2 VideoReading: Project Description: Plotting GDP Data on a World Map - Part 1 <p>Show less</p> <p> Graded: Project: Plotting GDP Data on World Map (Part 1)</p>
Module 4
<p>Week 4</p> <p>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.</p> <p> 3 videos, 3 readings</p> <ol style="list-style-type: none">Video: Growing as a ScripterReading: Version ControlReading: Practice Project: Visualizing Cancer-risk Data on the USA MapVideo: Project 3 VideoReading: Project Description: Plotting GDP Data on a World Map - Part 2Video: Wrapup Video <p>Show less</p> <p> Graded: Project: Plotting GDP Data on World Map (Part 2)</p>

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How It Works

General
<p>What do start dates and end dates mean?</p> <p>Once you enroll,</p> <p>More</p>

Course 4 of Specialization

Launch Your Career in Python Programming

Master the core concepts of scripting in Python to enable you to solve practical problems.



Introduction to Scripting in Python

Rice University

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	<p>Python Programming Essentials</p> <p>Rice University</p>
	<p>Python Data Representations</p> <p>Rice University</p>
	<p>Python Data Analysis</p> <p>Rice University</p>