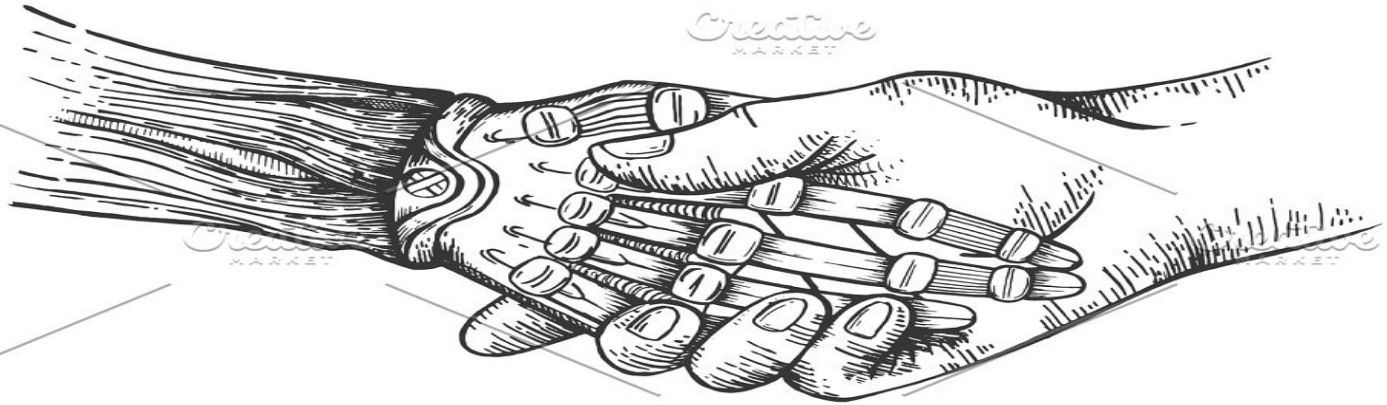
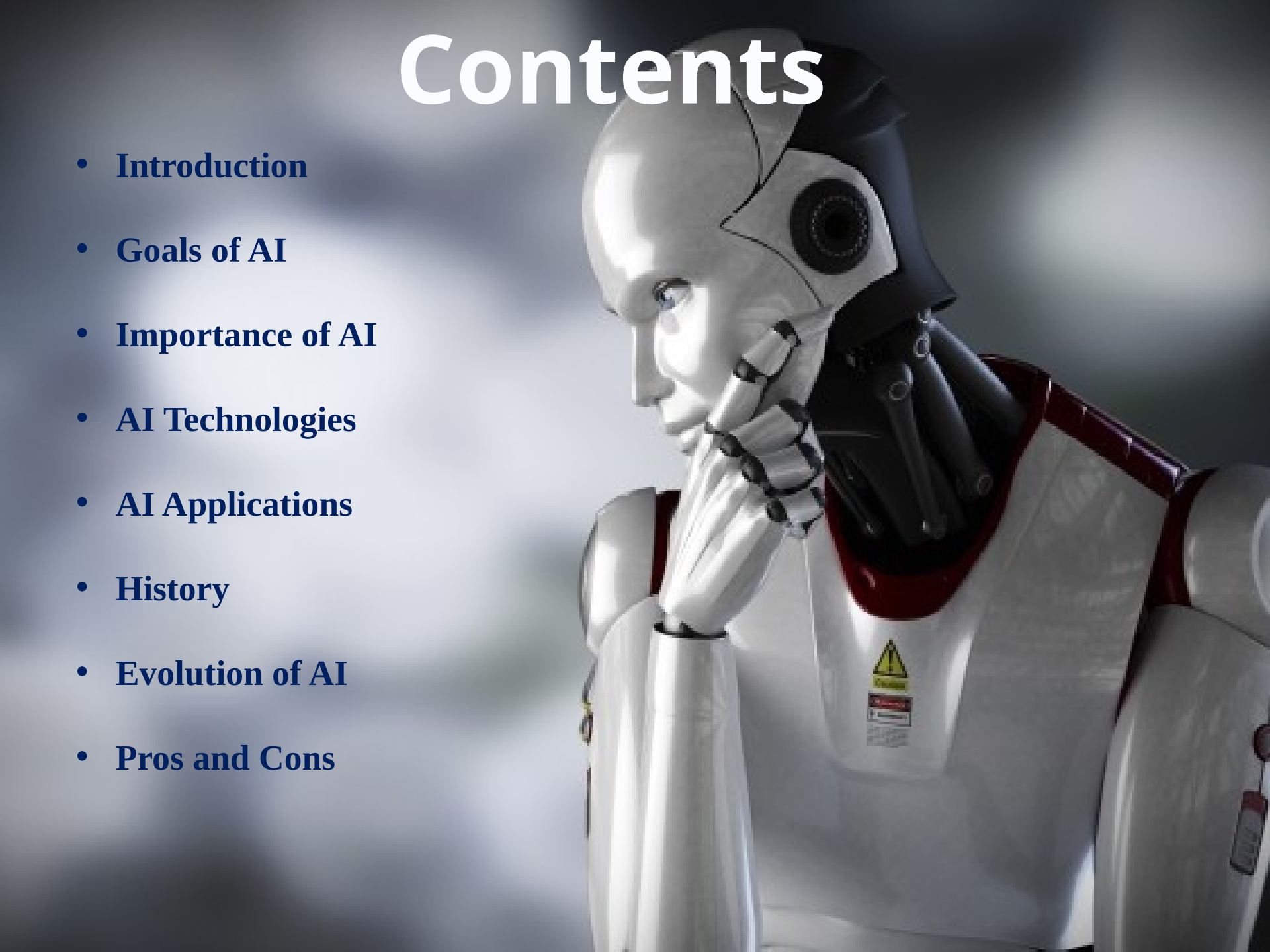


