WELLCOME
TO
INTRODUCTION TO MACHINE LEARNING

AGENDA :

1. History
2. Differentiate Between AI, ML, Dl & DS
3. Definition of ML
4. Types of ML
5. Differentiate between Supervised , Unsupervised & Reinforcement

HISTORY:

1950s: The Beginnings

- 1950: Alan Turing introduces the idea of a machine that can mimic human intelligence, proposing the Turing Test to measure a machine's ability to exhibit intelligent behavior.
- 1952: Arthur Samuel develops the first computer program that can learn as it plays checkers, a pioneering example of machine learning.

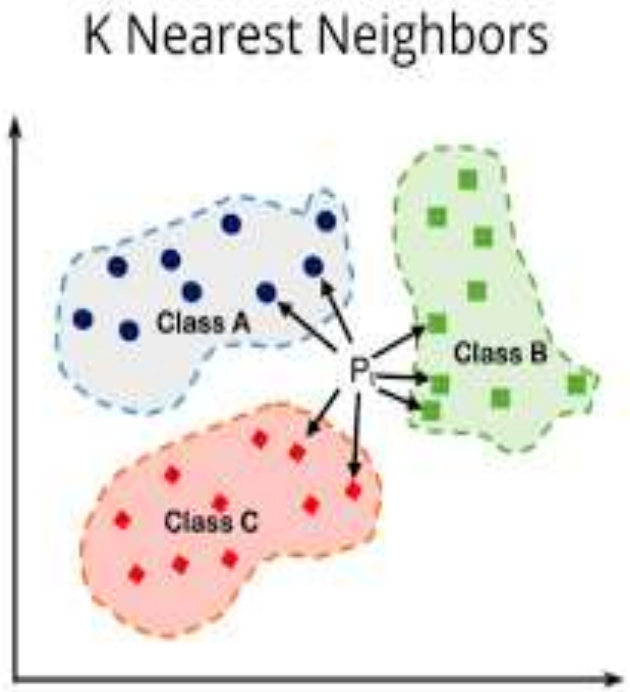
HISTORY Conti. :

1960s: Early Concepts

- 1960: The term "machine learning" is coined by Arthur Samuel.
- 1967: The nearest neighbor algorithm is introduced, allowing computers to start recognizing patterns and basic shapes.

1970s-1980s: Development of Fundamental Algorithms

- 1970: The field of artificial intelligence (AI) grows, but many systems are based on rules rather than learning.
- 1980: Backpropagation, a key algorithm for training neural networks, is popularized by Paul Werbos, allowing for more effective learning in multi-layer networks.



HISTORY Conti. :

1990s: Growth of Practical Applications

- 1990s: Rise of algorithms like SVM and decision trees.

Example: Sorting spam emails. An SVM algorithm learns to classify emails as spam or not spam by learning from examples of both.

2010s: The Deep Learning Revolution

2012: AlexNet wins ImageNet competition.

Example: AlexNet is like a super-powered vision system that can recognize thousands of different objects in pictures better than ever before.

Mid-2010s: Advancements in NLP with models like BERT and GPT.

