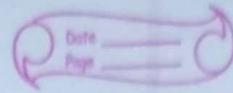


30/08/2021

Infy Data



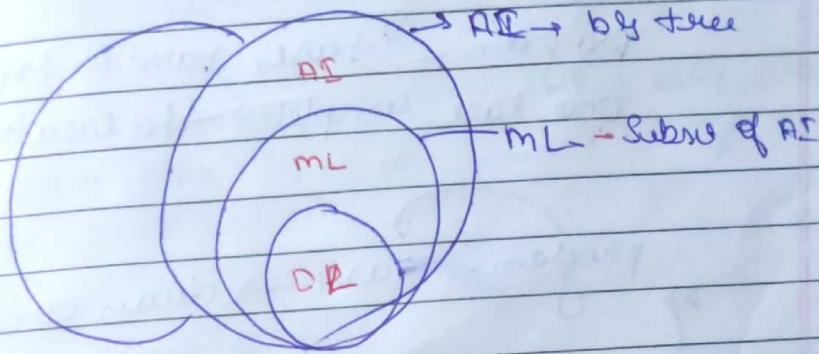
Machine Learning

→ Mathematic calculation, it is used to train the system, which have more accuracy

→ Machine Learning, Data Science, Deep Learning
Data Science & Machine Learning

→ to do have different meaning.

AI vs ML vs DL vs DS



- ① AI → A machine which can learn, make its own decisions without interference of human being
→ It is like a machine it mimic like a human

being
→ for exam → we can expect the output on seeing the output

Example for AI → Speech converter, ATS resume scanner, human robots, weather forecasting, etc

→ which is end-product, to get this we will be using ML, DL, & DS
Sometimes

→ to get &

② Machine Learning

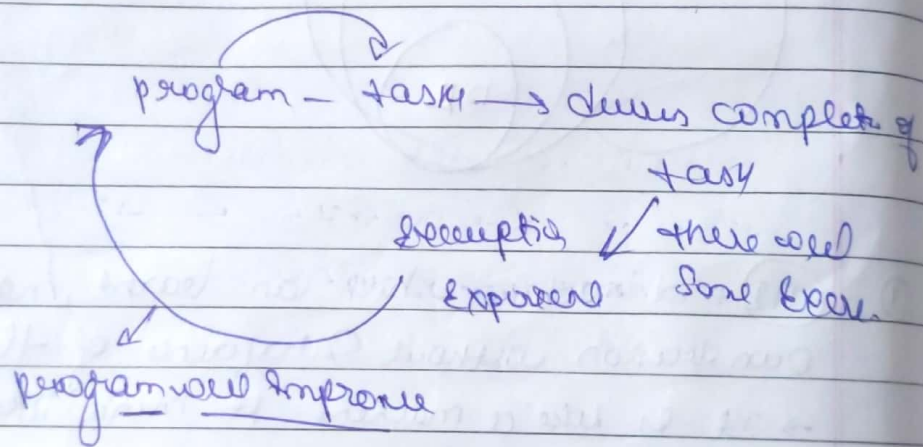
a subset of AI, which helps to get end product

Types of ML

- ① Supervised
- ② unsupervised
- ③ Reinforcement

→ Computer have program that performs task

program → task based on experience
once task completed the execution of



→ TO learn the system has to learn more accurately

Example :-

given a set of coins 1gm 2gm 5gm

It can be classified by weights by weight

- Based on parameters, we can train the machine.
- labeled data is given to system to train the system.

$I_1, I_2, I_3 \rightarrow$ labels

$W_1, W_2, W_3 \leftarrow$ parameters

- ML is also involved in statistical models
- ML \rightarrow starts learn from its experience

When we build statistical model

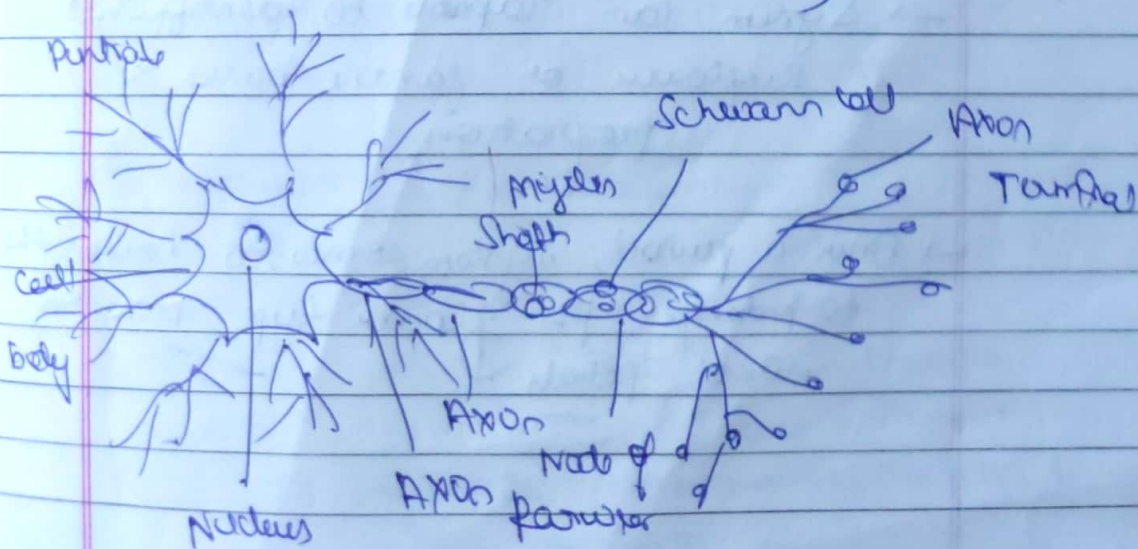
mathematical model that extract the predict the experience

② Deep learning

Subset of ML

- wherever have method it has advantages and some limitation

- DL is capable of identify/extract the new features
- It exclusively work on MNN (multineral Network architecture)



→ process the data to next level or further
work have to be done

→ ^{DL} will work same as multiple neural
Network architecture (MNN)

get algorithm for DL range among of

ANN → artificial vs Data In Series

in a time
series

RNN → Recurrent neural vs

CNN → Convolution neural network

↓ work on image data

Play a very Important note

character data

ML-1/In

ML-imitation

① Sunflower

② Jasmine

Flower → Band on length of petals
width of the petals &
Color of the petals

→ Trained a System

→ System can capable to identify
Sunflower or jasmine band on
specification

→ Over a period, system comes to know the
to identify the flower type band on
no. of petals.

① ML is not capable of identifying the new features

② Data Science

→ It ML, AL & DL & some mathematical expressions, calculus, limits & integrals etc

→ Data Science used for analysis

→ Both mathematical & Statistical models

anaconda navigator.

TOPIC

1. ML

need for ML

Types of ML

→ necessary tool for implementing ML

① numpy } fundamentals

② pandas }

③ Matplotlib } matplotlib

④ SciKit } numpy, spy etc relevant

KNOWLEDGE → Enormous power application in it
also a GUI