Introduction to Artificial Intelligence



## Definition of Artificial Intelligence



Artificial Intelligence refers to the simulation of human intelligence in machines that are programmed to think and learn like humans, enabling them to perform tasks that typically require human intelligence



Artificial Intelligence has a rich history that dates back to the 1950s, with notable milestones including the development of the first AI programs, advancements in machine learning algorithms, and breakthroughs in natural language processing

## Applications of Artificial Intelligence

Al in healthcare

Al in finance

Al in manufacturing

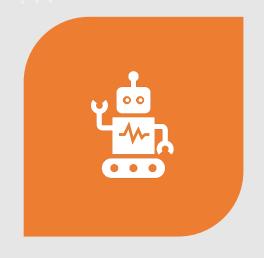
Al in project management

Al in telecom

Al in chatbot

Al in learning

Al in





A. NARROW AI (WEAK AI): DESCRIBES AI SYSTEMS CREATED TO CARRY OUT LIMITED FUNCTIONS OR ADDRESS SPECIFIC ISSUES. SPEECH RECOGNITION, PICTURE CATEGORIZATION, AND RECOMMENDATION SYSTEMS ARE A FEW EXAMPLES.

B. GENERAL AI (STRONG AI): DESCRIBES AI SYSTEMS WITH INTELLIGENCE COMPARABLE TO THAT OF A HUMAN BEING AND THE ABILITY TO COMPLETE ANY INTELLECTUAL WORK. THE DEVELOPMENT OF GENERIC AI IS A CONTINUING TOPIC OF STUDY.



Machine Learning (ML): A subset of AI that focuses on the development of algorithms that enable computers to learn from data and improve their performance over time without being explicitly programmed. ML techniques include supervised learning, unsupervised learning, and reinforcement learning.

Deep Learning: A subfield of ML inspired by the structure and functioning of the human brain. Deep learning uses artificial neural networks with multiple layers to process complex data and extract meaningful patterns. It has achieved remarkable success in areas such as image recognition and natural language processing.

Natural Language
Processing (NLP):
Concerned with
enabling computers to
understand, interpret,
and generate human
language. NLP
techniques involve
tasks such as text
classification,
sentiment analysis,
machine translation,
and question
answering.

Computer Vision:
Involves enabling
machines to interpret
and understand visual
information from
images or videos.
Computer vision
techniques include
image recognition,
object detection, facial
recognition, and image
generation.

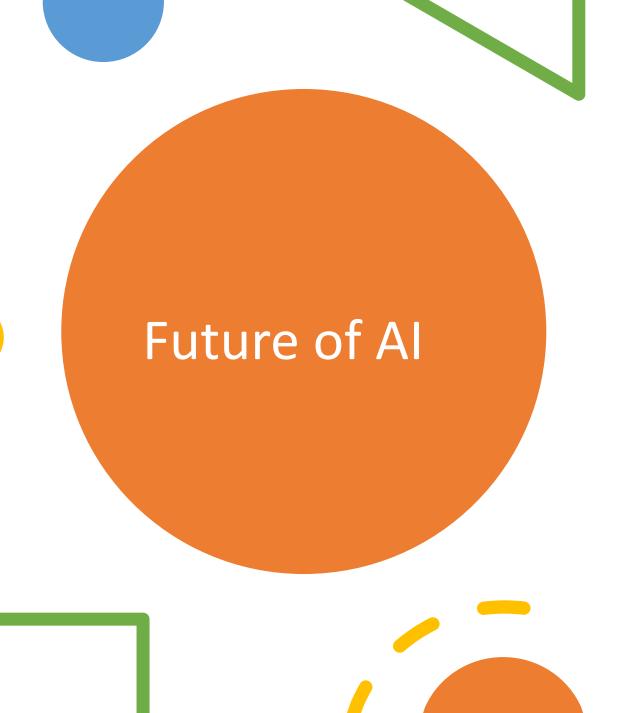
Robotics: Al plays a crucial role in robotics, enabling machines to perceive and interact with the physical world. Al-powered robots can perform tasks autonomously, adapt to changing environments, and collaborate with humans.

Al Ethics: With the rise of Al, ethical considerations have become important. Al ethics addresses issues such as transparency, accountability, privacy, bias, fairness, and the impact of Al on society, including potential job displacement.

## Challenges in Employment

As Al becomes more prevalent, there is concern that it will lead to job displacement. Many jobs that are currently done by humans could be automated, leading to unemployment. Additionally, there is a need for workers to develop new skills to keep up with the changing job market.





Al is advancing rapidly, with ongoing research in areas such as explainable Al, Al safety, human-Al collaboration, and Al for social good. The future holds possibilities for Al-driven breakthroughs in various domains, impacting multiple aspects of our lives.



Artificial intelligence

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