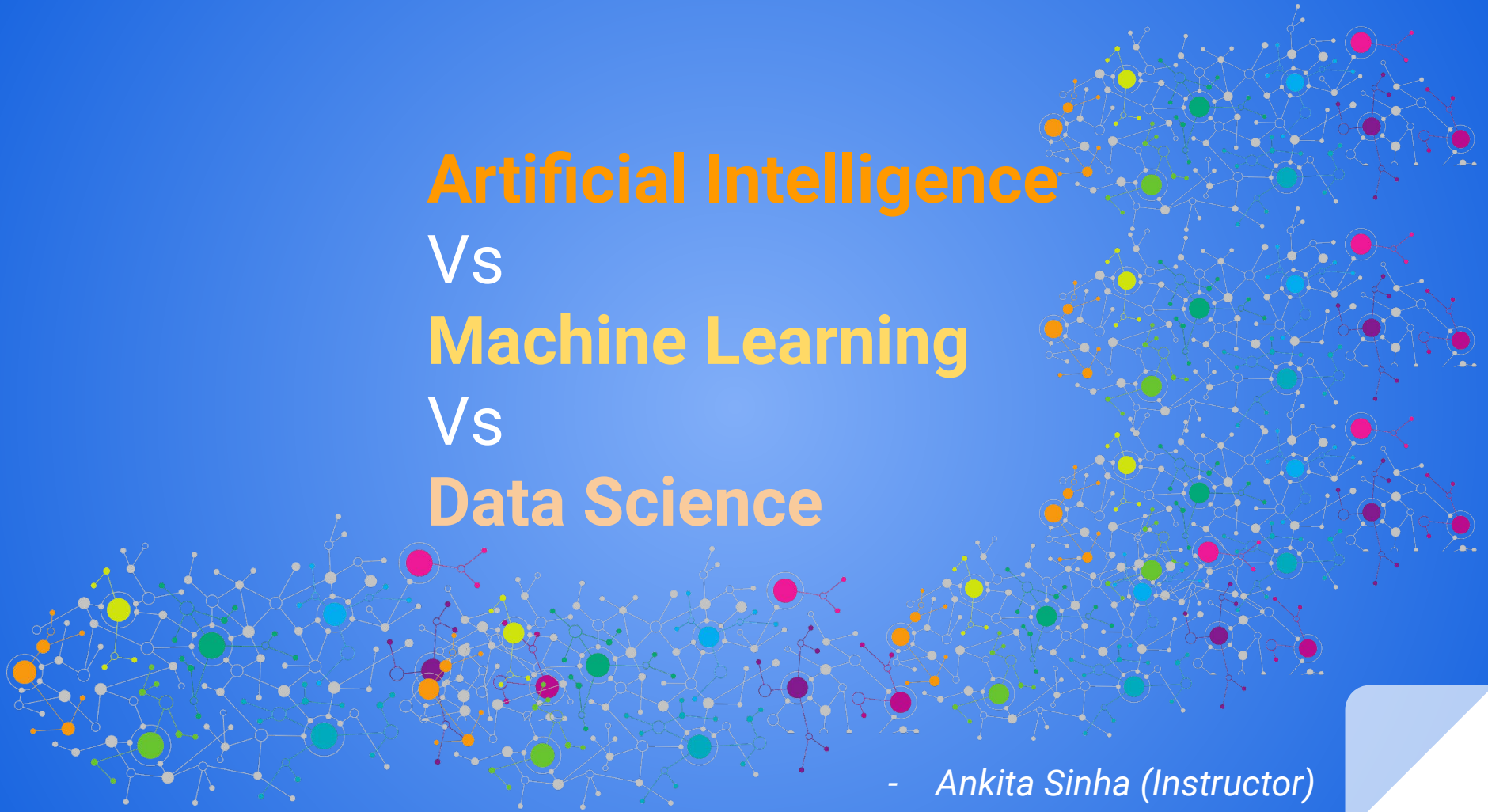
Artificial Intelligence
Vs
Machine Learning
Vs
Data Science



- *Ankita Sinha (Instructor)*

ARTIFICIAL INTELLIGENCE

DATA SCIENCE

MACHINE LEARNING

- People often get confused by buzzwords like AI, ML and Data Science.

- They seem very complex to a layman.

- Let us have a look at the difference between them and how there are being used in business.

