

- 1.What is the core definition of Artificial Intelligence (AI) as it relates to machine behavior?**
- 2.In what year and at which location was the term "Artificial Intelligence" first coined?**
- 3.What was the "Logic Theorist," and what specific task did it perform in early AI research?**
- 4.How does AI utilize mathematics to improve decision-making in applications like gaming?**
- 5.In the context of the "Theoretical Framework," how does the field of Psychology influence the way AI is developed?**
- 6.What is the difference between "Machine Learning" and "Deep Learning" regarding how they handle data and tasks?**
- 7.How do recommendation systems, such as those used by Netflix or YouTube, demonstrate the concept of Machine Learning?**
- 8.What role do "algorithms" and "data" play in the overall functioning of an AI system?**
- 9.What are three major ethical concerns that have been raised regarding the widespread use of AI?**
- 10.How can AI specifically benefit the educational process for both students and teachers?**

1. Definition of AI: Artificial Intelligence (AI) is the simulation of human intelligence in machines that are designed to learn, reason, and self-correct. It enables machines to think and learn like humans to perform complex tasks.

2. Origin of the term: The term was coined by **John McCarthy** in **1956** at **Dartmouth College**.

3. The "Logic Theorist": It was an early AI program that could prove mathematical theorems, representing the first efforts in automated reasoning and problem-solving.

4. Role of Mathematics: AI uses math to process data and make predictions. For example, in gaming, it uses math to calculate the best path for a character to move while avoiding obstacles.

5. Influence of Psychology: AI mimics how humans think. Just as people learn from experience, AI "learns" from data to improve its performance over time, such as getting better at language translation.

6. Machine Learning vs. Deep Learning:

- **Machine Learning** involves looking at data to find patterns and improve decisions without needing explicit instructions for every task.
- **Deep Learning** is a more advanced version that uses massive amounts of data to handle complex tasks like recognizing faces or understanding speech.

7. Recommendation Systems: Platforms like Netflix and YouTube demonstrate machine learning by watching what you watch and suggesting new content based on those past choices.

8. Algorithms and Data: AI functions by using **algorithms** (rules for making decisions) and large amounts of **data**. It identifies patterns within that data to make informed decisions.

9. Ethical Concerns: The widespread use of AI raises concerns regarding **privacy**, **job loss**, and **bias**.

10. Benefits to Education: AI-powered systems can provide personalized guidance, support, and feedback for both students and teachers, helping to simulate human intelligence in making predictions and conclusions.

