

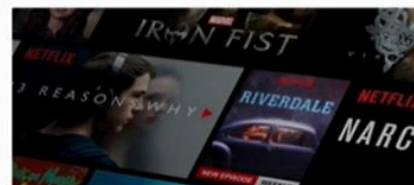
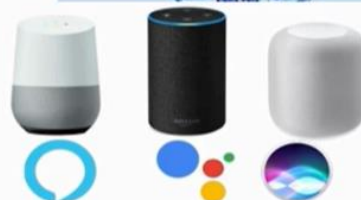
Introduction to ML

- What is Artificial Intelligence ?
- Terms used in AI
- What is Machine Learning ?
- Types of ML
- What is Data Science?
- Data Science Lifecycle
- DS vs ML vs AI



What is AI ?

- Simulation of Human intelligence processes by machines
- Or
- It is the ability for a computer to think and learn



Terms used in AI

- Learning
- Reasoning
- Self-correction

1) LEARNING



2) REASONING



3) SELF-CORRECTION



Types of AI

Weak AI



Strong AI



What is ML?

- Machine learning is the subset of AI that uses statistical methods to allow machines to improve their results with the amount of training data fed to it.

Types of ML

Supervised learning

Unsupervised learning

Human Learning

Observations

Learning

Skills

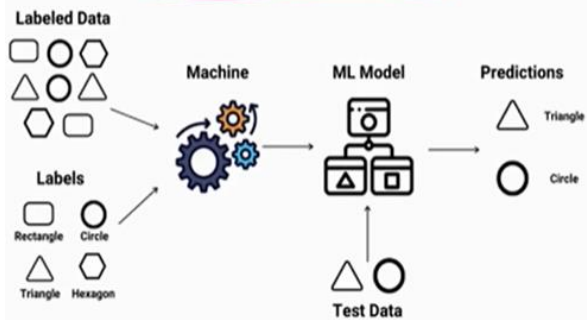
Machine Learning

Data

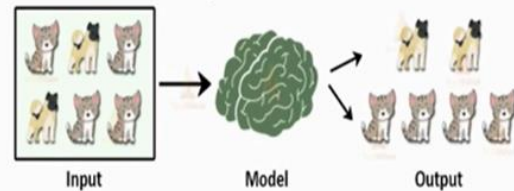
model/
predictor

Predict

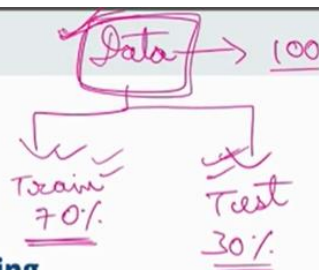
Supervised Learning



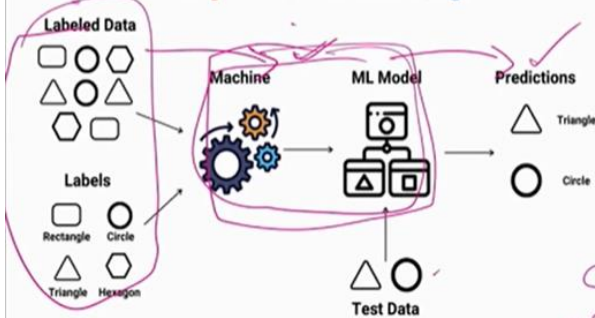
Unsupervised Learning in ML



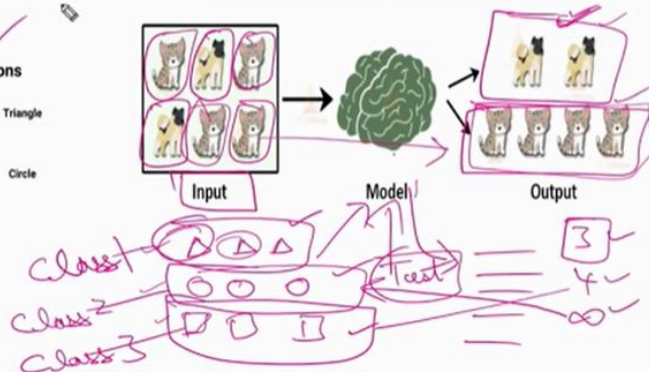
→ use case
→ seq.



Supervised Learning



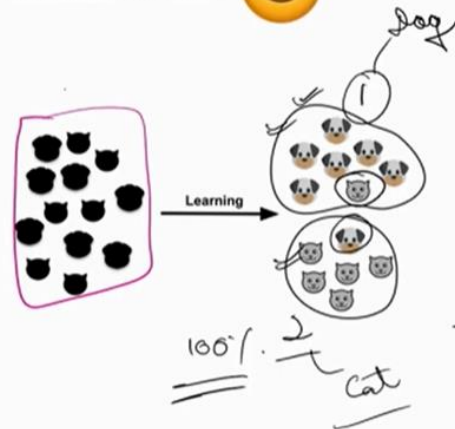
Unsupervised Learning in ML



Let's do some classification using Human brain 🧠

1. Email spam classification- ?
2. Recommendation system -?
3. Cat-dog classification- ?
4. Cat-dog clustering - ?
5. Playing alpha Go game- ?

Chirwa



ARTIFICIAL INTELLIGENCE

Any technique which enables computers to mimic human behavior



MACHINE LEARNING

AI techniques that give computers the ability to learn without being explicitly programmed to do so



DEEP LEARNING

A subset of ML which make the computation of multi-layer neural networks feasible



1950s 1960s 1970s 1980s 1990s 2000s 2010s

What is Data science?

- Data Science is a field of study involving statistical tools and techniques to extract meaningful insights from data.
- The data from which these insights are extracted can come from various sources, including databases, business transactions, sensors, and more.
- Data science uses complex machine learning algorithms to build predictive models.

Lifecycle of data science project

Life Cycle of Data Science Project



Data Science vs AI vs ML

