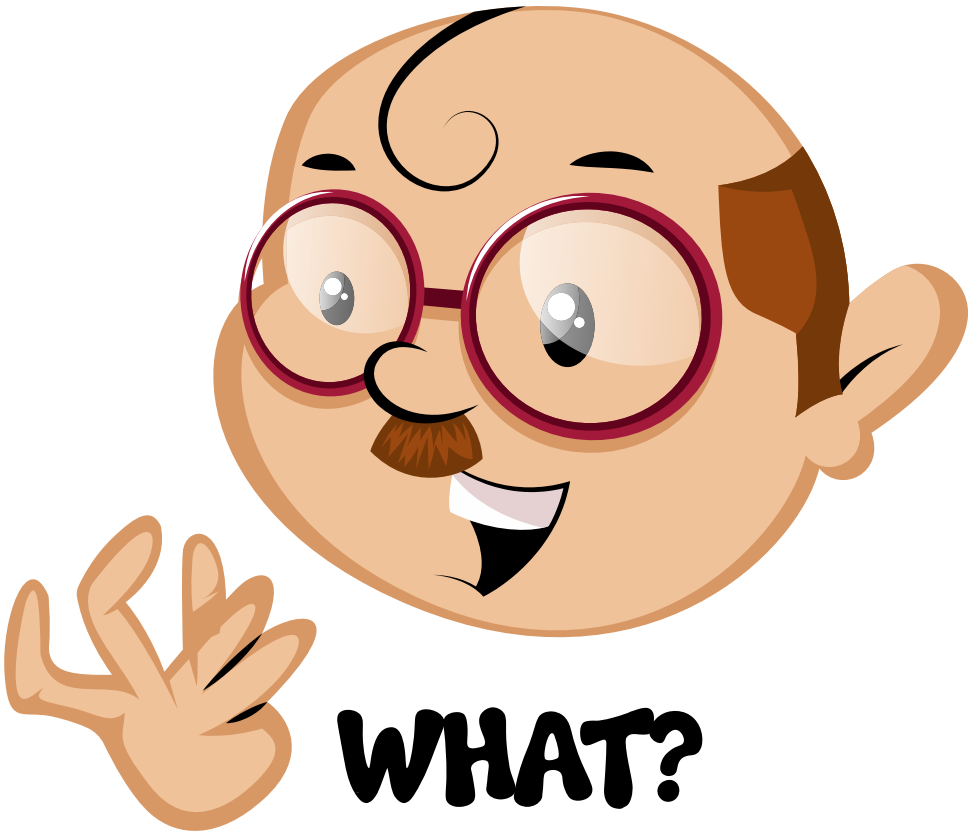
EVERYTHING YOU NEED

TO KNOW ABOUT

ARTIFICIAL INTELLIGENCE

Part - 1

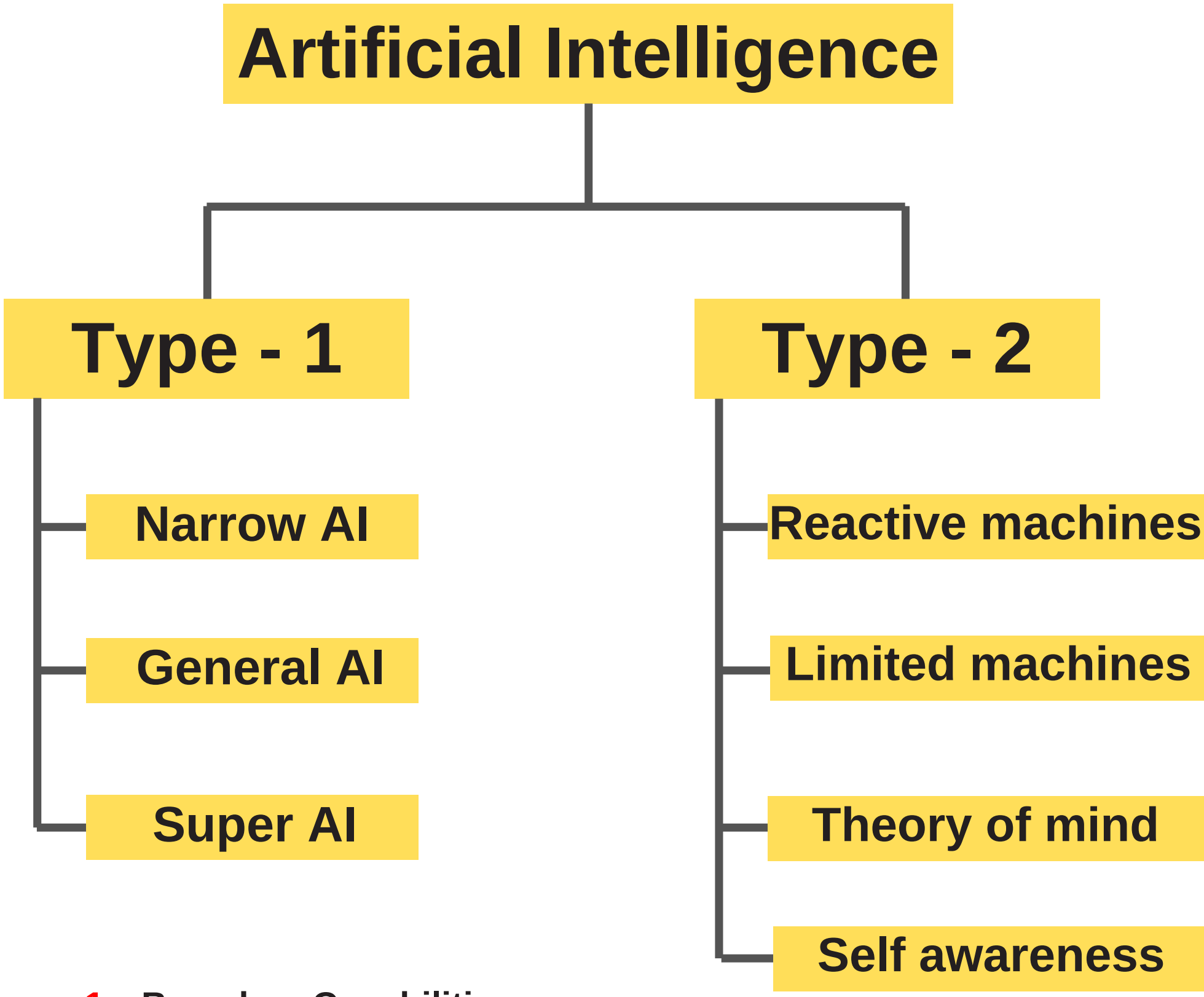
WHAT IS ARTIFICIAL INTELLIGENCE



- **Artificial Intelligence is a branch of computer science that aim to replicate or simulate human intelligence in a machine/program.**

- **Artificial intelligence is machines or computer programs that learn to perform tasks that require types of intelligence and that are usually performed by humans(Not a perfect one, though we have many definitions all say the same).**
- **What is intelligence?? - The dominant thought in psychology considers human intelligence not as single ability or cognitive process, but as a set of separate components.**
- **Most focued arears are planning, learning, reasoning, problem solving, and decision making.**

Types of Artificial Intelligence



Type - 1 Based on Capabilities

Type - 2 Based on functionality

Types of Artificial Intelligence

- **Narrow AI:** **Also known as weak AI which involve machine to performs only narrowly defined set of specific task. Examples: playing chess, purchasing suggestions on e-commerce site, self-driving cars, speech recognition, and image recognition etc....**
- **General AI:** **Also known as strong AI which involve machine to think and make decisions just like humans. Currently, there is no such system exist which could come under general AI and can perform any task as perfect as a human.**
- **Super AI:** **Super AI is a level of Intelligence of Systems at which machines could surpass human intelligence, and can perform any task better than human with cognitive properties. It is an outcome of general AI.**

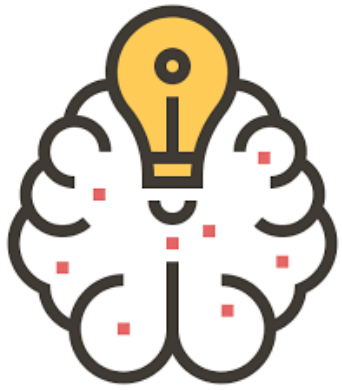
Types of Artificial Intelligence

- **Reactive Machines:**
  - **AI systems do not store memories or past experiences for future actions.**
  - **These machines only focus on current scenarios and react on it as per possible best action.**
  - **IBM's Deep Blue, AlphaGo**
- **Limited Memory:**
  - **Limited memory machines can store past experiences or some data for a short period of time.**
  - **Self-driving cars are one of the best examples of Limited Memory systems.**

