

Artificial Intelligence:- AI is the study of how to make computer do things which people do better. [machine + human Intelligence]

↳ AI can cause a machine to work as human.

↳ AI → Artificial [Man-Made]  
          → Intelligence [Power of thinking]

GOALS OF AI:

- i) Replication of Human Intelligence.
- ii) Solving problems that require knowledge.
- iii) Building a machine that can do human intelligence task. [CHESS, Proving theorem, automated car driving...]

Reasons of Boost in AI:

↳ i) S/W or device can be made to solve Real-time Problems.

ii) Creation of Virtual assistant [SIRI, CORTANA]

iii) Robots development. [Helps in dangerous env. cond<sup>n</sup>]

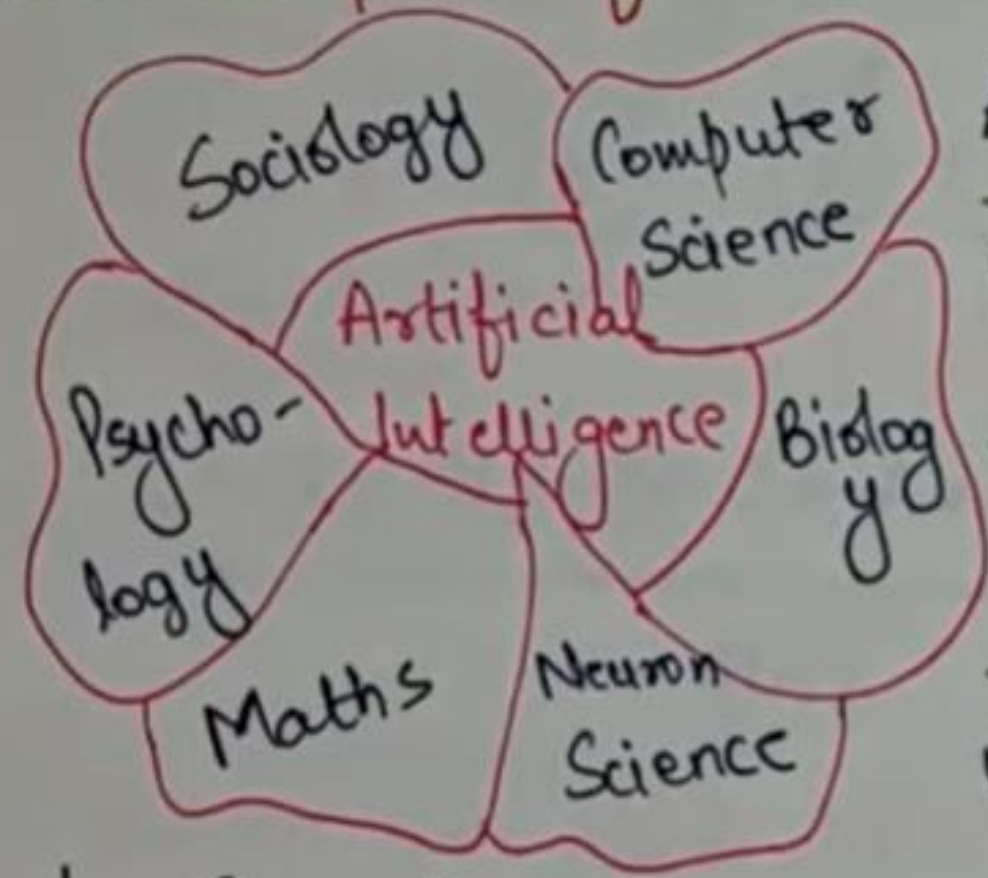
iv) New Job opportunities.

## Applications of AI:-

- ① AI in Gaming: Chess, Poker, tic-toe.  
↳ machine can think large no. of moves.
- ② AI in NLP: Natural lang. Processing  
↳ Machine can understand human lang.
- ③ AI in Healthcare: Fast diagnosis  
↳ Robotic Surgery.
- ④ AI in Finance: Adaptive Intelligence.  
↳ automatic chatbots, algorithm trading.
- ⑤ AI in Data Security: Helps in making data/app^n more secure.  
↳ AEG bot, AI2
- ⑥ Expert System: Integration of slw machine and special info^n to provide reasoning & advise.
- ⑦ Computer Vision: Understand the visual automatically by machine.
- ⑧ Speech Recognition: Extract - the meaning of sentence by human talk. [slang removal, noise rem.]
- ⑨ Robotics: Talk and behave like humans. ↳ Erica and Sophia.
- ⑩ AI in e-Commerce: Automatic recommendation of



## AI is Comprised of :-



- ↳ Reasoning
- ↳ Learning
- ↳ Problem solving
- ↳ Language Understanding.

## Advantages of AI

Accuracy  $\uparrow$  & Error  $\downarrow$

Fast Decision Making.

Reliability is more

usefulness in Risky Area.

Digital Assistant

## Disadvantages of AI

COST  $\uparrow$

Can't think beyond the limits.

No feeling & emotions

more dependency on machines  $\uparrow$ .

No original thinking

## Classification of AI:-

Narrow AI

WEAK AI: Able to perform dedicated task with Intelligence. [Not concerned with How]  
↳ Can't perform beyond its field or limitations.

↳ Example:-

- Flying machine
- Using logics
- Apple SIRI
- Playing chess

Evolutionary AI: It is the study and design of machines that simulate simple creatures and attempt to evolve.

↳ Example: Ants, Bees etc.

Strong AI: It is the study and design of machines that simulate human mind to perform intelligent tasks.

↳ i) Borrowing ideas from psychology and neuroscience

↳ ii) Forgetting things, Genetics, Language.

Super AI:- Hypothetical concept.  
machine > Human.  
[ machine ↔ machine ]







