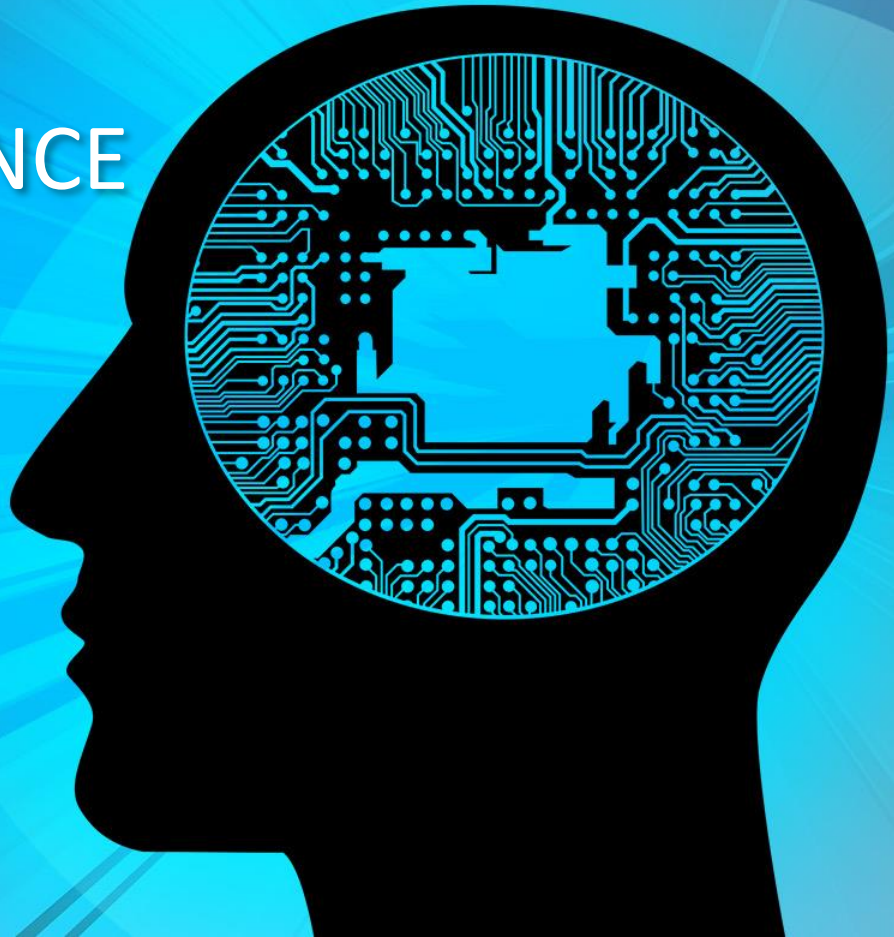
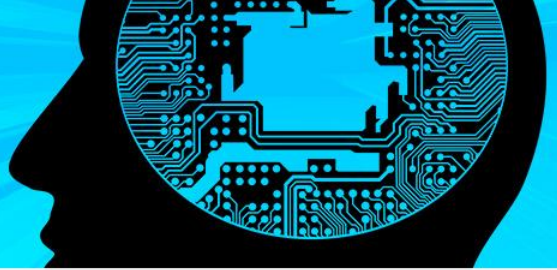
ARTIFICIAL INTELLIGENCE



