



SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)

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Different Modes of Artificial Intelligence (AI)

I. Based on Capabilities

1. Narrow AI (Weak AI)

Definition: AI that is designed and trained for a specific task.

Examples: Voice assistants (Siri, Alexa), recommendation systems (Netflix, Amazon), facial recognition.

Features:

Cannot perform tasks outside its training.

Most AI applications today fall into this category.

2. General AI (Strong AI)

Definition: AI with human-like intelligence, capable of performing any intellectual task that a human can do.

Status: Theoretical at this stage; not yet achieved.

Goal: Develop a machine that can learn, reason, and solve problems like a human.

3. Super AI

Definition: Hypothetical AI that surpasses human intelligence in all aspects—creativity, decision-making, and emotional intelligence.

Features:

Can outperform humans in every field.

May pose ethical and existential risks.

Status: Only exists in theory and fiction for now.

II. Based on Functionality

1. Reactive Machines

Definition: AI that reacts to specific inputs without storing memories or past experiences.

Example: IBM's Deep Blue chess-playing system.

Limitation: Cannot learn from past experiences.

2. Limited Memory

Definition: AI that can use past experiences/data to make better decisions.

Example: Self-driving cars (use stored data to predict behavior of other vehicles).

Features: Learning from historical data, still task-specific.

3. Theory of Mind

Definition: AI that understands emotions, beliefs, intentions of others.

Status: Still in research and development.

Potential Use: Advanced human-robot interaction.

4. Self-aware AI

Definition: AI with self-consciousness and awareness of its own existence.

Status: Purely theoretical.

Capabilities: Understanding own internal states, potentially developing desires and motivations.

III. Other Modes (by Application or Behavior)

1. Supervised Learning AI

Learns from labeled data.

Common in image classification, spam detection, etc.

2. Unsupervised Learning AI

Works with unlabeled data to find patterns.

Used in customer segmentation, anomaly detection.

3. Reinforcement Learning AI

Learns by interacting with an environment and receiving rewards or penalties.

Used in robotics, game-playing (e.g., AlphaGo).

Summary Table

Mode Type	Subtypes/Examples	Status
Capabilities	Narrow AI, General AI, Super AI	Narrow is active, others are theoretical
Functionality	Reactive, Limited Memory, Theory of Mind, Self-aware	Varies, most are in development
Learning Type	Supervised, Unsupervised, Reinforcement	Widely used in industry