

Youtube Channels

[Krish Naik](#) [Channel where concepts are taught in an easy manner]
[Code Basics](#) [Theory + Code. Very brief and surface level understanding of the topic]
[StatQuest](#) [Channel where math behind ml model is explained]
[Nicholas R](#) [Channel with Full Walkthrough of ML/DL Projects]
[CampusX](#) [Channel with Very Detailed Explanation]

Book

[Best overall for beginner](#)
[Data science from Scratch](#)

Online Foreign Uni Courses

[CS229 || Stanford](#) [Stanford - CS229 \(Complete Lecture\)](#)

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Pre-requisite

[Coursera - Mathematics for Machine Learning and Data Science Specialization](#)

0. Intro to Machine Learning and its types

- ▶ What is Machine Learning?
- ▶ What is Machine Learning? [In under 4 minutes!]

1. Preprocessing / Exploratory Data Analysis For Tabular Data

In the beginning, we have to learn to work with tabular data. For that the most crucial library is Pandas. [Pandas Documentation](#) [to know everything pandas has to offer]

[Pandas for ML Preprocessing \(Collab Notebook\)](#) [following this should be enough for beginners]
[Coursera - Course 1](#)
[YT Pandas Playlist](#)

2. Supervised Learning: Classification

[Coursera Course 1](#) [Must Watch]

Algorithm To Learn: Logistic Regression, Support Vector Machine, Naive Bayes, K Nearest Neighbour, Decision Tree, Bagging Classifier, Random Forest, Ensemble Techniques.

Algorithm To Learn	Video Link	Article / Book Chapter
Logistic Regression	Video 1 Theory + Code	
Support Vector Machine	Video 1 Theory + Code More In Depth Understanding Using Kernel Trick	
Naive Bayes	Video 1 Theory + Code More in Depth Understanding	
K Nearest Neighbour	Theory + Code	
Decision Tree	Video 1 Theory + Code	
Ensemble Learning Model	Theory 1 Theory 2	
Random Forest		
Boosting		

3. Machine Learning Best Practices

(i) Imbalance in Dataset and why accuracy is not a good measure:

(ii) HyperParameter Tuning:

(iii) Underfitting - Overfitting (Bias- Variance Tradeoff):

[Video 1](#)

4. Supervised Learning: Regression

[Coursera Course 1](#)

5. Un-Supervised Learning [optional]

[Coursera Course 1](#)

6. Advanced Topic: Deep Learning

[YT - What is a neurone](#)

[Coursera Course 1](#)