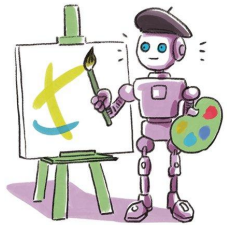
What is Artificial Intelligence (AI)?

1. Artificial intelligence is a wide field with many applications

2. To make machines smart, we need a lot of computing power and data to empower them to simulate human thinking.

3. AI refers to making machines intelligent in a wide array of activities that involve thinking and reasoning.

4. For example, AI could be an algorithm that is capable of playing board games like chess or scrabble with us or a chatbot registering a complaint or ordering food for us online.



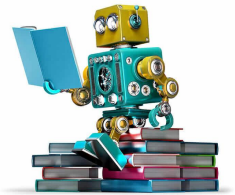
What is Machine Learning (ML)?

1. Machine learning is the ability of a computer system to learn from the environment and improve itself from experience without the need for any explicit programming.

2. Machine learning focuses on enabling algorithms to learn from the data provided, gather insights and make predictions on previously unanalyzed data using the information gathered.

3. For instance, if you want to classify pictures of cats and dogs then you can feed the data of a few labeled pictures and then the machine will classify all the remaining pictures for you.

4. Machine Learning algorithms learn from experience.



What is Data Science (DS)?

1. Data science is the extraction of relevant insights from data.

2. It uses various techniques from many fields like mathematics, machine learning, computer programming, statistical modeling, data engineering and visualization.

3. Data scientists solve complex data problems to bring out insights and correlation relevant to a business.

4. The practitioners of data science are usually skilled in mathematics, statistics, and programming

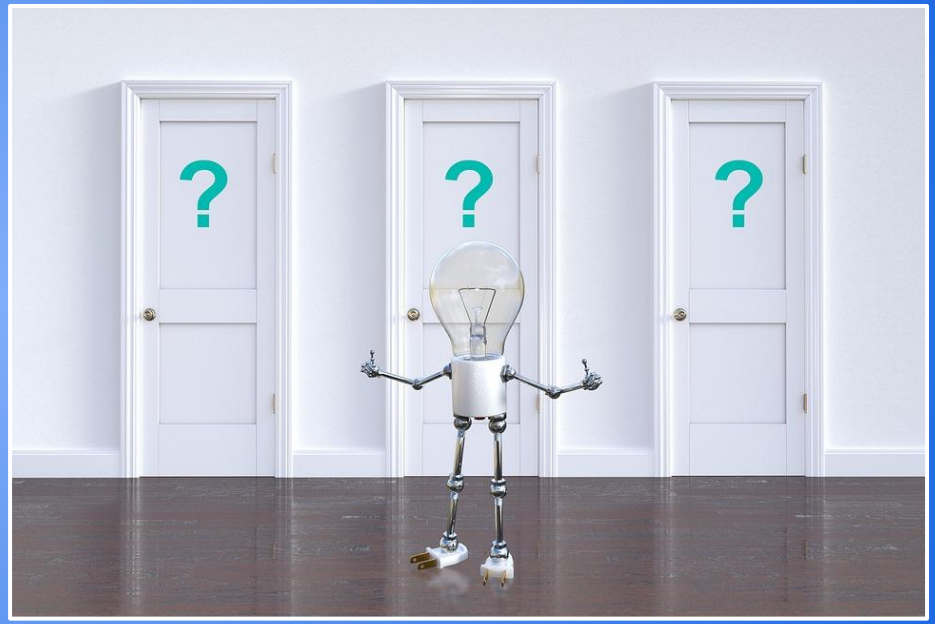
Which one to opt?

Artificial Intelligence

Machine Learning

or

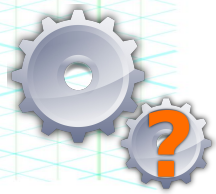
Data Science



Artificial intelligence is a very wide term with applications ranging from robotics to text analysis. It is still an active topic of research and handles advance form of learning like neural networks and deep learning Dealing with Huge datasets for handling more complex tasks.

On the other hand, Machine learning is a subset of AI that focuses on a narrow range of activities. It has constantly proven to be commercially viable and serves purpose with many applications in real-world problems.

Data science isn't exactly a subset of machine learning but it uses ML to analyze data and make predictions about the future. It combines machine learning with other disciplines like big data analytics and cloud computing. Data science is a practical application of machine learning with a complete focus on solving real-world problems by giving insights out of the data that matter to the business.



Ankita Sinha
ML/AI/DS Instructor