Artificial Intelligence

Contents



- Introduction
- Goals of AI
- Importance of AI
- AI Technologies
- AI Applications
- History
- Evolution of AI
- Pros and Cons

WHAT IS A.I.?

- John McCarthy, it is “The science and engineering of making intelligent machines, especially intelligent computer programs”.
- Artificial intelligence is a branch of computer science that aims to create intelligent machines.
- An area of computer science that deals with giving machines the ability to seem like they have human intelligence
- Power of a machine to copy intelligent human behavior

- Some of the activities computers with artificial intelligence are designed for include:

1. Speech recognition
2. Learning
3. Planning
4. Problem solving

- AI can be categorized as either weak or strong.

- Weak AI, also known as narrow AI, is an AI system that is designed and trained for a particular task.

- Strong AI, also known as artificial general intelligence, is an AI system with generalized human cognitive abilities

alexa

facebook research

Siri

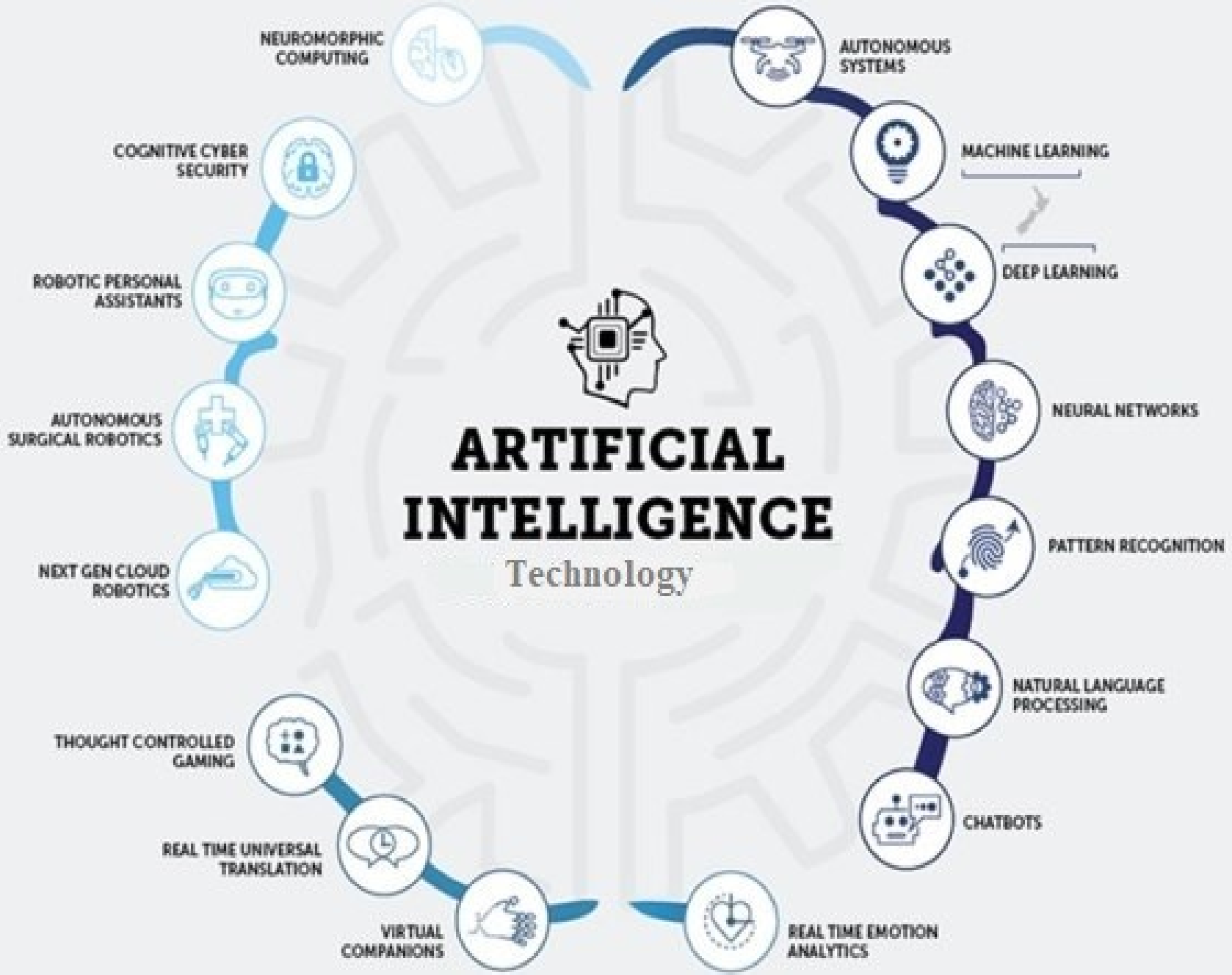
Goals of AI

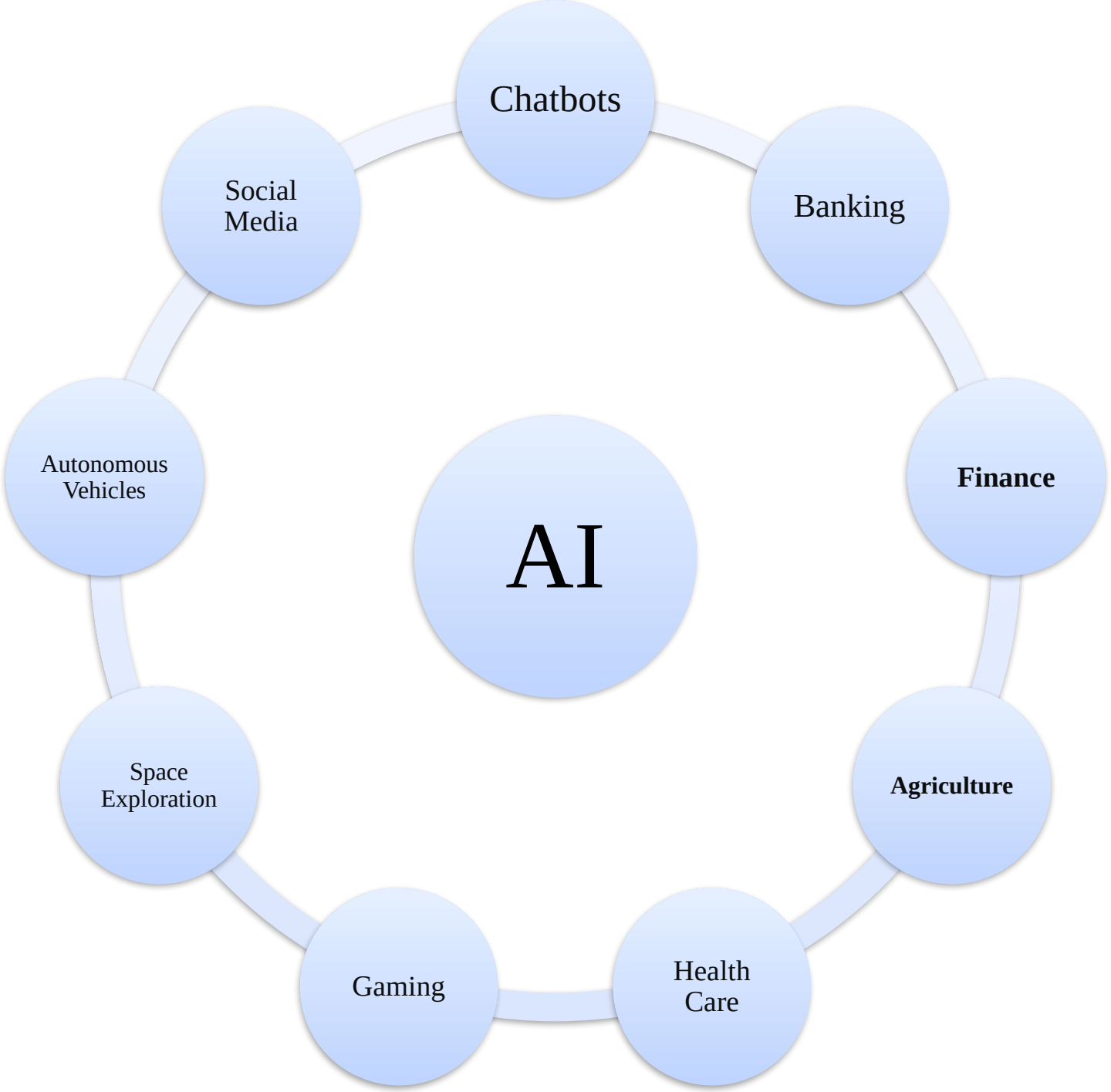
- **To Create Expert Systems**: The systems which exhibit intelligent behavior, learn, demonstrate, explain, and advice its users.

- **To Implement Human Intelligence in Machines**: Creating systems that understand, think, learn, and behave like humans.

