

Wants to be a Data Scientist in 2023 ?

Here's a complete roadmap for you !

If you are a fresher or an experienced Professional and wants to make a transition into Analytics industry then this roadmap is specifically for you .

Let's go ahead and discuss the roadmap :-

So to start the first thing is to learn about the programming language, Now with respect to the DATA SCIENCE you can learn various programming languages like- Python, R, Java, C++ but my suggestion would be always start with PYTHON programming language.

WHY PYTHON?

Python has abundant number of open-source libraries and packages that can actually help you to implement lot of things just by writing some line of codes, even two tech giants like GOOGLE and FACEBOOK have come up with this tool, open-source libraries like TensorFlow and Py torch which will actually help you to develop lot of amazing DEEP LEARNING applications.

So in the future any kind of research that will be happening with respect to DEEP LEARNING is also compatible with python, and more importantly python is a versatile programming language it can help you in actually implementing **web applications, desktop app applications, mobile app development, machine learning and deep learning** where it will actually help you to develop amazing applications.

So in short if you're learning a Python programming language, you'll get a lot of skill sets.

So guys after familiar with python programming language,

The next thing you really need to learn is Statistics.

So as you know guys Data speaks a lot and you definitely require some tools some and some statistical analysis to extract the useful data.

In statistic we'll definitely learn two different types

1. Descriptive statistic - Bar chart, Histogram, Distribution of the data
2. Inferential statistic- Z-test, T-test, Chi-square test, Anova test

So once you're familiar with all these concepts you'll be able to extract important information from the data and will be able to represent the data to the stakeholders.

So guys once you're familiar with statistics and programming,

The next thing you should definitely learn is Databases.

Databases you really need to focus on are of two types

1. SQL - MySQL, SQL server
2. NoSQL- mongo dB

Now it's time you can probably jump into machine learning,

In machine learning you need to learn somewhere of 20-22 algorithms which will be based on two different types i.e.,

1. Supervised Machine learning algorithm
2. Unsupervised Machine learning algorithm

So once you're familiar with all these algorithms, all these theoretical intuition,

You should also try to implement end-to-end ML projects which will be super important for your career so after you cover ML,

You probably need to jump into Deep Learning part

In deep learning 3 important things you need to learn:-

1. Artificial neural Network
2. Convolution neural network
3. Recurrent neural network

Through these algorithms you'll be familiar with the projects that are related to **Computer vision** and **Natural language processing**

Once you're familiar with all these things definitely I'll say implement many end-to-end projects as you can .

why?

In industry whenever you see any kind of business use cases they are mostly related to **Computer vision** and **Natural language processing**

So at the end of the day once you complete your **Deep Learning part** you will be familiar with **Computer vision** and **Natural language processing**.

So guys this was just the learning roadmap,

Where we discuss about what we really need to learn to become a Data scientist, but as you all know AI (ARTIFICIAL INTELLIGENCE) is evolving a lot and lot of new things are coming everyday lots of research are basically happening lot of problem statement has been solved so with respect to this as an AI practitioner it is always our duty that we stay up to date. with all these new things.

So keep on learning continuously and be up to date with all the recent research that is probably happening.

If I'll give you an example, I hope everyone heard about ChatGPT, It is a kind of large language model and it is built on **Generative AI**, and if I probably see right now lots of startups are specifically working on **Generative AI**.

So, if you're familiar with this particular concepts you can build your own language model with the help of libraries such as 'LANGCHAIN'

So it is super super necessary that you need to stay up to date with all the recent research that is basically happening and through which you'll also be able to implement it in your companies for solving a specific use cases

So once you completed this entire roadmap

Now, I really want to convey for freshers who want to make a transition in **Data analytics industry**.

For a fresher it is super important that you implement lot of end-to-end projects and try to participate in some kind of internships program from various companies.

THANKYOU GUY'S