# Machine Learning with Python — Learn from Notable Educators

Machine learning is one of the hottest new technologies to emerge into popular consciousness in the last decade, transforming fields from consumer electronics and healthcare to retail.

This has led to intense curiosity among many students and working professionals about the field.

Simply put, machine learning is a set of statistical techniques and algorithms designed to find and use structure and patterns in data to make interesting predictions or provide cool insights.

Companies like Amazon, Spotify and Google are actively using machine learning for all kinds of applications: whether it's translating text from one language to another, detecting obstacles in front of self-driving cars or for identifying fraudulent credit card transactions.
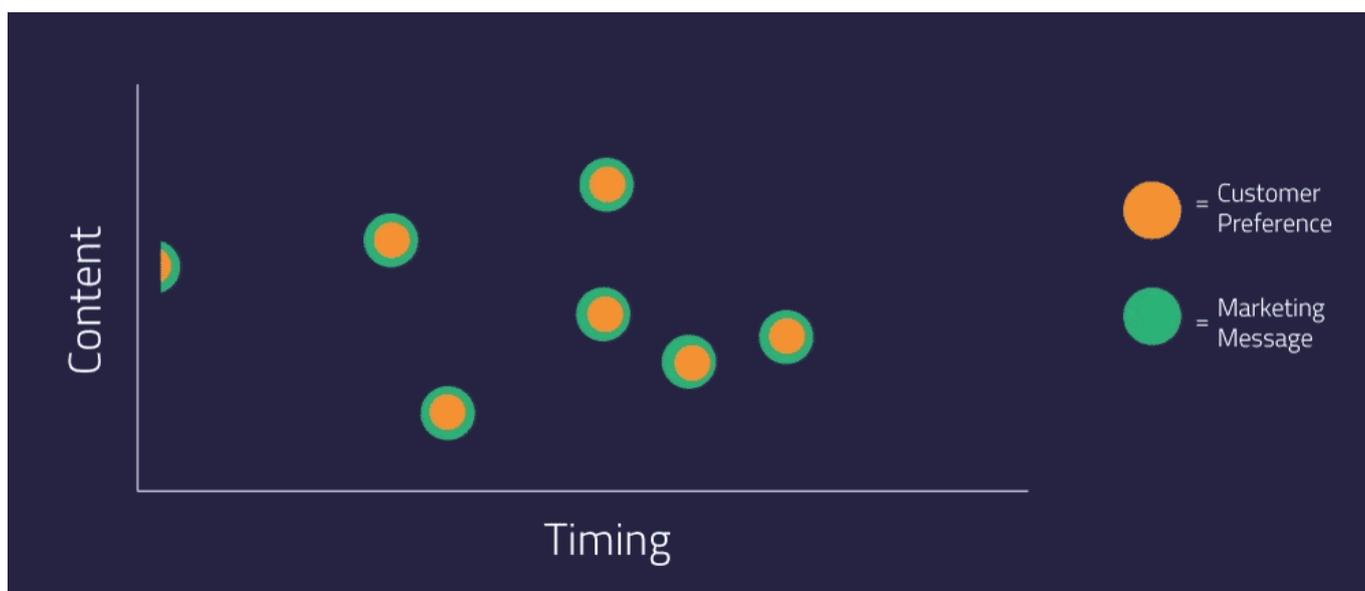
Source: Gifer

If you're a tech professional such as a software developer, business analyst or even a product manager, you might be curious about how machine learning can change the way you work and take your career to the next level.

As a beginner, you may be looking for a way to get a solid understanding of machine learning that's not only rigorous and practical, but also concise and fast. So without further ado, let's start with what you need to learn.

Learn Machine Learning with Python

First off you'll need to learn Python. Python is widely used in Data Science, IOT, Machine Learning, Web Applications or Game Development.

Unlike other Programming languages, Python's syntax is human readable and concise. So as a beginner, this will allow you to grasp the basics quickly, with less mental strain, and you can level up to advanced Machine Learning topics faster.

There are many wonderful free online resources to get started on machine learning but if you're having trouble getting started, I would suggest taking any Python Course and in my personal opinion Introductory course with emphasis on Data Science is much better.

The recommendations in this are suitable for beginner and intermediate learners, and they offer tremendous support to help you intellectually bootstrap your career in the field of Information Sciences.

— Intro Python for Data Science – Beginners

Introduction to Python for Data Science course will provide an overview of the Python ecosystem for Data Science and get you to write your first code in Python.

Most importantly you will receive an in-depth introduction to Pandas and Numpy, powerful and efficient libraries for both Machine Learning and Data Science.