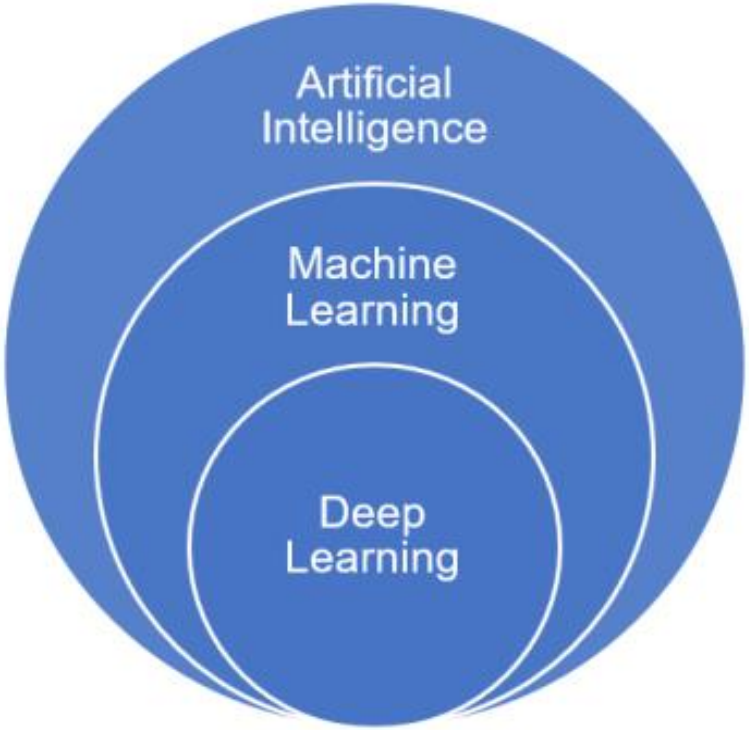
What is AI ?



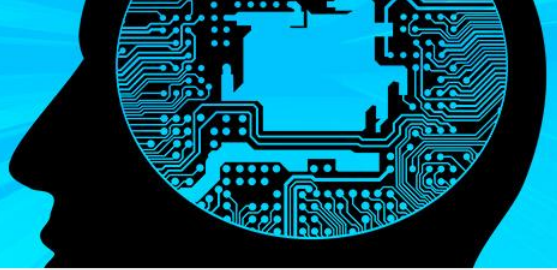
- AI is a form of Intelligence; a type of technology and a field of study

- Artificial Intelligence covers a broad range of domains and applications and is expected to impact every field in the future.

AI, ML & DL

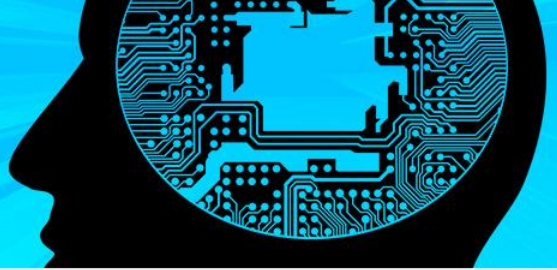


Artificial Intelligence (AI)



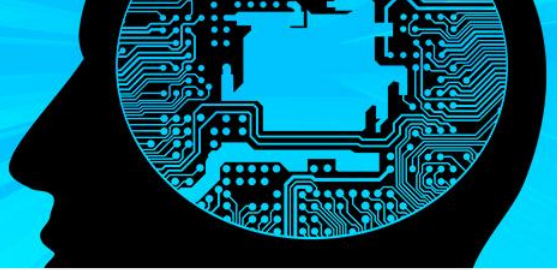
- Technique that enables computers to mimic human intelligence.
- Gives the ability to machines to recognize a human’s face;
- To move and manipulate objects;
- To understand the voice commands by humans, and also do other tasks.
- The AI-enabled machines think algorithmically and execute what they have been asked for intelligently.

Machine Learning (ML)



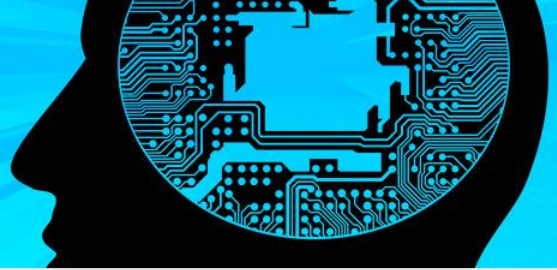
- It is a subset of Artificial Intelligence
- Enables machines to improve at tasks with experience
- Enable machines to learn by themselves using the provided data and make accurate Predictions/ Decisions.

