# Artificial Intelligence: A Milestone to Machinery Empowerment

Artificial Intelligence has been a very familiar phenomenon in this advanced tech-based world. Artificial Intelligence is a technology to make the machines capable to learn from experience and process inputs with human -like rational behavior. According to Wikipedia, Artificial Intelligence (AI) is intelligence exhibited by machines. Though the most common examples we hear about AI are : virtual assistants (Siri, Cortana), Natural Language Processing and chess-gaming, the use of artificial intelligence is very huge and versatile extended to each and every sphere of modern life.
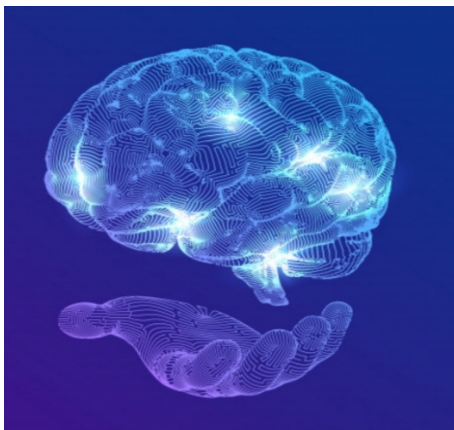
Picture: fictional representation of a digital brain by freepik.com

History

Legends about artificial intelligent behavior has been traced in ancient Egyptian folk studies. The first theory about artificial intelligence was given by American mathematician Norbert Winner. According to his 'Feedback Theory' – "Any intelligent behavior is a feedback mechanism." John McCarthy was the first man to use the word 'Artificial Intelligence' in an academic conference in 1956. He is considered the 'father' of artificial Intelligence.

How AI Works

Artificial intelligence models are developed using different programming languages (Python, MATLAB, Java, C, C++, PROLOG, LISP etc.). Then the models are fed huge input to get trained to gradually develop human-like intelligent capabilities.

Different kind of procedures are applied in this process:

Machine learning automates analytical building of AI models. Using various methods like pattern recognizing, neural networks, statistics to analyze the invisible insights and patterns of a database. But it need not to be specifically programmed to work on any specific genre of database to find the data in one exact location.

Neural networks are developed on the idea of interconnected neuron cells in human brain. It is made of different interconnected units that analyze the data on the perspective of external inputs. After several passes, relations between data and actual insight of the database is derived eventually.

Deep Learning is basically made of huge neural networks. It is capable of analyzing large chunks of data and is able to find sophisticated patterns. It is widely used in visual recognition, NLP (Natural Language Processing), Virtual assistants.

Cognitive Computing stimulates the thinking and reasoning process of human-beings in a computerized model. It can draw inferences from provided data and patterns and come to reasonable conclusion depending of existing domain of knowledge and information.

Versatile uses of AI

1. Stock Market: The previous statistics can be analyzed and processed by AI models. Thus, upcoming ups and downs of share prices can be thoroughly predicted. The accuracy of the prediction depends on the sophistication of the model and the amount of data provided to it. So,

in the upcoming modern world, success in stock markets will literally depend on how much sophisticated technology a company or an investor possess.

2. Banking: In this world of various economic classes of people, there exists fluctuating demands of banking facilities from men to men. So, an AI model comes very useful to optimize the policies (interest rates and deposit plans) in order to reach the maximum number of clients. It only needs some economical survey as input data.

3. Healthcare: Artificial intelligence models can skillfully observe the diagnostic results (X-Ray, CT Scan, MRI) and generate readable reports and advice measures for the patients. Recently, a researcher group of Computer Science and Artificial Intelligence Laboratory, Massachusetts Institute of Technology have claimed that they have designed an AI model that can predict mildest symptoms of heart attacks observing ECG graphs of a patient.

4. Customer Care Bots: Every online service provider companies have customer care services to manage complains, queries and suggestions. Now-a-days it is very common using Artificial Intelligence to develop the aviator or bot. It reduces manpower, possibilities of mistakes and ensure swift responses to the clients.

5. Traffic Management: In dense cities with large number of population and intersections, the traffic systems can easily be managed by well-trained AI models. Depending on various speed range and numbers of different vehicles, signaling system can be automated using AI models. Auto-driving cars are one of the latest success of artificial intelligence.

These are only a few of the vast and versatile use of artificial intelligence. Even several books can be written only on use of AI.

However, as AI learns from data, insufficient supply of data can lead to lack of accuracy. So, proper amount of data is a pre-requisite for

artificial intelligence models to work.

After all, artificial intelligence can provide highly rational software to provide reasonable decision along with human-like interactions, but it is not going to be any possible replacement of human so soon.