Is it right for you?

DataCamp has several great introductory courses, all taught via interactive exercises. This course is suitable for any motivated individual with burning intellect and insatiable desire learn Data Science or Machine Learning.

GO TO COURSE

> *Once you are able to understand other people's Python code, i strongly recommend taking any Intermediate Python course. DataCamp also offers Intermediate Python for Data Science which will introduce you to advanced topics, helpful to gain functional knowledge for Machine Learning.*

— **Machine Learning with Python** – Intermediate

In this Skill track, you'll be introduced to the world of Machine Learning and learn the fundamental concepts for Machine Learning with Python. This learning track is divided into 5 courses;
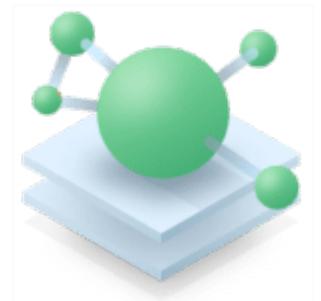
Supervised Learning with scikit-learn

Unsupervised Learning with scikit-learn

Linear Classifiers in Python

Machine Learning with the Experts: School Budgets

Deep Learning in Python

Don't get intimidated with new concepts presented in this Machine Learning Skill track. It will be hard to finish but not impossible. Some concepts will be foreign or straight up weird, just take it again if you have to.

Is it right for you?

In this Machine Learning Skill Track, you can practice with real-life examples of Machine learning and understand the most exciting capabilities in diverse areas

like robotics, natural language processing, image recognition and artificial intelligence by using Keras, the latest version of a cutting edge library for deep learning in Python.

GO TO CAREER TRACK

If you are interested in finding about the quick and best Machine Learning Courses specifically, I've got you covered with this article about Best Courses in Machine Learning on the internet.

Brush up your Math Skills for Python Mathematical Libraries !!!

Mathematics is the bedrock of any contemporary discipline of science. However, You don't need a degree in Mathematics to succeed in Machine Learning. Yet, if you do have a math background, you'll definitely get ahead.

You will need a structured learning approach with achievable goals to upgrade your skills required for Machine Learning. I would strongly suggest to brush up your math skills from the day one of learning Python, irrespective of your background in Mathematics.

In my personal experience, devoting at-least 30-45 minutes everyday will bear much fruit and you'll understand and learn advanced Python topics for Maths and Statistics faster.

In coming days, I will to publish another post about the level of Mathematics you

need for Machine Learning. Meanwhile, Let's briefly dive into this section and use the infographic below to learn about the minimum level of mathematics needed to be a Machine Learning Scientist/ Engineer.

Importance of Maths Topics Needed For Machine Learning
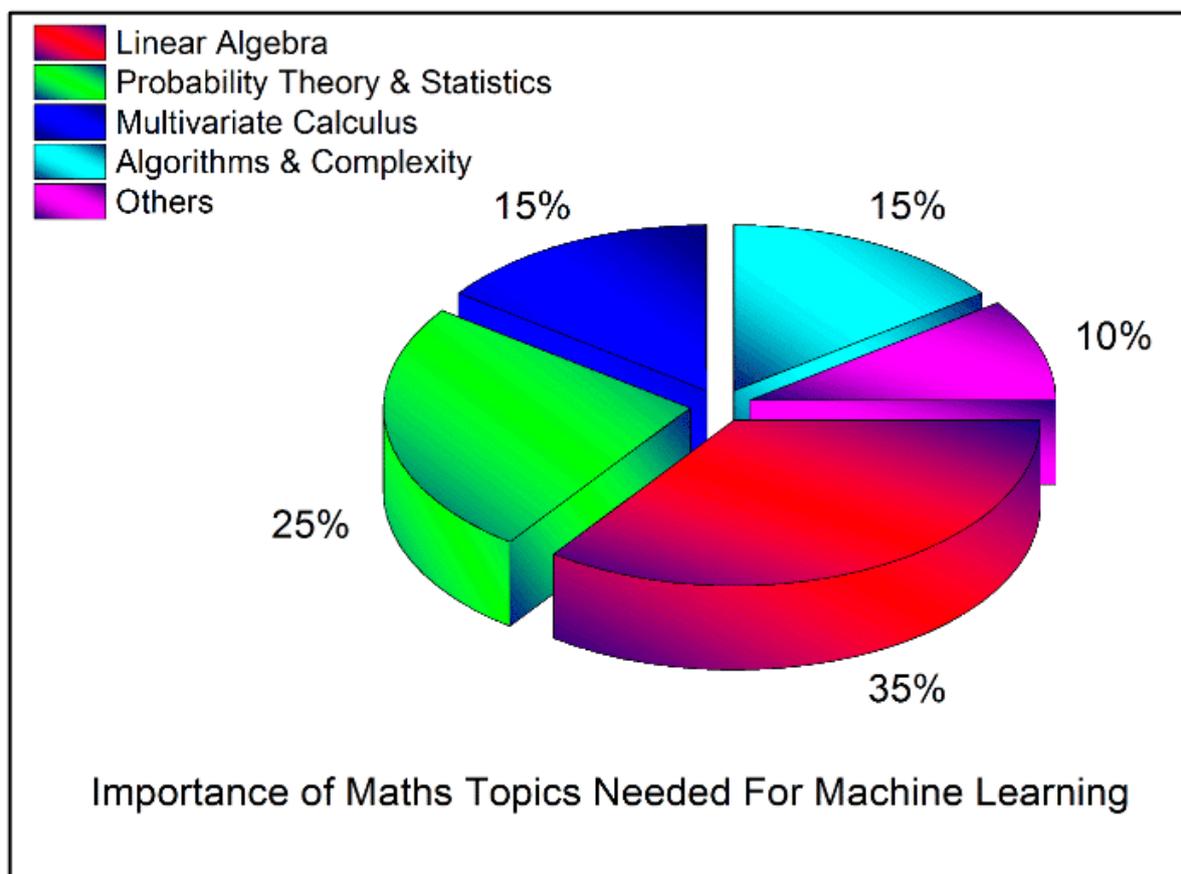
If you want to learn math and statistics for machine learning, i've got two articles for you. One about Math for Machine Learning and Data Science and One about Probability and Statistics for Data Science.