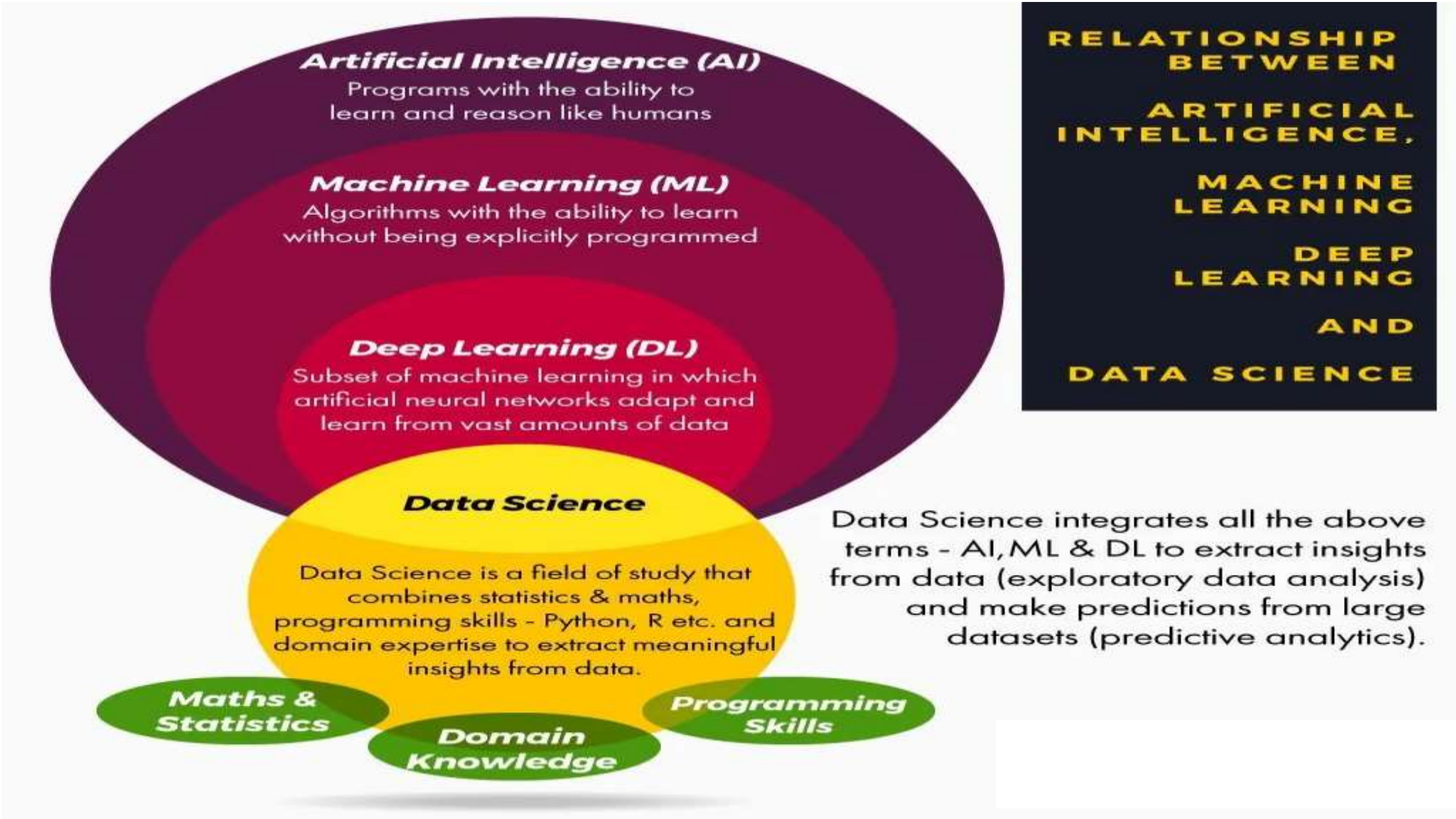
Example: Chatbots like those in customer service become more capable of understanding and responding to human language, making interactions smoother and more human-like.

2020s: Widespread Adoption and Advancements

Early 2020s: Machine learning in various industries.

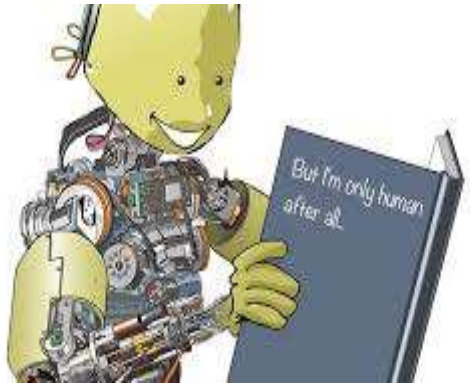
Example: In healthcare, machine learning models analyze medical images to help doctors diagnose diseases like cancer more accurately.

