

Document Generated: 05/21/2026

Learning Style: On Demand

Technology: Microsoft

Difficulty: Intermediate

Course Duration: 48 Hours

Essential Math for Machine Learning: Python Edition



About this Course:

This intermediate-level 48-Hours Training Program covers all the basic and essential concepts of Mathematics to help professionals gain proficiency in working with Python Programming Language. Machine Learning and Artificial Intelligence revolve around the essentials of Algebra and Differential Calculus and often Programmers find it hard to cross this hurdle in the way to professional career success. This course is specifically designed to help such professionals and candidates understand the mathematics essentials in a better and simpler way.

This course is specifically designed to help programming enthusiasts build a basic understanding and knowledge of the key concepts of Algebra, Calculus, Statistics, Probability, and Differential Equations. In this way, professionals will be able to develop the required level of proficiency needed to pursue further education in machine learning and artificial intelligence.

This course presents professionals with an opportunity to work with data and apply the core mathematical concepts and techniques in programming. This course specifically targets the mathematical concepts relating to programming and only sheds light on mathematical areas sharing significance in the world of artificial intelligence and machine learning.

Course Objectives:

The core objective of this course is to help professionals gain a better knowledge and understanding of the following key concepts:

- Fundamentals and Essentials of Mathematical Functions, Equations, and Graph
- Key Concepts of Optimization and Differentiation
- Differential Calculus and Derivatives
- Understanding Matrices and Vectors
- Core Concepts of Probability and Statistics

Audience:

This course is tailored for the following group of professionals and interested candidates:

- Data Analyst and Scientists
- IT Professionals and Expert
- Programmers

Prerequisites:

Professionals planning to enroll in the Essential Math for Machine Learning: Python Edition must comply with the following prerequisites:

- Fundamental Knowledge of Core Concepts of Mathematics
- Practical Experience of working with Python
- Familiarity with Self-Paced Learning Modules

Course Outline:

Equations, Graphs, and Functions

- Lesson 1: Algebra Fundamentals
- Lesson 2: Quadratic Equations and Functions
- Module Assessment

Derivatives and Optimization

- Lesson 1: Differential Calculus Foundations
- Lesson 2: Differentiation and Derivatives
- Module Assessment

Vectors and Matrices

- Lesson 1: Vectors
- Lesson 2: Matrices
- Module Assessment

Statistics and Probability

- Lesson 1: Statistics Fundamentals
- Lesson 2: Probability
- Module Assessment

Credly Badge:



Display your Completion Badge And Get The Recognition You Deserve.

Add a completion and readiness badge to your LinkedIn profile, Facebook page, or Twitter account to validate your professional and technical expertise. With badges issued and validated by Credly, you can:

- Let anyone verify your completion and achievement by clicking on the badge
- Display your hard work and validate your expertise
- Display each badge's details about specific skills you developed.

Badges are issued by QuickStart and verified through Credly.

[Find Out More](#) or [See List Of Badges](#)