5 Courses

Programming for Everybody (Getting Started with Python)

Python Data Structures

Using Python to Access Web Data

Using Databases with Python

Capstone: Retrieving, Processing, and Visualizing Data with Python

UNIVERSITY OF MICHIGAN

06/28/2020

JITHIN MATHEW

has successfully completed the online, non-credit Specialization

Python for Everybody

This Specialization builds on the success of the Python for Everybody course and will introduce fundamental programming concepts including data structures, networked application program interfaces, and databases, using the Python programming language. In the Capstone Project, you'll use the technologies learned throughout the Specialization to design and create your own applications for data retrieval, processing, and visualization.

Charles Severance
Clinical Associate Professor, School of Information
University of Michigan

The online specialization named in this certificate may draw on material from courses taught on-campus, but the included courses are not equivalent to on-campus courses. Participation in this online specialization does not constitute enrollment at this university. This certificate does not confer a University grade, course credit or degree, and it does not verify the identity of the learner.

Verify this certificate at:
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Python for Everybody Specialization

Learn to Program and Analyze Data with Python. Develop programs to gather, clean, analyze, and visualize data.

★★★★★ 4.8 275,435 ratings Share

Offered By

UNIVERSITY OF MICHIGAN

Charles Russell Severance

Enrolled Already enrolled

698,799 already enrolled

About How It Works Courses Instructors Enrollment Options FAQ

WHAT YOU WILL LEARN

- ✓ Install Python and write your first program
- ✓ Use variables to store, retrieve and calculate information
- ✓ Describe the basics of the Python programming language
- ✓ Utilize core programming tools such as functions and loops

LEARNER CAREER OUTCOMES

39% Started a new career after completing this specialization.

WHAT YOU WILL LEARN

- ✓ Install Python and write your first program
- ✓ Describe the basics of the Python programming language
- ✓ Use variables to store, retrieve and calculate information
- ✓ Utilize core programming tools such as functions and loops

SKILLS YOU WILL GAIN

Json | Xml | Python Programming | Database (DBMS) | Python Syntax And Semantics | Basic Programming Language | Computer Programming | Data Structure | Tuple | Web Scraping | Sqlite | SQL

About this Specialization

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LEARNER CAREER OUTCOMES

39% Started a new career after completing this specialization.

19% Got a pay increase or promotion.

Shareable Certificate
Earn a Certificate upon completion

100% online courses
Start instantly and learn at your own schedule.

Flexible Schedule
Set and maintain flexible deadlines.

Beginner Level
No prior experience required.

Approx. 8 months to complete
Suggested 3 hours/week

English

UNIVERSITY OF MICHIGAN **Python for Everybody Specialization** Enrolled

About How It Works **Courses** Instructors Enrollment Options FAQ

There are 5 Courses in this Specialization

COURSE 1

Programming for Everybody (Getting Started with Python)

★★★★★ 4.8 146,985 ratings • 35,166 reviews

This course aims to teach everyone the basics of programming computers using Python. We cover the basics of how one constructs a program from a series of simple instructions in Python. The course has no pre-requisites and avoids all but the simplest mathematics. Anyone with moderate computer experience should be able to master the materials in this course. This course will cover Chapters 1-5 of the textbook "Python for Everybody". Once a student completes this course, they will be ready to take more advanced programming courses. This course covers Python 3.

COURSE 2

Python Data Structures

★★★★★ 4.9 68,554 ratings • 11,926 reviews

This course will introduce the core data structures of the Python programming language. We will move past the basics of procedural programming and explore how we can use the Python built-in data structures such as lists, dictionaries, and tuples to perform increasingly complex data analysis. This course will cover Chapters 6-10 of the textbook "Python for Everybody". This course covers Python 3.

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COURSE 3

Using Python to Access Web Data

★★★★★ 4.8 33,894 ratings • 6,064 reviews

This course will show how one can treat the Internet as a source of data. We will scrape, parse, and read web data as well as access data using web APIs. We will work with HTML, XML, and JSON data formats in Python. This course will cover Chapters 11-13 of the textbook "Python for Everybody". To succeed in this course, you should be familiar with the material covered in Chapters 1-10 of the textbook and the first two courses in this specialization. These topics include variables and expressions, conditional execution (loops, branching, and try/except), functions, Python data structures (strings, lists, dictionaries, and tuples), and manipulating files. This course covers Python 3.

COURSE 4

Using Databases with Python

★★★★★ 4.8 17,023 ratings • 2,549 reviews

This course will introduce students to the basics of the Structured Query Language (SQL) as well as basic database design for storing data as part of a multi-step data gathering, analysis, and processing effort. The course will use SQLite3 as its database. We will also build web crawlers and multi-step data gathering and visualization processes. We will use the D3.js library to do basic data visualization. This course will cover Chapters 14-15 of the book "Python for Everybody". To succeed in this course, you should be familiar with the material covered in Chapters 1-13 of the textbook and the first three courses in this specialization. This course covers Python 3.

COURSE

Capstone: Retrieving, Processing, and Visualizing Data with Python

★★★★½ 4.7 8,979 ratings • 1,171 reviews

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COURSE

5

Capstone: Retrieving, Processing, and Visualizing Data with Python

4.7 8,979 ratings • 1,171 reviews

In the capstone, students will build a series of applications to retrieve, process and visualize data using Python. The projects will involve all the elements of the specialization. In the first part of the capstone, students will do some visualizations to become familiar with the technologies in use and then will pursue their own project to visualize some other data that they have or can find. Chapters 15 and 16 from the book "Python for Everybody" will serve as the backbone for the capstone. This course covers Python 3.

Show Less

Instructor

Charles Russell Severance
Clinical Professor
School of Information

2,203,961 Learners
23 Courses