1. Differentiate Between AI, ML, Dl & DS:

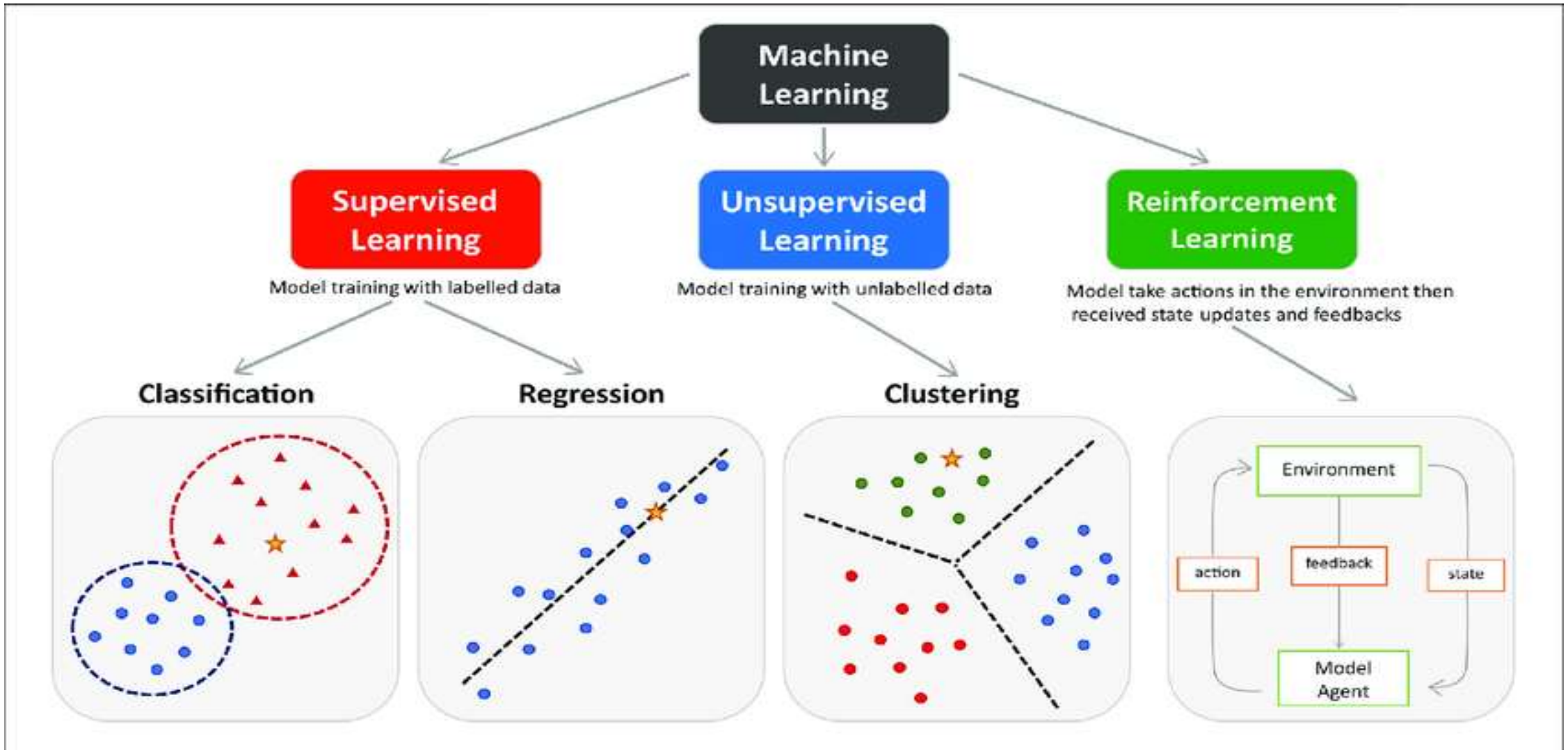


2. Defination of Machine Learning:

- Machine learning is a subset of artificial intelligence that involves the development of algorithms and statistical models that enable computers to perform tasks without explicit instructions, learning from and making predictions based on data. It focuses on building systems that improve their performance over time through experience.



2. Types of Machine Learning:



2. Types of Machine Learning: