MAKE SKILLED

MACHINE LEARNING

WHY IS MACHINE LEARNING IMPORTANT

- It is all around us in this modern world.
- From Facebook Feeds to Google Maps for navigation, Machine Learning finds its application almost in every aspect of our lives.
- It is quite frightening and interesting to think of how our lives would have been without the use of Machine Learning.
- That is why it becomes quite important to understand what is Machine Learning, its applications and its importance.

ML IS THE FUTURE

SINCE THE DAWN OF TIME ...
UP UNTIL 2005 ...

HUMANS HAD CREATED ...

130 EXABYTES OF DATA

130 EXABYTES OF DATA

1 byte



1k byte

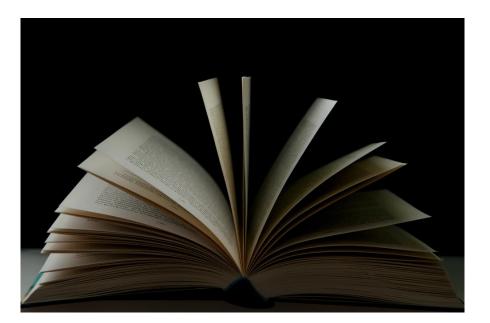
embrassait l'immensité de l'océan, elle aperçut once beaux cygnes qui nageaient sur les flots en s'avançant vers elle.

Juste au moment oile soiei, à son coucher, tombait dans la mer, les onze cygnes sortirent de l'eau devant elle, leur plumage tomba soudain et la frincesse, tombait dans la mer, les onze cygnes sortirent de l'eau devant elle, leur plumage tomba soudain et la frincesse, tombait dans la mer, les onze cygnes sortirent de l'eau devant elle, leur plumage tomba soudain et la frincesse, l'active de l'eau devant elle plumage a fait de nous Nous devons rester des cygnes tous le temps que le soleil est au dessus de l'horizon, mais chaque sort au coacher du soleil nous redevenns homes. Nous ne pouvois dons les des les carents elles elles mée a fait de nous Nous devons rester des cygnes tous le temps que le soleil est au dessus de l'horizon, mais chaque sort au coacher du soleil nous redevenns homes. Nous ne pouvois devons des les peniems essus, se mient de nuite à l'ouvrage, et fabriquèrent avec de juunes branches, une sort de grand lite n'formé de radeau. Leur sour s'y couche, des les peniems leurs de la juurone, lis transportèrent vers la mer le radeau, avec son prédeix fardeau, et lorsqu'au lever du soleil lis furent den ouvoux chaptés en cygnes, les le prient dans leurs beset et monerérent vers la soir, une tempête formidable s'éleva, les éclairs décliraient les nues, le tomener roulait avec forcas, mais just et l'heur de coucher du soleil lis purent baureussement atteindre un rocher au moment où les onze frères reprenaient leur forme humaine.

Les éclairs illuminaient encore les cieux, mais la Princesae Eliza n'avait pas peur cas ses onze frères se tennant par la main entouraient la pointe du rocher de soleil lis purent baureussement atteindre un rocher au moment où les onze frères se l'arrivait à conceile put se reposer et dormir.

Le calme revenu au matin, la Princesse monta dans son radeau et les Princes ayant repris leur forme de cygnes. Au conduisirent dans une le merveilleuses où elle put ae re