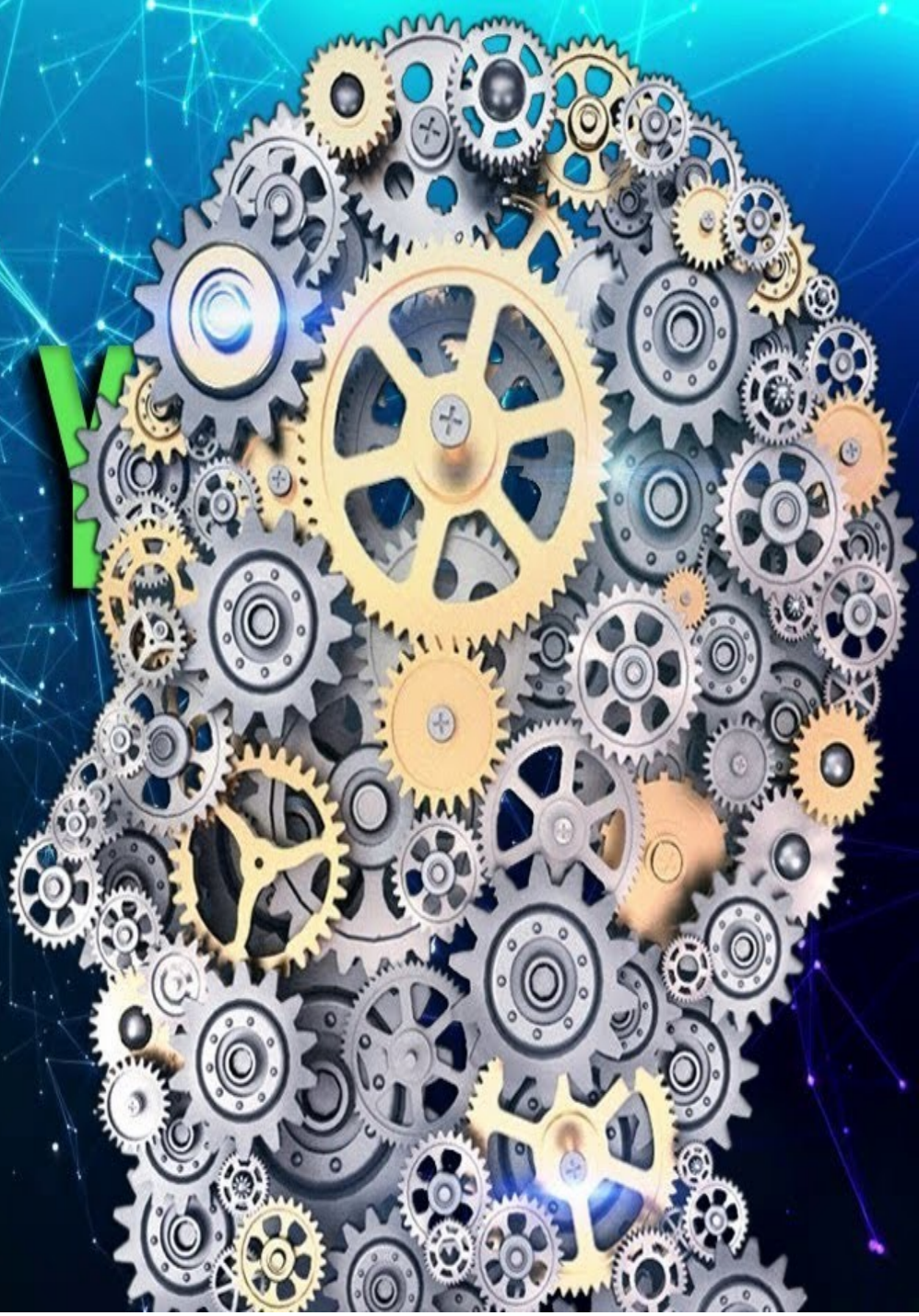
Importance of Artificial Intelligence

- AI analyzes more and deeper data
- AI achieves incredible accuracy
- AI adds intelligence
- AI gets the most out of data


NEUROMORPHIC COMPUTING
COGNITIVE CYBER SECURITY
ROBOTIC PERSONAL ASSISTANTS
AUTONOMOUS SURGICAL ROBOTICS
NEXT GEN CLOUD ROBOTICS
THOUGHT CONTROLLED GAMING
