



4 Courses

Introduction to Python
Programming

Data Analysis Using Python

Introduction to Java and
Object-Oriented
Programming

Inheritance and Data
Structures in Java



Dec 17, 2024

Muhammad Mobeen Zaid

has successfully completed the online, non-credit Specialization

Introduction to Programming with Python and Java

Learners who complete this series of four courses will be able to write fully-functional programs in both Python and Java. Topics in this Specialization include language syntax, style, programming techniques, coding conventions, best practices and good code design, code testing and test-driven development, code debugging, code and program documentation, and computational thinking. The online courses named in this certificate use material from the University of Pennsylvania, but they are not equivalent to a Penn course. Participation in this Specialization does not constitute enrollment at the University of Pennsylvania. This certificate does not confer a University grade, course credit or degree, and it does not verify the identity of the learner.

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.

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Director, Wharton
Customer Analytics
University of
Pennsylvania

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