1M Byte



1G Byte



1T Byte



1 Petabyte



1 Exabyte



ML IS THE FUTURE

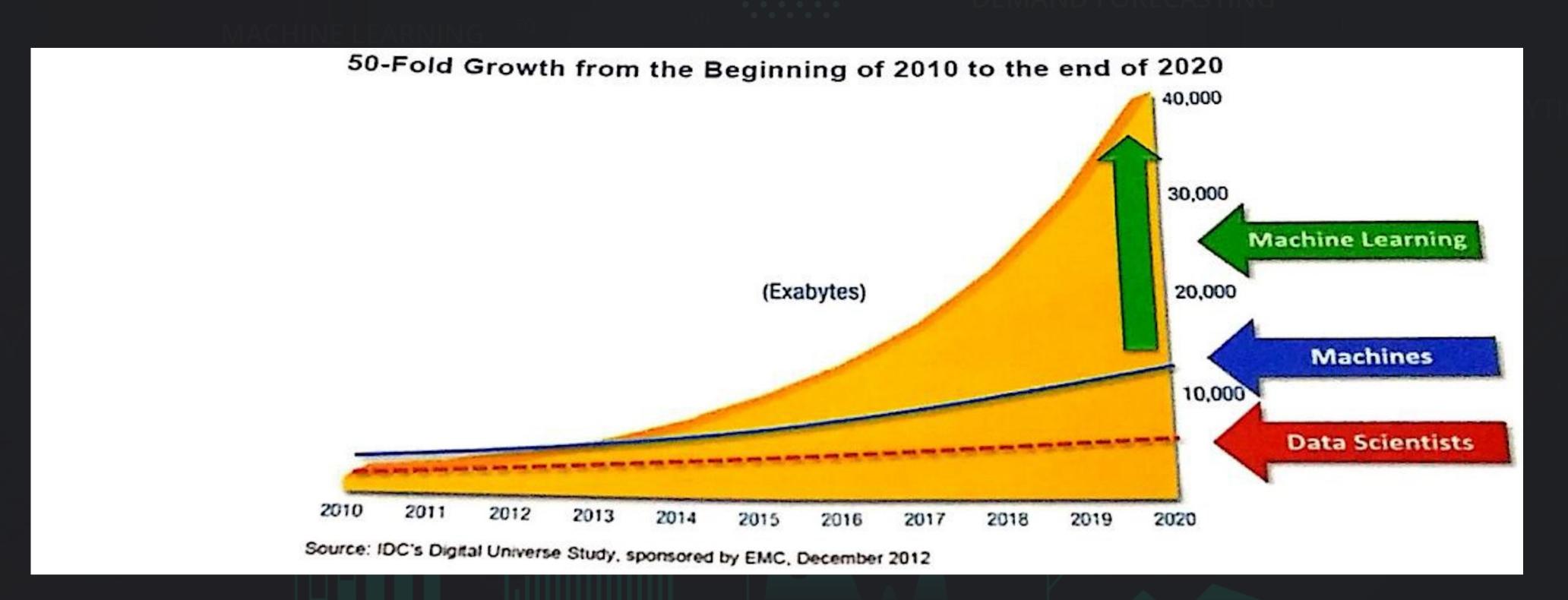
2005 - 130 EXABYTES

2010 - 1,200 EXABYTES

2015 - 7,900 EXABYTES

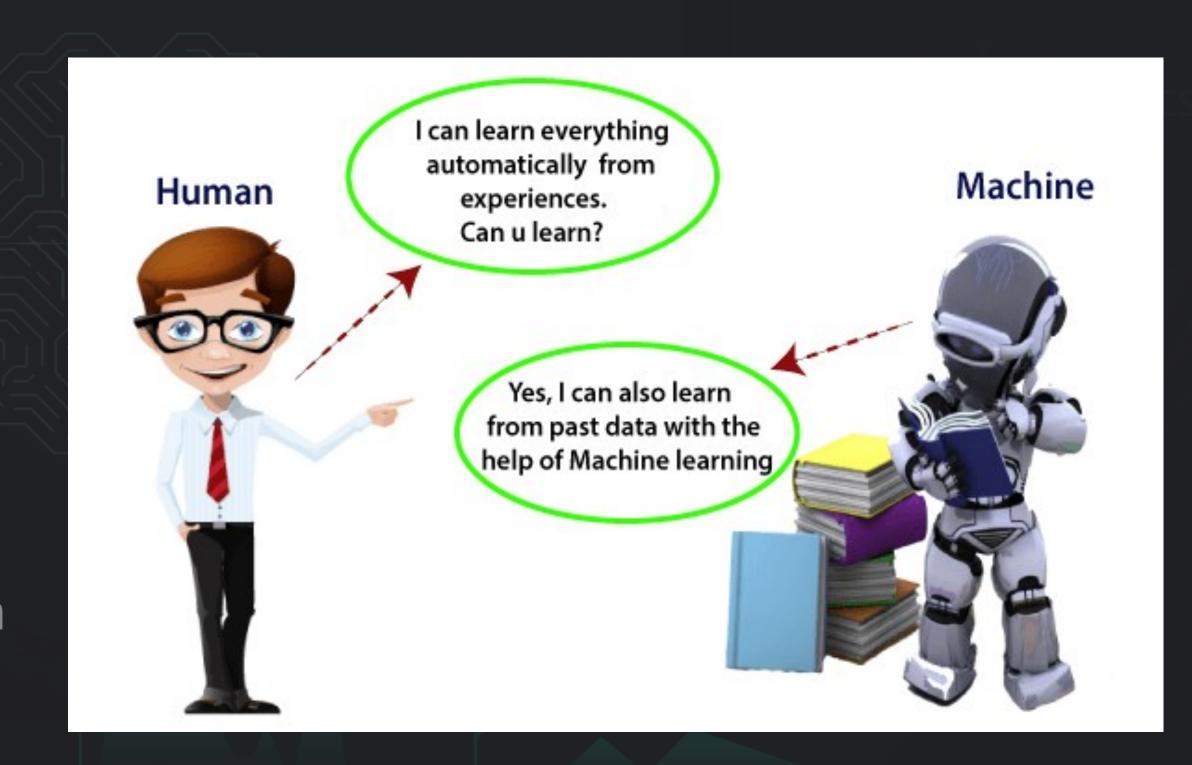
2020 - 40,900 EXABYTES

ML IS THE FUTURE

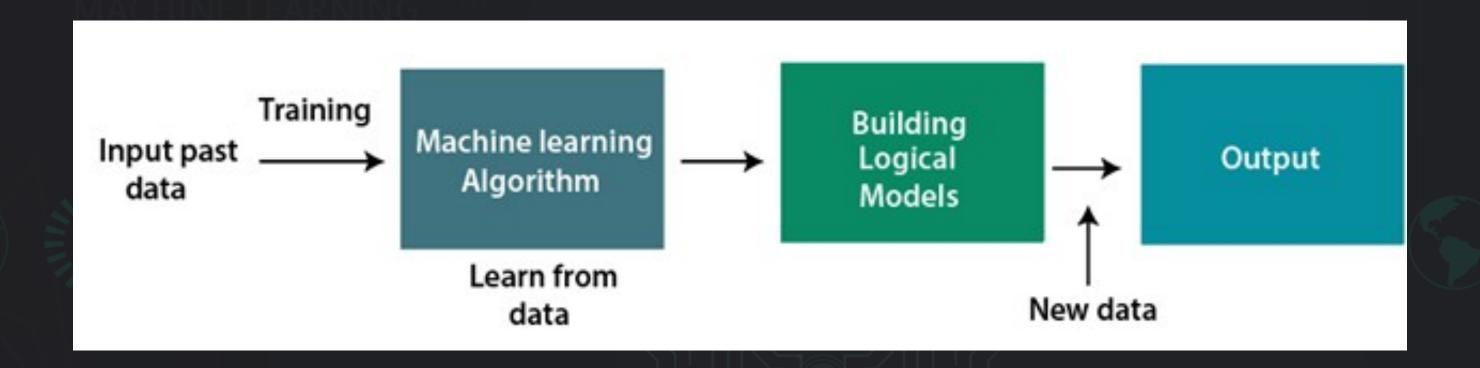


WHAT IS MACHINE LEARNING

- Machine Learning enables a machine to automatically learn from data, improve performance from experiences and predict things without being explicitly programmed.
- A machine has the ability to learn if it can improve its performance by gaining more data.



