

Module 1

Chapter 1 notes

Understanding AI and Its Fundamentals

- The simple definition of Artificial Intelligence (AI) is a program that can learn and reason like humans. AI is an artificial simulation of human intelligence, a technology that mimics our understanding.
- While it's true that humans themselves don't fully understand their own intelligence, we do know that fundamentally, the human brain operates on pattern recognition, which leads to future predictions and guessing the next pattern.
- For instance, when we look at the stars at night, everyone sees different patterns - some see a lion, some a dog, or other shapes. This pattern recognition is also how AI functions, which we will explore further.

Types of AI (Explained via Movies)

- Reactive Machines:

These AI systems are somewhat naive, akin to the character of Aamir Khan in the movie 'Ghajini'. They don't have memory, hence, can't predict the future based on past experiences. However, given current data, they can perform fast calculations and pattern recognition.

- Limited Memory:

These AI systems have limited memory, like humans, and can make informed decisions based on past experiences and data quickly. Most current AIs, like Chat GPT and Google Bard, fall into this category.

- Theory of Mind:

This type of AI, when it attains social intelligence and begins to understand emotions, moves into the realm of 'Theory of Mind'. It predicts behaviour by understanding human intentions.

- Self-Awareness:

The most advanced and potentially dangerous type is self-aware AI, which would possess its own consciousness and operate independently.

Why AI?

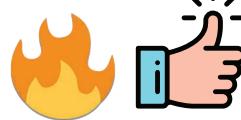
AI opens up possibilities for new discoveries and developments. Humans discover through knowledge, past experiences, and a drive to try new or odd things, leading to inventions. AI can continue this process indefinitely, potentially enhancing discoveries.

- **AI in Education:** AI can revolutionise education by allowing students to learn at their own pace, focusing on areas of interest, thus increasing productivity for both students and teachers.
- **AI in Health Sector:** In medicine, AI can speed up the process of finding the right drug combinations, saving time and lives.

Understanding and working with AI is crucial, and more details will be covered in the next modules.



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