REAL TIME UNIVERSAL TRANSLATION
VIRTUAL COMPANIONS
REAL TIME EMOTION ANALYTICS
CHATBOTS
NATURAL LANGUAGE PROCESSING
PATTERN RECOGNITION
NEURAL NETWORKS
DEEP LEARNING
MACHINE LEARNING
AUTONOMOUS SYSTEMS
ARTIFICIAL INTELLIGENCE
Technology

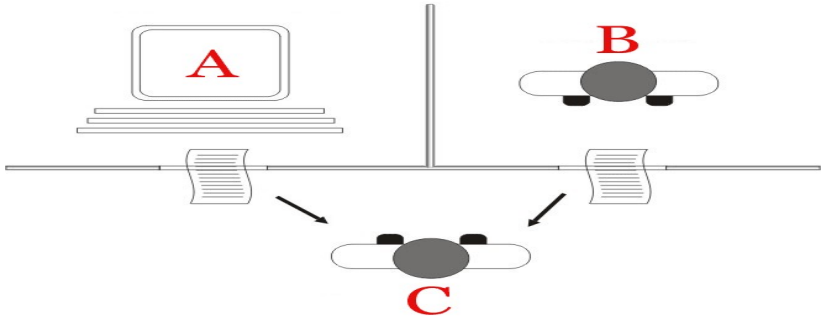

Chatbots
Banking
Finance
Agriculture
Health Care
Gaming
Space Exploration
Autonomous Vehicles
Social Media
AI