HOW DOES MACHINE LEARNING WORK



- A Machine Learning system learns from historical data, builds the prediction models, and whenever it receives new data, predicts the output for it.
- The accuracy of the predicted output depends upon the amount of data, as the huge of amount of data helps to build a better model which predicts the output more accurately.

FEATURES OF MACHINE LEARNING

Machine Learning uses data to detect various patters in a given dataset.

It can learn from past data and improve automatically.

It is a data-driven technology.

Machine Learning is much similar to data mining as it also deals

with the huge amount of the data

IMPORTANCE OF MACHINE LEARNING

Rapid increment in the production of data

Solving complex problems, which are difficult for a human

Decision making in various sector including finance

Finding hidden patterns and extracting useful information from data

CLASSIFICATION OF MACHINE LEARNING

Supervised Learning

Unsupervised Learning

ReinforcementLearning



SUPERVISED LEARNING

It is a type of machine learning method in which we provide labeled data to the ML system in order to train it, and on that basis, it predicts the output.

Classification

Regression

UNSUPERVISED LEARNING

Unsupervised learning is a learning method in which a machine learns without any supervision.

In unsupervised learning, we don't have a predetermined result.

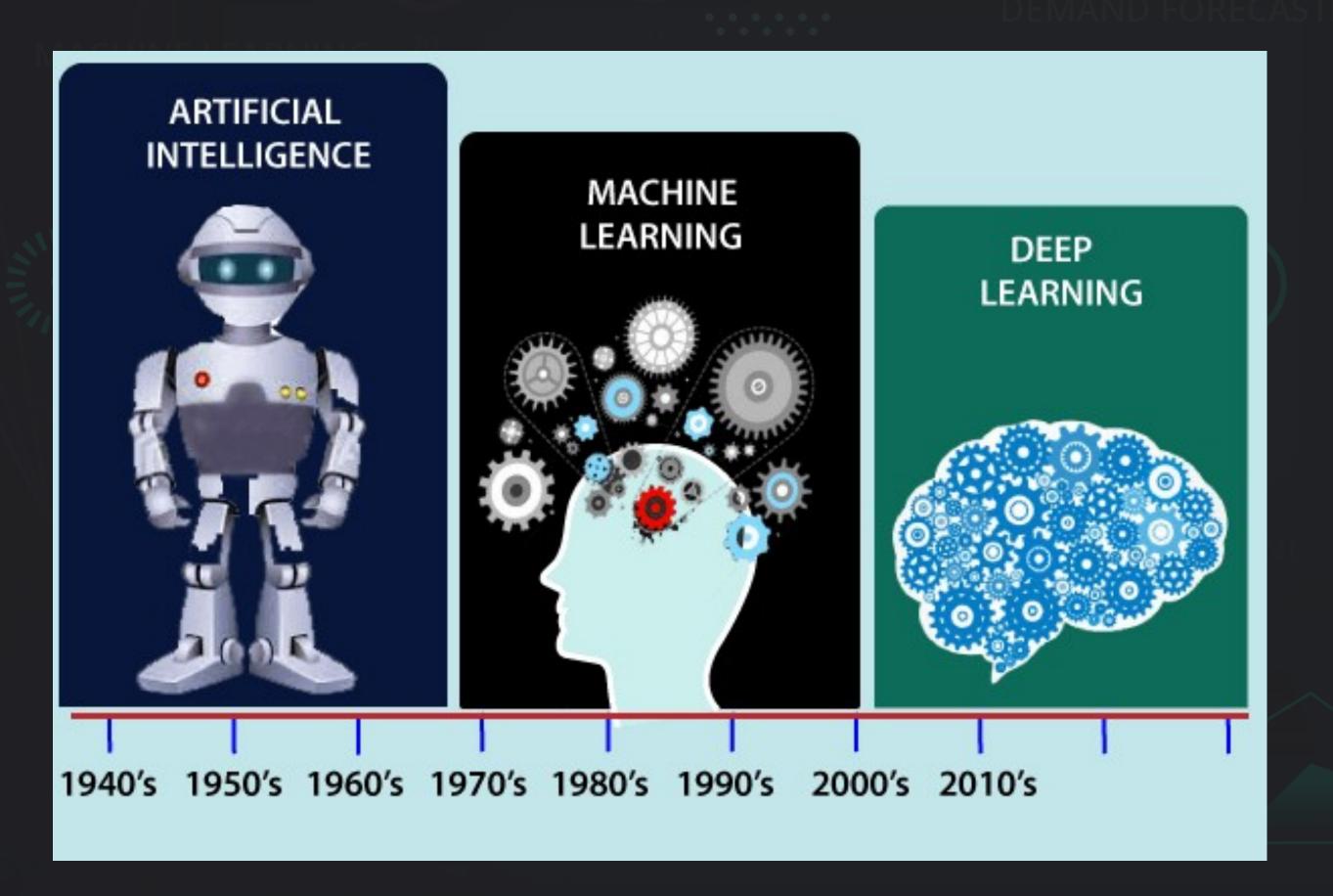
The machine tries to find useful insights from the huge amount of data