Deep Learning (DL)



- Most advanced form of AI
- Enables software to train itself to perform tasks with vast amounts of data
- Machines are intelligent enough to develop algorithms for themselves
- Makes use of Artificial Neural Networks (ANN)

AI vs ML vs DL

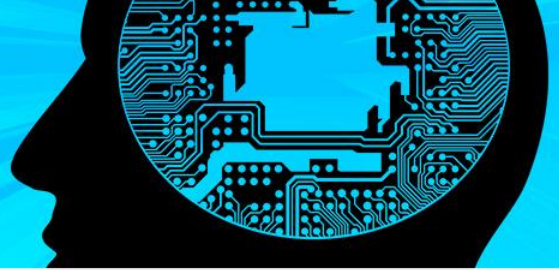


Artificial intelligence

Dog

Cat

AI vs ML vs DL



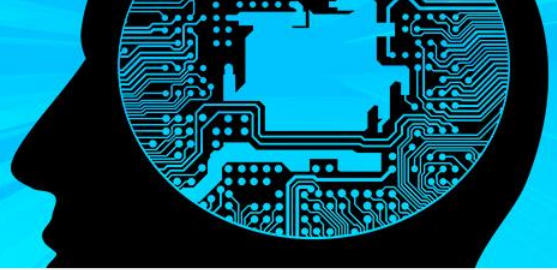
Machine Learning

Features:
a. Eyes
b. Noses
c. Ears
d. Flew
e. Viscous
f. Nape

Dog

Cat

AI vs ML vs DL



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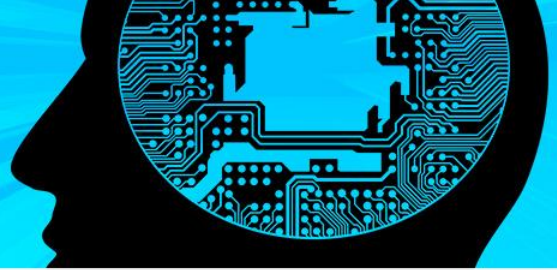
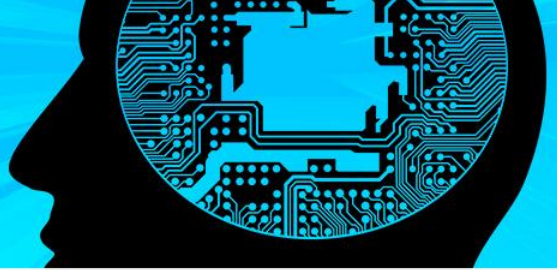


Artificial Intelligence	Machine learning	Deep Learning
AI represents stimulated intelligence in machines.	ML is the practice of getting machines to make decisions without being programmed.	It is artificial neural network to solve the complex problems.
AI is a subset of data science.	ML is the subset of AI and data science.	DL is the subset of AI , ML and data science.
AI aims toward building machines that are capable to think like humans	ML aims to learn through data to solve problems.	DL aim to build neural network that automatically discover patterns for feature detection

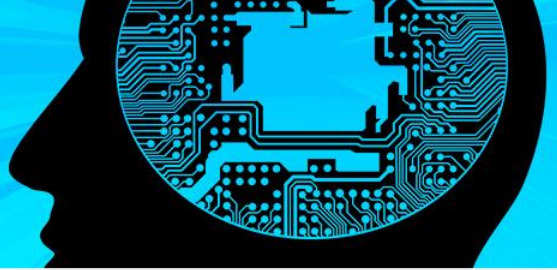
AI Domains



With respect to the type of data fed in the AI model, AI models can be broadly categorized into three domains:

- Data Sciences
- Computer Vision
- Natural Language Processing

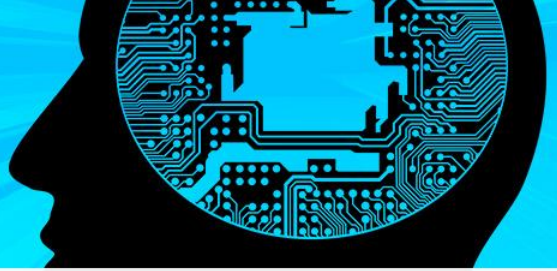
Data Science



- Domain of AI related to data systems and processes
- Study of data- Audio , visual and text