THE HISTORY OF AI

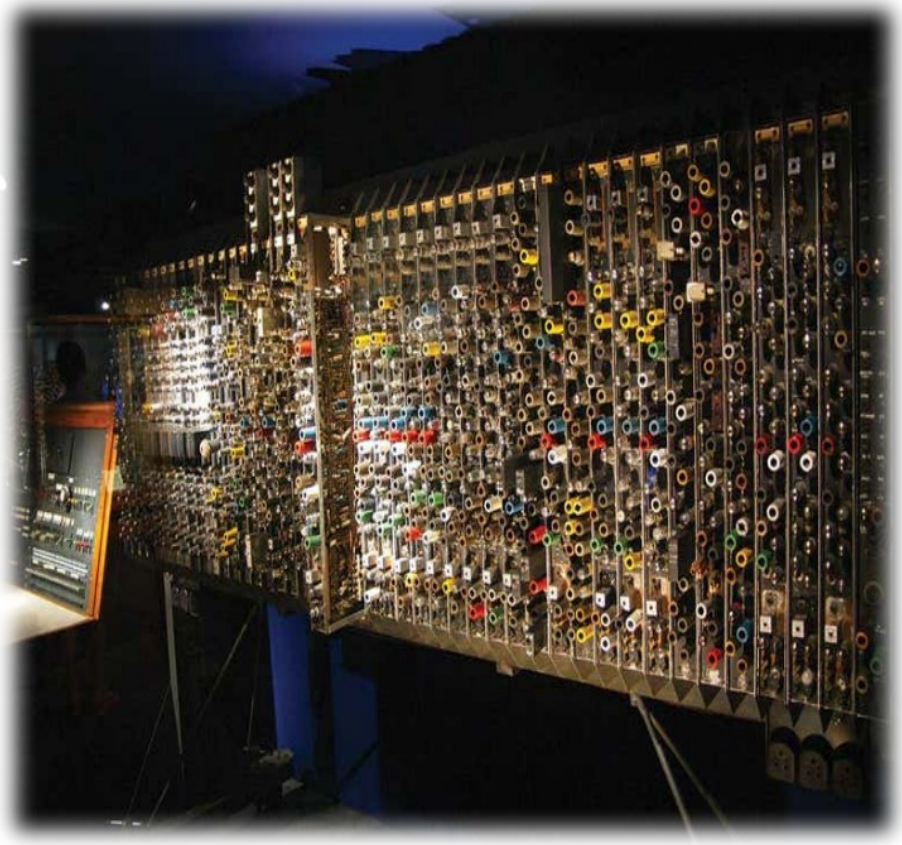


Turing Machine

- Alan Turing was born on 23th June 1912 in London.
- He is widely known, because the encrypted the code of the enigma, which were used from Nazi Germany to communicate
- He presented his idea in the model of the Turing machine, which is today still a popular term in Computer Science
- he Turing machine is an abstract machine, which can ,despite the model's simplicity, construct any algorithm's logic
- Some years after the end of World War 2, Turing introduced his widely known Turing Test or also known as Imitation Game



Enigma



Turing Machine

- The **first** working **AI** programs were written in 1951 to run on the Ferranti Mark 1 **machine** of the University of Manchester

    1. A checkers-playing program written by Christopher Strachey

    2. Chess-playing program written by Dietrich Prinz

- In 1956, John McCarthy finally coined the term artificial intelligence

- In *1956* he organized a conference "The Dartmouth summer research project on artificial intelligence" to draw the talent and expertise of others interested in machine intelligence

- New challenges:

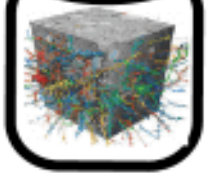
1) the creation of systems that could efficiently solve problems by limiting the search and

2) the construction of systems that could learn by themselves.