Clustering

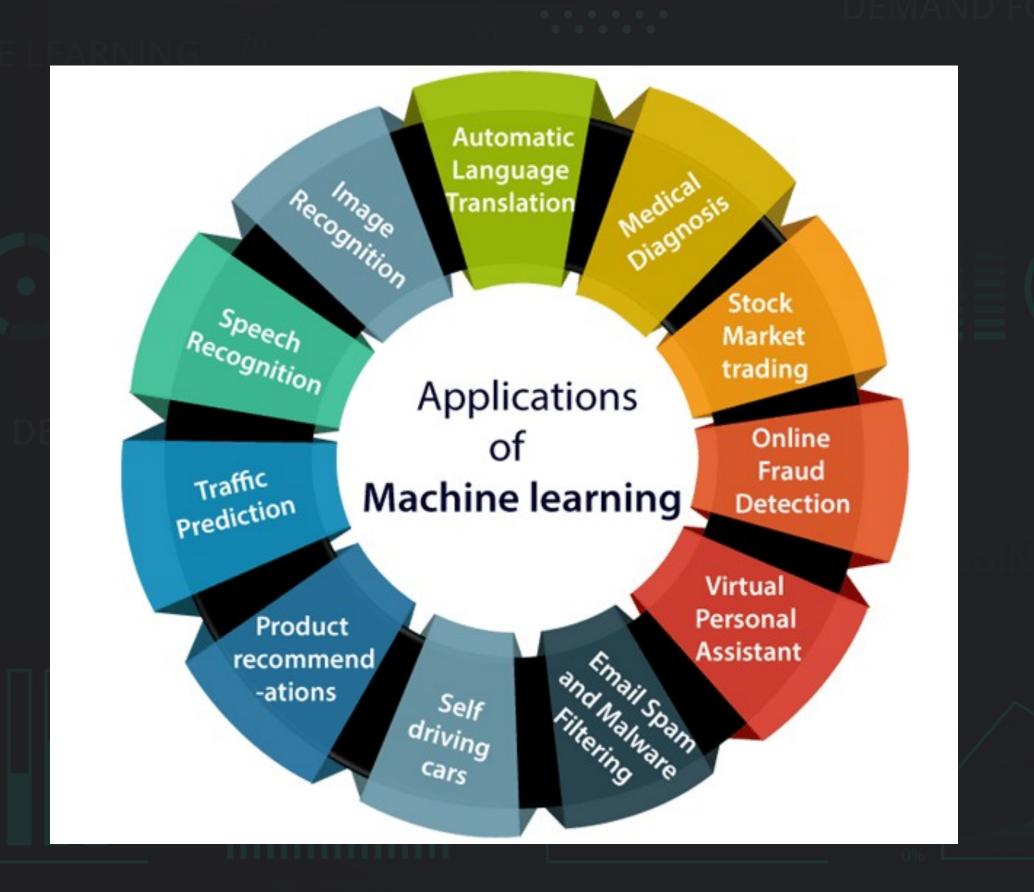
REINFORCEMENT LEARNING

- It is a feedback-based learning method, in which a learning agent gets a reward for each right action and gets a penalty for each wrong action.
- The agent learns automatically with these feedbacks and improves its performance.

