SMITHA KOLAN

Machine Learning Roadmap For Absolute Beginners

BEFORE YOU GET STARTED...

The time frame given for each stage assumes that you put in about 8-10 hours/week. If you can spare more time, you might finish the entire roadmap sooner. However, everyone learns at their own pace and feel confident to take more time in understanding certain concepts! Learning is a continuous process.

Take a basic AI course

2 WEEKS

The first step involves taking a basic AI course, one which does not involve any coding or math heavy content. At this point you want to build a solid understanding of what artificial intelligence and. machine learning is. You should also have a basic idea of the subfields in machine learning and what each of them mean.

Recommended resources:

- **COURSERA: AI FOR EVERYONE**
- **EDX: AI FOR EVERYONE BY IBM**

coursera   **edX**   **IBM**

Learn linear algebra & stats

2 MONTHS

The second step involves learning the necessary math involved with machine learning. At this stage, you will focus a lot of statistics, linear algebra and probability. I've split the resources into basic, intermediate & advanced levels:

Beginner

UDACITY: INTRO TO STATISTICS

KHAN ACADEMY: LINEAR ALGEBRA

Intermediate

COURSERA: MATH FOR MACHINE LEARNING

Advanced

STANFORD BOOK: ELEMENTARY STATS

MIT: MATHEMATICS OF MACHINE LEARNING

Learn Python

1-2 MONTHS

The third stage involves learning Python programming. Python is the most popular languages in Tech currently, especially within machine learning and data science. It is also one of the best languages for complete beginners to pick up. Here are some of the best Python resources to learn it:

FREECODECAMP: PYTHON FOR EVERYONE

COURSERA: UNI OF MICHIGAN COURSE FOR PYTHON (INCLUDES DATA STRUCTURES AND BASIC DATA EXTRACTION & DATABASES)

Deep dive into machine learning

3 MONTHS

The forth stage is the deep dive into machine learning with all the math and coding that comes with it.

DUKE UNIVERSITY: INTRODUCTION TO MACHINE LEARNING

UNIVERSITY OF WASHINGTON: MACHINE LEARNING SPECIALIZATION

Practice + learn advanced ML

3 MONTHS

At this final stage, it's time to learn more advanced concepts within machine learning like deep learning. It's also the best time to pick up more advanced machine learning algorithms.

HSE: ADVANCED MACHINE LEARNING

DEEP LEARNING WITH PYTHON BY FRANÇOIS CHOLLET