AI

- Artificial Intelligence is composed of two words **Artificial** and **Intelligence**, where Artificial defines *"man-made,"* and intelligence defines *"thinking power"*, hence AI means *"a man-made thinking power."*

- **"It is a branch of computer science by which we can create intelligent machines which can behave like a human, think like humans, and able to make decisions."**

- Examples of fields where AI is being used:
  1. **Self driven carshttps://youtu.be/xnjyhfYIqmM**
  2. **Playing chess and music**
  3. **Painting etc.**

Goals of Artificial Intelligence

1. Replicate human intelligence

2. Solve Knowledge-intensive tasks

3. An intelligent connection of perception and action

4. Building a machine which can perform tasks that requires human intelligence such as:
   1. Proving a theorem
   2. Playing chess
   3. Plan some surgical operation
   4. Driving a car in traffic

5. Creating some system which can exhibit intelligent behavior, learn new things by itself, demonstrate, explain, and can advise to its user.
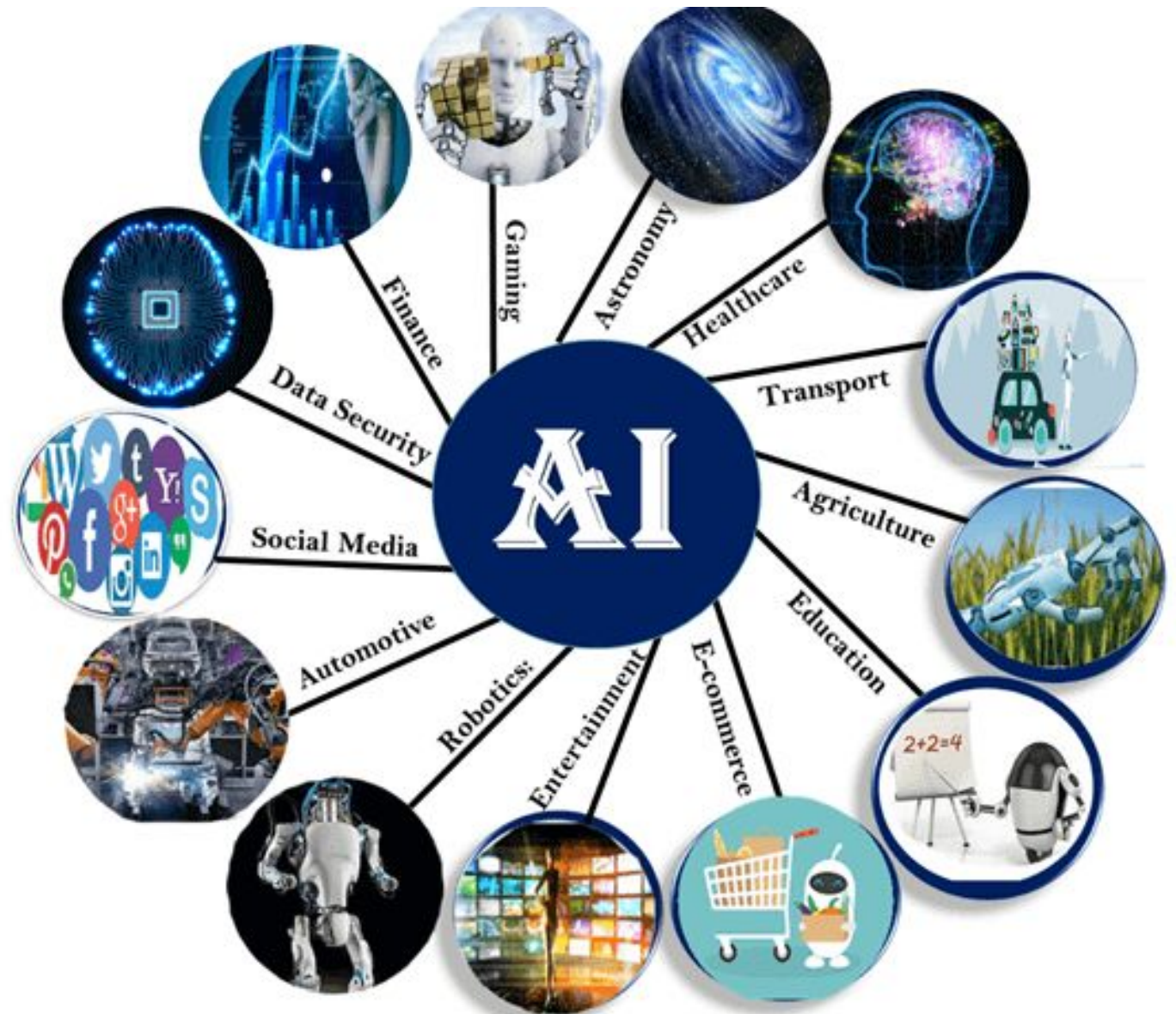
Advantages of Artificial Intelligence

- High Accuracy with less errors
- High-Speed
- High reliability
- Useful for risky areas
- Digital Assistant
- Useful as a public utility

Disadvantages of Artificial Intelligence

- High Cost
- Can't think out of the box
- No feelings and emotions
- Increase dependency on machines
- No Original Creativity

APPLICATIONS OF AI

AI Techniques

- AI techniques are methods that can be used to develop and create computer programs commonly viewed as forms of artificial intelligence.

- There are many different artificial intelligence techniques that can be utilized by an AI programmer, they are as follows:

  ❖ Heuristic
  ❖ SVM(support vector machine)
  ❖ Artificial Neural Network
  ❖ Natural language Processing

Problem Solving in AI

- Before solving any problem in AI you need to identify the kind of problem.

- The problems can be categorized as
  1. Structured
  2. Non structured
  3. Linear
  4. Non Linear

Problem Solving in AI(contd.)

- The aim of [Artificial Intelligence](#) is to develop a system which can solve the various problems on its own.

- The **steps involved in solving a problem are:**
  - ❖ Define a problem
  - ❖ Form the state space
  - ❖ Gather knowledge
  - ❖ Planning–(Decide data structure and control strategy)
  - ❖ Applying and executing