



SNS COLLEGE OF ENGINEERING

(Autonomous)

DEPARTMENT OF CSE-IoT ENGINEERING



Artificial Intelligence & Natural Language Processing

Intelligence & Types

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What is Intelligence?

- Intelligence is the ability to acquire, understand, and apply knowledge to solve problems, adapt to new situations, and make decisions.
- It involves reasoning, learning, perception, and problem-solving.
- In Artificial Intelligence (AI), intelligence refers to the simulation of human-like cognitive abilities by machines to perform tasks such as learning, reasoning, and self-correction.



Types of Intelligence in AI

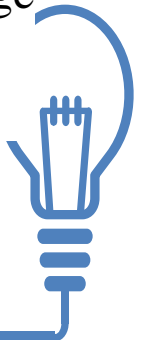
AI intelligence is classified into different types based on capability, functionality, and approach.

Based on Capability.

This categorization is based on how advanced and human-like the AI is.

Narrow AI (Weak AI)

- AI designed for a specific task with limited capabilities.
- Cannot perform beyond its programmed functions.
- Examples: Voice assistants (Siri, Alexa), recommendation systems, image recognition.



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General AI (Strong AI)

- AI that has **human-like cognitive abilities** and can perform **any intellectual task**.
- Can learn, reason, and apply knowledge like a human.
- **Examples:** Still under research; not yet achieved.

Super AI

- A hypothetical AI that **surpasses human intelligence** in all aspects, including reasoning, creativity, and emotions.
- **Examples:** AI from sci-fi movies (like Jarvis from Iron Man).



Contd...

Based on Functionality

- This categorization is based on how AI processes and uses data.

Reactive Machines

- AI that **only responds to current inputs** without learning from past experiences.
- **Examples:** IBM's Deep Blue chess-playing system.

Limited Memory

- AI that **stores past experiences** and uses them to make decisions.
- **Examples:** Self-driving cars (using past driving data to navigate).



Contd...

Theory of Mind

- AI that understands **human emotions, intentions, and social interactions**.
- Still under research.

Self-Aware AI

- AI that has **consciousness and self-awareness**, similar to human intelligence.
- **Examples:** Hypothetical and not yet developed.



Contd...

Based on Approach

- This categorization is based on how AI processes information.

Symbolic AI

- Uses **rules and logic** to process information.
- **Examples:** Expert Systems.

Connectionist AI

- Mimics the **neural networks of the human brain** (Deep Learning).
- **Examples:** ChatGPT, Image Recognition.

Evolutionary AI

- Uses **genetic algorithms** and survival-based approaches for problem-solving.
- **Examples:** AI for optimization and robotics.



Thank you