Here are 2 best online classes from World Class faculty to help you master the vocabulary, notation, concepts, and algebra rules that all aspiring Machine Learning Scientists/ Engineers must know before moving on to a more advanced material.

—Mathematics for Machine Learning Specialization

This Specialization is comprised of 3 courses to equip you with intuitive understanding of Mathematics and will help you apply key concepts to machine learning.

Mathematics for Machine Learning: Linear Algebra

Mathematics for Machine Learning: Multivariate Calculus

Mathematics for Machine Learning: PCA

Is it right for you?

Upon the completion of this Specialization, you will have gained the prerequisite mathematical knowledge to continue your journey and take more advanced courses in machine learning.

GO TO COURSE

—Introduction to Mathematical Thinking

This course will help you to think like a Professional mathematician to solve real problems that can arise from the everyday world, or from science, or from within mathematics itself.

This course is not about doing Mathematics but about how you can think the way mathematicians do.

Is it right for you?

You will richly benefit from this course and inculcate a powerful cognitive process for Machine Learning or Data Science.

GO TO COURSE

> Also, If you have little to no background in Maths or need a refresher, i've got you covered in this piece about Mathematics for Machine Learning and Data Science.

Stay on Top of Learning !!!

Machine learning is difficult for beginners as well as libraries for Machine Learning in python are difficult to understand.

Over the past couple month, I have been collecting latest Python Cheat Sheets for Data Science and Machine Learning from different sources.

These cheat sheets will engage you in deliberate practice to help you learn the important Machine Learning Libraries libraries like numpy, pandas, scikit-learn in Python.

> 7+ Python Cheat Sheets for Beginners and Experts
>
> Concise Cheat Sheets of Machine Learning with Python (and Maths)

It's possible to lose motivation while learning, so you can give any of these Python Podcasts a listen to stay current.

If you ever feel stuck, never hesitate to reach out to the fellow learners on Reddit and Stackoverflow, who are one click away to help and support you.

Also, be sure to partake in Kaggle Learning/ Challenges for Machine Learning, you will be able to stay on top of learning and grow faster.

Machine Learning is intimidating and learning without efforts is exceedingly impossible.

It's not going to be easy but if you follow the order and keep practicing Python every day to tighten your grip on the Mathematical Libraries then everything will

eventually become easy.

Thanks for making it to the end 🎉

If you liked this article, I've got a practical reads for you. One about the [Best Machine Learning Courses](#) on the Internet and one about [Math for Machine Learning](#) and Data Science.

> I've also got this great [Data Science Newsletter](#) that you might be into. I send a tiny email once or twice every quarter with some useful resource I've found.
>
> Don't worry, I hate spam as much as you. Feel free to subscribe. ✍️