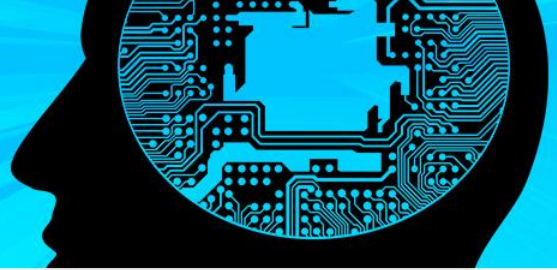
- Eg: Price comparison website

Computer Vision



- Domain of AI is to teach machines to collect information from pixels
- AI Domain that depicts the capability of a machine to get and analyze visual information and afterwards predict some decisions about it.
- Eg: Self Driving car, face lock in smart phones

Natural Language processing



- Branch of artificial intelligence that deals with the interaction between computers and humans using the natural language.
- Objective of NLP is to read, decipher, understand, and make sense of the human languages in a manner that is valuable.

Eg:

1.Email filters

Email filters are one of the most basic and initial applications of NLP online. It started out with spam filters, uncovering certain words or phrases that signal a spam message.

2.Smart Assistance:

Smart assistants like Apple's Siri and Amazon's Alexa recognize patterns in speech, then infer meaning and provide a useful response.

3.chat gpt

Applications of AI in our daily life

Smartphones: The smartphone has many applications that running and provided services with the help of AI. Ex. Google Assistant, Alexa, Apple Siri, etc.

Social Media:

- Social media websites like Twitter, Facebook, Instagram, or Snapchat sending notification and managing timelines by AI.
- AI takes all your past behavior, web searches, interactions, and everything else that you do when you are on these websites and tailors the experience just for you.

Music and Media streaming:

- Apps like Spotify, NetFlix, or Youtube AI is making a decision for the users.
- AI records playlist history and generating some recommendations for watching or playing songs.

Video Games

- Video games companies are most earlier adopters of AI. AI generate random levels in video games.
- In many games, AI defeated world champions. PUBG, Dota 2, Fortnite all are AI integrated games.

Smart Home

- Many smart home devices use AI to learn the behavior of the members of the family and can adjust settings accordingly.
- Smart voice assistants playing a vital role in smart homes.
- Smart thermostats used to adjust the temperature based on the user's preferences.
- Smart lights change the color and intensity of lights based on time and much more.

Security and Surveillance

- Thousands of cameras keep monitoring at the same time by AI only.
- Object recognition and face recognition getting better and better day by day.

Smart Keyboard and Apps

- Smart Keyboards provide comfort for users while typing on the screen.
- It generates suggestions based on the writing style of users.
- It also displays a few words and emojis.

Healthcare

- With an introduction to AI-powered machines detection of disease and treatment becomes a bit easier and convenient.
- AI-powered machines make the process of treatment and management simplified research to cure some disease done by AI- based systems.

More applications of AI

E-Commerce

- Online shopping on Amazon and eBay like websites using chatbots to collect data of customers and building a good rapport with buyers.

Smart Email

- Modern email apps like spark provides the facility to get rid of spam email and unwanted emails.
- It also categorizes email, so users can quickly read the important ones.
- The smart reply concept also giving a few suggestions with a reply text like in Gmail.

Smart Cars

- Tesla is a prime example of AI is impacting in our daily life.

Smart Drones

- Companies like Amazon and Walmart are heavily investing in drone delivery programs and it will become a reality far sooner than what you expect.

Banking and Finance

- The banking and finance industry relies on AI for providing customer services, protection against fraud, investment suggestions, and so on.
- While using the chat service of banks the chat is represented by Bots only. In the finance industry, AI is used to analyze data.

Online Ads Network

- AI just not tracking records of users but also serve the ads based on statistics.
- With the help of AI Ads network displaying random Ads online.

Navigation and Travel

- While traveling or enjoying rides like ola, uber, or any other services, google map navigation help to find a perfect route for the journey.
- Moreover, AI can give you real-time traffic data.