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**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

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