- LISP (LIST Processing) language is created by John McCarthy in *1958*.

History of AI

1943



Evolution of Artificial neurons

1950

Turing Machine

1956

Birth of AI: Dartmouth Conference

1966

First Chatboat : ELIZA

1972

First Intellgence Robot : WABOT -1

1974-1980

First AI Winter

1980

Expert Systems

1987-1993

Second AI winter

1997

IBM Deep blue : first computer to beat a world chess champion

2002

AI in Home: Roomba

2011

IBM s Watson : Wins a quiz show

2012

Google now

2014

Chatbot Eugene Goostman:Wines a "Turing test

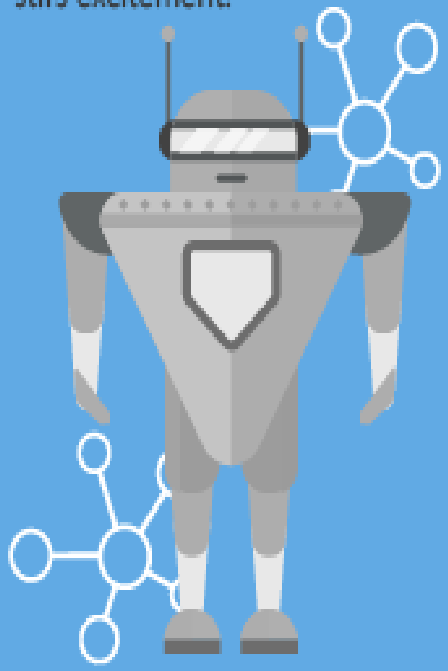
2015

Amazon Echo

EvolutionAI

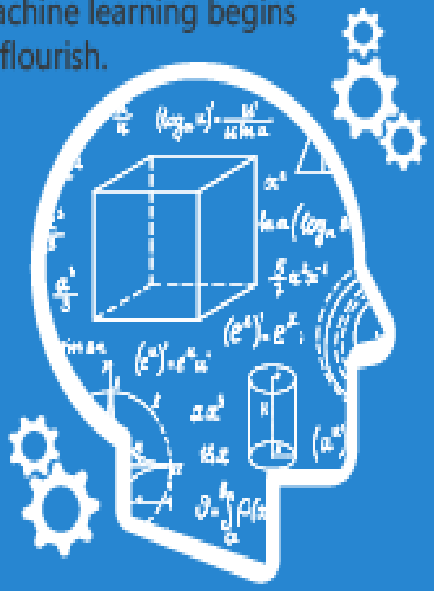
ARTIFICIAL INTELLIGENCE

Early artificial intelligence stirs excitement.



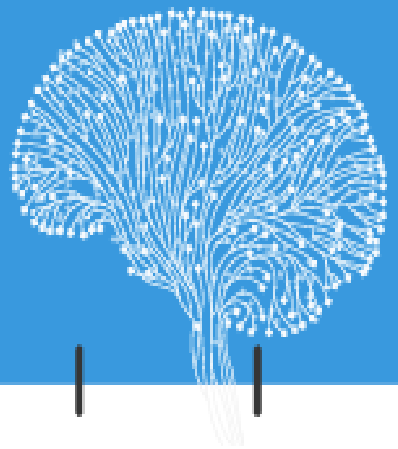
MACHINE LEARNING

Machine learning begins to flourish.



DEEP LEARNING

Deep learning breakthroughs drive AI boom.



1950's 1960's 1970's 1980's 1990's 2000's 2010's

Pros	Cons
Precision and Accuracy	Cost incurred in the maintenance and repair
Space exploration	Not able to act any different
Used for mining process	Lack a creative mind
Fraud detection, manage record	Lack common sense
Lacking the emotional side	Unemployment
Can do repetitive and time-consuming tasks	Humans may became dependent on machines
Function without stopping, Risk Reducing	**Wrong hands causes destruction**