

D1-D2 Basic

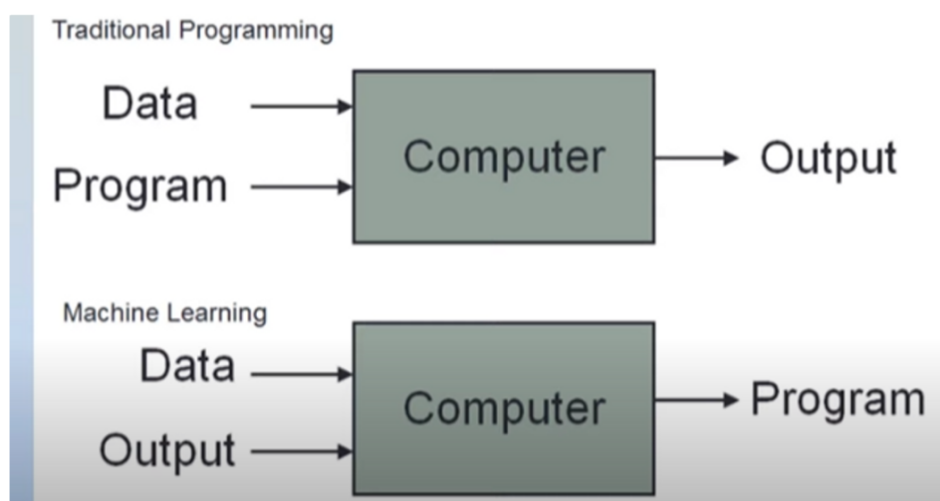
What is Machine Learning?

Machine Learning

Machine learning is a field of computer science that uses statistical techniques to give computer systems the ability to "learn" with data, without being explicitly programmed.

Explicit coding - We write code for every scenario - traditional

We don't do explicit coding in machine learning



Example :-

If we make a program using traditional coding then we can explicitly code how to take out the sum of 2 numbers .

But in machine learning , we feed the data in excel sheet giving the input of 2 numbers and then taking out the output then we can also take out the input of 3 numbers .

Example

1. Email Spam classifier . -

:- For example you set word containing prize are spam and then the spammer comes to know about your algorithm then you have to change your algo.

But you want your algo to grow with time so you use ml.

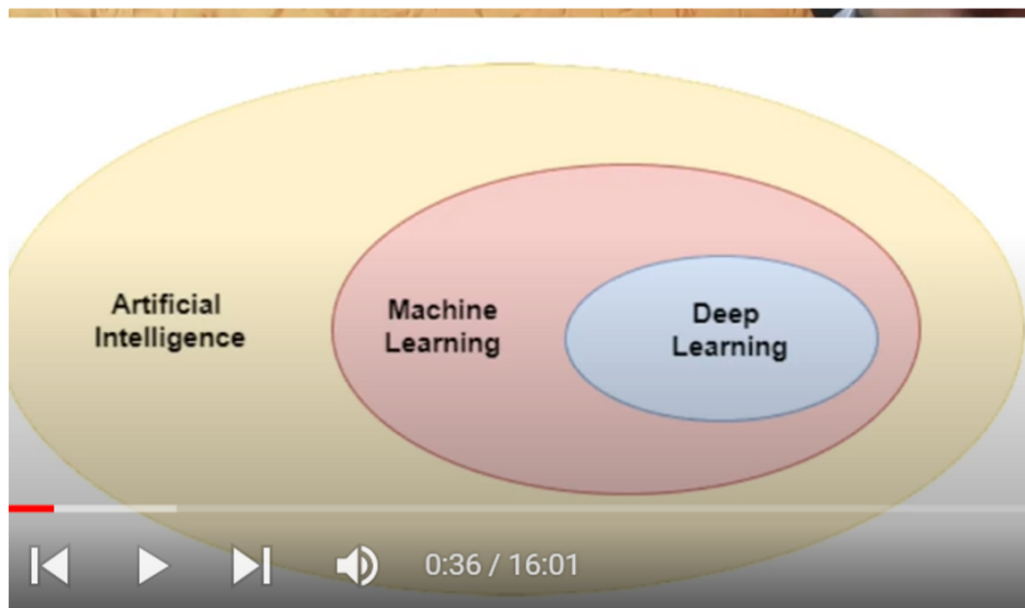
2. If there are too many characteristics .

Classification between Cats and dogs.

Why machine learning has surfaced recently?

Because only recently we can generate data easily

It was a very hard process to generate data and more hard to store data.



We take all the info

Expert Systems

Machine Learning vs Deep Learning

Machine Learning	Deep Learning
We have to specify the features . ex — differentiate b/w cat and dog. Like dog must have 2 big ears and cats have small ears	We don't have to specify the features . It automatically gets the features
	As we add layer the efficiency increases
After sometime even after increasing the amount of data the performance does not change	The more the data the better the performance