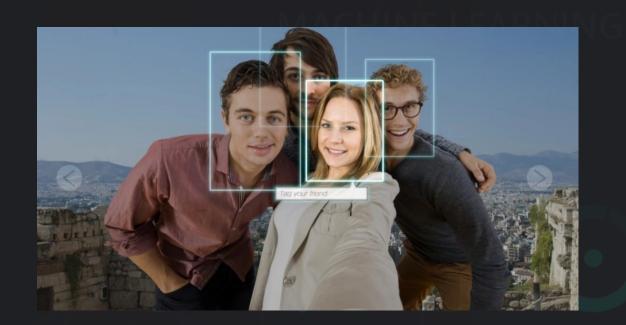
HISTORY OF ML



APPLICATIONS OF ML

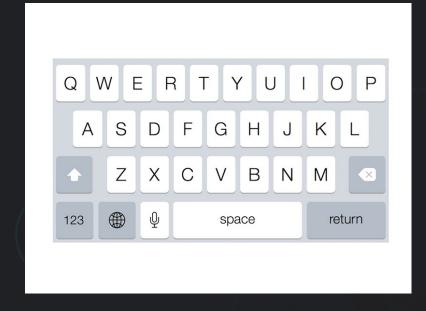


APPLICATIONS OF ML





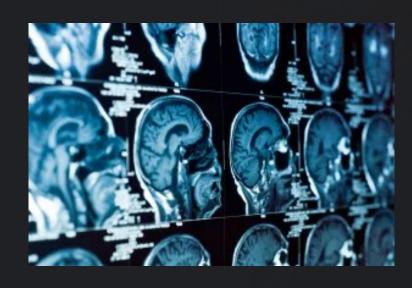










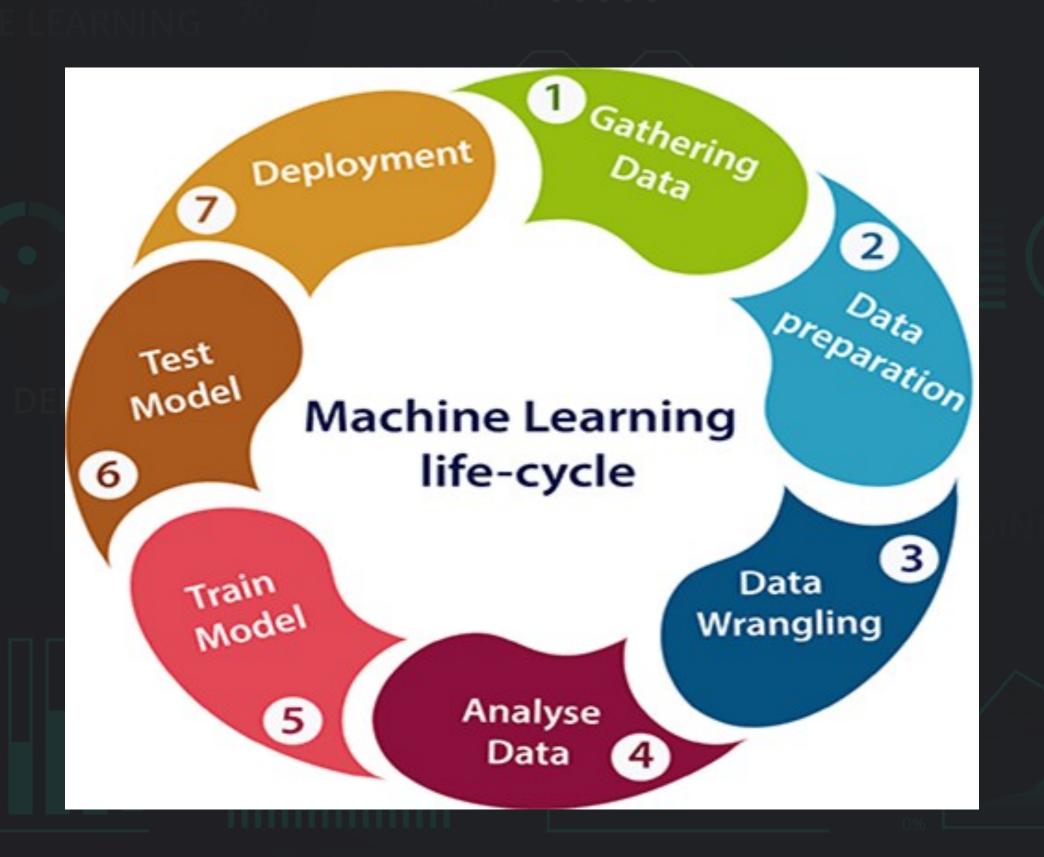




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MACHINE LEARNING LIFE CYCLE