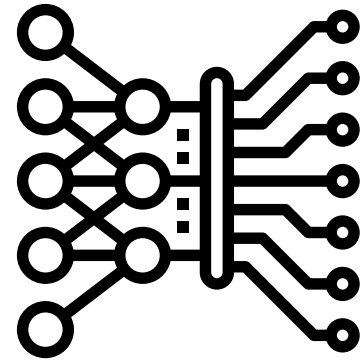
Types of Artificial Intelligence

- **Theory of Mind:**
  - **Theory of Mind AI should understand the human emotions, people, beliefs, and be able to interact socially like humans.**
  - **This type of AI machines are still not developed, but researchers are making lots of efforts and improvement for developing such AI machines.**
- **Self-Awareness:**
  - **Self-awareness AI is the future of Artificial Intelligence. These machines will be super intelligent, and will have their own consciousness, sentiments, self-awareness.**
  - **Self-Awareness AI does not exist in reality still and it is a hypothetical concept.**

Different ways AI can be achieved

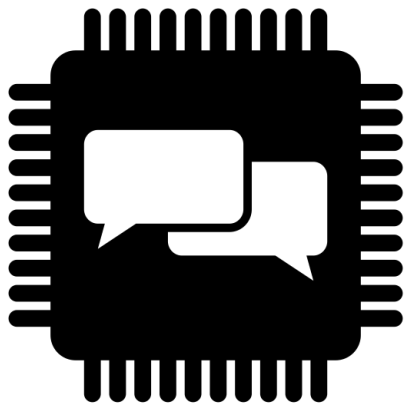


Machine learning

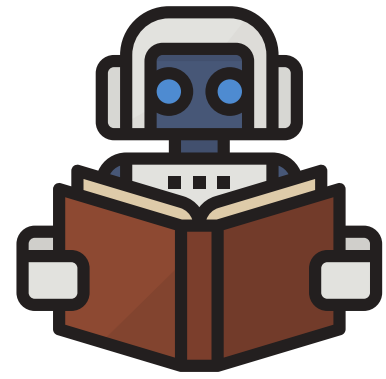


Neural networks

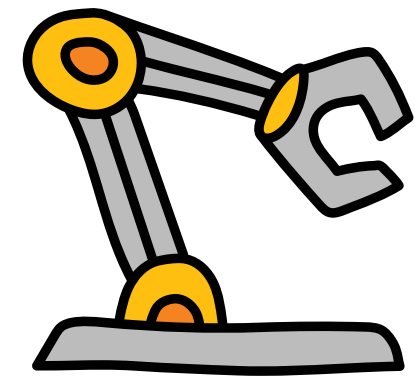
Planning, scheduling



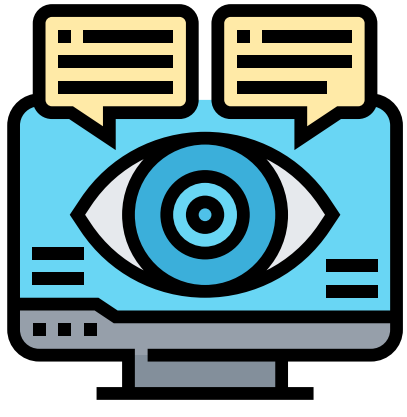
NLP



Expert systems

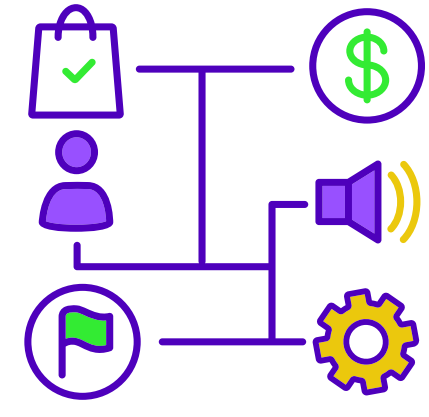


Robotics



Computer vision

Speech



Fuzzy logic