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nal notes

Important Today

## HISTORY OF AI

8 Three periods of history of AI

9 ① Classical - from 1950

- In 1956 → concept of AI came in existence

10 11 - Research work for game playing, theorem proving, concept of state space.

12 ② Romantic - mid 1960 - 1970

- To make machine understand
- "Semantic net" technique was developed.

13 ③ Modern - 1970 to present

- To solve complex problems
- Develop concept like Artificial Neuron, Pattern recognition, Expert System

APRIL

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W T F S S

TURNING TEST

- Given by Alan Turing in 1950.
- He proposed if a device could think like humans or not.
- Used as benchmark for evaluating machine's ability to think humanly.



Personal notes

AI - NLP, Visual perception, Automatic reasoning, knowledge representation, intelligent robot.

ML - Random forest, k-means, support vector matrix

NN - MLP, Boltzman neural network

Deep learning - CNN, GAN, DBN, RNN

AI - It is the intelligence that a computer has developed on basis of information inserted into it.

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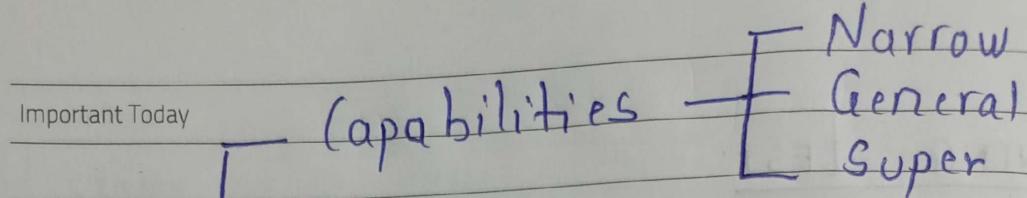
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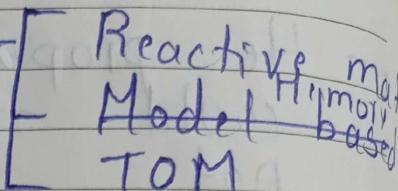


AI - [ ]

9

Functionality - [ ]

10



Personal notes

Strong AI

12

Weak AI

1

• Future of AI

1

• Have mind to behave like human

2

• Trained for specific task

3

• Learns / adapt like humans

4

• Eg - None

5

Eg - Siri, Alexa

6

Reactive Machines

→ No memory

→ Don't learn from past experience

→ Only reactive

→ Task specific.

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Limited memory

- Stores data temporarily
- Use past experience.

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Personal notes

Theory of Mind

Mind - part of body that helps us to think and make decision

- Emotional intelligence
- Social interaction.

AI techniques - Search, knowledge, abstract.

\* Rationality

→ To do the right thing.

→ The agent takes input through sensor and acting upon environment through actuator.

→ The gadgets are known as effectors

JUNE

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Important Today

## Types of Agent

### → Simple Agent

- Act on current input  
Eg - Vacuum cleaner

### → Model based Reflex Agent

- Has track of activities  
not visible currently

### → Goal Based

- Has goal, selects action

### → Utility Based

- Use function to select action

### → Learning

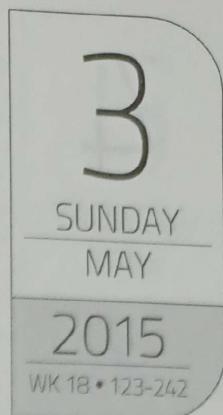
- Learns from past experience.

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# Terminology

- 1) State : condition
- 2) State space : all possible state
- 3) Move : transition from 1 to other
- 4) Rule : Description on how to make a move.



Personal notes

## Searching Techniques

↓  
3 Uninformed  
(Blind Search)  
4  $O(b^d)$

5  
6 BFS

7 DFS

8 Cost  
First  
Search

↓  
Informed  
(Heuristic)  
A\*  
B\*  
Hill  
climbing

Best  
first  
Search

JUNE						
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