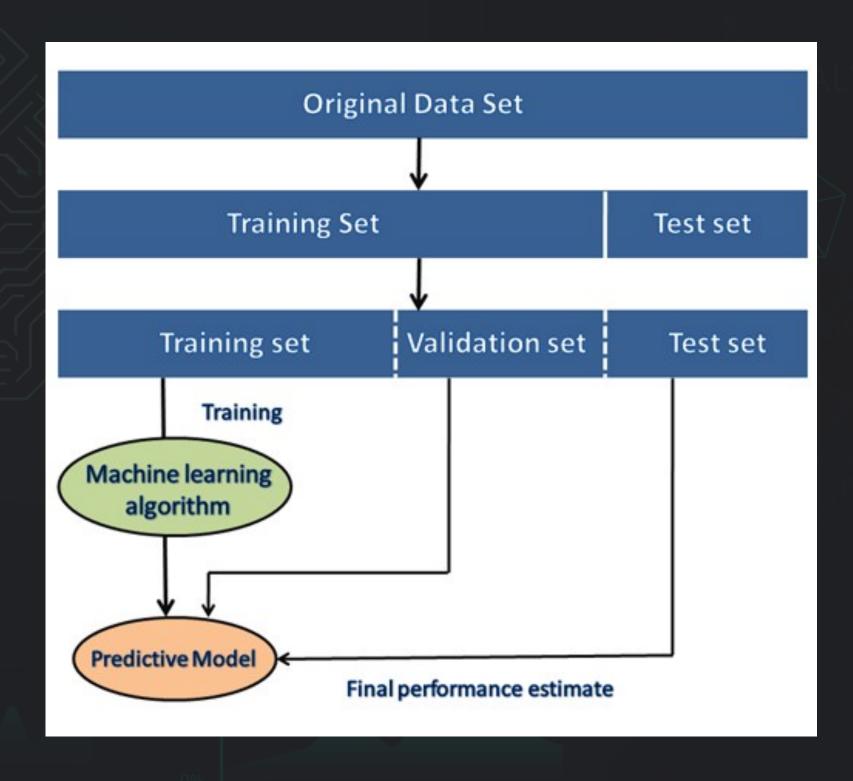
WHAT IS DATASET

A dataset is a collection of data in which data is arranged in some order.



NEED OF DATASET

- During the development of the ML project, the developers completely rely on the datasets.
- In building ML applications, datasets are divided into two parts
 - Training dataset



Test Dataset