DATA SCIENCE

Resource Guide :)

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GDSC IIITV

The Problem Statement
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How to go about learning data science?

What is Data Science?
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Data Science is a field in which we use data to make decisions. Every organization generates some data, the job of a data scientist is to analyze the data, get some insights from it, and help in decision making and strategy formation for the organization.

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> ## Data Scientist: The Sexiest Job of 21ˢᵗ Century
>
> –Harvard Business Review
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Skills Required
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So, what skills do you need to learn? And where to learn those skills?

Don't worry, we got you covered!

Python

The most used programming languages in data science are Python and R. Following are the resources to learn python –

YouTube –

1. ▶ Python Tutorial - Python Full Course for Beginners
2. ▶ Learn Python - Full Course for Beginners [Tutorial]

Websites –

1. [The Python Tutorial — Python 3.10.6 documentation](#) (Official Documentation)

2. [Learn Python | learnpython.org](#)
3. [Python Tutorial | w3schools](#)
4. [Pythonspot](#)

SQL

You're going to work with data, you should know how to handle it :), take a chill pill, SQL is quite easy! (Though it might get a tad bit boring sometimes, but hang on, you'll get through it!)

YouTube –

1. ▶️ MySQL Tutorial for Beginners [Full Course]
2. ▶️ SQL Tutorial – Full Database Course for Beginners

Websites –

1. [Intro to SQL: Querying and managing data | Khan Academy](#)

Mathematics

Your pain, I can understand :') but this part is important.

Linear Algebra -

YouTube -

1. [MITOCW Linear Algebra Course by Gilbert Strang](#)
2. [Essence of Linear Algebra by 3Blue1Brown](#)

Websites -

1. [Linear Algebra | Khan Academy](#)

Probability and Statistics -

YouTube -

1. [MIT RES.6-012 Introduction to Probability, Spring 2018](#)
2. ▶ Statistics and Probability: Your first steps on the road to d…
3. ▶ Statistics - A Full University Course on Data Science Basics

Websites -

1. [Seeing Theory](#) **(THIS WEBSITE IS COOL!!)**

Data Analysis and Visualization -

Courses -

1. [Data Analysis with Python](#)
2. [Google Data Analytics Professional Certificate | Coursera](#)
3. [IBM Data Science Professional Certificate | Coursera](#)

YouTube -

1. ▶ Tableau for Data Science and Data Visualization - Crash Cours…

Machine Learning/Deep Learning/NLP -

Courses –

1. [Machine Learning Specialization](#)
   (In my opinion, there's no course better than Andrew Ng's)
2. [Deep Learning by deeplearning.ai | Coursera](#)
3. [https://ml.berkeley.edu/blog/tag/crash-course](#)

YouTube –

1. [ML Zero to Hero – YouTube](#)
2. [Natural Language Processing (NLP) Zero to Hero – YouTube](#)

Need more resources for ML? Head over to the [resource guide for AI/ML](#) :)

Web Scraping -

You need some data to analyze, sometimes you get that data by web scraping.

YouTube –

1. ▶ Web Scraping with Python – Beautiful Soup Crash Course
2. [Python Web Scraping & Crawling using Scrapy – YouTube](#)

Miscellaneous -

Datasets –

1. [Dataset Search | Google](#)
2. [Hugging Face – The AI community building the future.](#)
3. [Find Open Datasets and Machine Learning Projects | Kaggle](#)
4. [Datasets for Data Science, Machine Learning, AI & Analytics – KDnuggets](#)
5. [Machine Learning Datasets | Papers With Code](#)

Pre-trained Models –

1. [Models – Hugging Face](#)
2. [Model Zoo](#)
3. [AI Models – Computer Vision, Conversational AI, and More | NVIDIA NGC](#)

Daily Practice –

- [Bnomial](#)