

Ability To solve Problem demonstrates intelligence.
↓ or Plan & schedule
memorize & information
answer questions
learn & understand
Perceive & more...

*disadvantages of AI:

- 1- increased costs
- 2- difficulty with software development (slow & expensive)
- 3- few experienced programmers
- 4- few practical products have reached the market as yet

what can AI system do ?

- computer vision → face recognition from large set
- Robotics → automous (Mostly) automobile
- natural language processing → simple machine translation
- Expert system, medical diagnosis is a narrow domain
- spoken language systems → loan word continuous speech
- learning → text categorization into loose topics
- user modeling → Bayesian reasoning in window help
- Games → grand Master level in chess
- planning and scheduling → Hubble telescope experiments.

* Known as the father of AI → John McCarthy

AI applications ::

- Autonomous Planning & scheduling → telescope scheduling
- Medicine → image guided surgery
- vision → * OCR, handwriting recognition
 - * face detection / recognition
 - * visual search: Google Goggles
 - * vehicle safety system: Mobileye
- Games
- Robotic toys
- Transportation → Pedestrian detection
- Natural language → speech technologies
 - Automatic speech recognition
 - text to speech synthesis
 - Dialog system
 - Machine translation

AI in ::

- ① Engineering to get Machines to do a wider variety of useful things
- ② Cognitive science AS a way to understand how natural minds and Mental Phenomena
- ③ Philosophy AS a way to explore some basic & interesting Philosophical question

why AI is hard

RePresentation	Reasoning
need to rePresent our knowledge in computer readable	need to be able to Manipulate knowledge & derive new knowledge
	many Possible ways to do but Most give rubbish
	Finding the successful way usually involves search

AI Generic techniques:

- Automated Reasoning → Resolution, Proof Planning, Davis CSPS
- Machine learning → neural nets, ILP, decision tree
- Natural language Processing → N grams, Parsing grammar
- Robotics → Planning, edge detection, cell decomposition
- Evolutionary approaches → crossover, Mutation, selection

Artificial intelligence:

is the science & engineering of Making intelligent machines, especially intelligent computer Programs

intelligence:

is the computational Part of ability to achieve Goals
 Varying kinds & degrees of intelligence occur in People
 capacity to learn & solve Problems