

THE IMPACT OF ARTIFICIAL INTELLIGENCE IN INDIA.

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ABSTRACT:

AI is regarding artificial life-forms that can improve on human intelligence, and for others, almost any data processing technology can be called AI. Artificial intelligence (AI) has been applied widely in our daily lives in a variety of ways with numerous successful stories. Examine in AI has built upon the tools and techniques of numerous in different disciplines; the application of various disciplines in AI has necessitated the development of many enhancements and extensions. AI has also contributed to dealing with the corona virus disease (COVID-19) pandemic, which is currently. In addition to helping us develop our bodies, AI technology is also accepted to help us create artificial life forms. Science fiction has long recommended the concept of human-like robots that are capable of difficult interactions. It Cause of Unemployment Artificial Intelligence has dramatically improved our world in ways unimaginable, but there are many concerns regarding the impact it can have on employment and the credibility of the workforce. There are predictions that tell us about the possibility of millions of people facing unemployment in the next decade due to automation and neural networks. There has been a significant transformation in business, education, banking, and the market and government sector due to AI. This can inform the development of more detailed models of safety assurance and contribute to more effective risk control.

“As a technologist, I see how AI and the fourth industrial revolution will impact every aspect of people’s lives.” –Fei-Fei Li, Professor of Computer Science at Stanford University.

Keywords: Artificial intelligence, Robots, Machine learning, data science and deep learning.

❖ INTRODUCTION

Artificial Intelligence is a division of Science which deals with helping machines find solutions to difficult problems in a more human-like fashion¹. John McCarthy is one of the "founding fathers" of artificial intelligence, together with Alan Turing, Marvin Minsky, Allen Newell, and Herbert A. Simon. McCarthy coined the term "artificial intelligence" in 1955. AI or artificial intelligence is the simulation of human intelligence processes by machines, especially computer systems. These processes include learning, reasoning and self-correction. A few of the applications of AI include expert systems, speech recognition and machine vision, Machine Learning, Deep Learning, Natural Language Processing, Robotics, Fuzzy Logic. There are four types of artificial intelligence that reactive machines, limited memory, theory of mind and self-awareness and AI is a broad term referring to robots, bots, chatbots, androids and cyborgs, categorised into 3 types of AI: super artificial intelligence (ASI), narrow artificial intelligence (ANI), and general artificial intelligence (AGI).

AI works by combining large amounts of data with fast, iterative processing and intelligent algorithms, allowing the software to learn automatically from patterns or features in the data. Cognitive computing is a subfield of AI that strives for a natural, human-like interaction with machines. AI applications are analytics; bots; robotic process automation (RPA); and report generation.

MACHINE LEARNING

The roots of machine learning are in statistics, which can also be thought of as the art of **extracting knowledge from data**. Especially methods such as linear regression and Bayesian statistics, which are both already more than two centuries old (!), are even today at the heart of machine learning.

Three types of machine learning

The area of machine learning is often divided in subareas according to the kinds of problems being attacked. A rough categorization is as follows:

Supervised learning: We are given an input, for example a photograph with a traffic sign, and the task is to predict the correct output or label, for example which traffic sign is in the

¹https://www.google.com/search?xsrf=ALeKk02dHOs1N4h_gsJPOIzM2R998NriDA%3A1585323725714&ei=zR5-XqOfK7vH4-

picture (speed limit, stop sign, etc.). In the simplest cases, the answers are in the form of yes/no (we call these *binary classification problems*).

Unsupervised learning: There are no labels or correct outputs. The task is to discover the structure of the data: for example, grouping similar items to form “clusters”, or reducing the data to a small number of important “dimensions”. Data visualization can also be considered unsupervised learning.

Reinforcement learning: Commonly used in situations where an AI agent like a self-driving car must operate in an environment and where feedback about good or bad choices is available with some delay. Also used in games where the outcome may be decided only at the end of the game.

The categories are somewhat overlapping and fuzzy, so a particular method can sometimes be hard to place in one category. For example, as the name suggests, so-called **semi supervised learning** is partly supervised and partly unsupervised.²

ROBOTICS means building and programming robots so that they can operate in complex, real-world scenarios. In a way, robotics is the ultimate challenge of AI since it requires a combination of virtually all areas of AI. For example:

- ✚ Computer vision and speech recognition for sensing the environment
- ✚ Natural language processing, information retrieval, and reasoning under uncertainty for processing instructions and predicting consequences of potential actions
- ✚ Cognitive modelling and affective computing (systems that respond to expressions of human feelings or that mimic feelings) for interacting and working together with humans
- ✚ Many of the robotics-related AI problems are best approached by machine learning, which makes machine learning a central branch of AI for robotics.

AI has the potential to add US\$957 billion, or 15 percent of India's current gross value in 2035. The combination of the technology, data and talent that make intelligent systems possible has reached critical mass, driving extraordinary growth in AI investment.

Objectives:

- To study about the AI and its important in the global level. India/
- To know the application of AI in present and future scenario
- To solve the complex task in global level. India.

² <https://course.elementsofai.com/4/1>

❖ OPERATIONAL DEFINITION:

- **Artificial** refers to something which is made by human or non natural thing.
- **Intelligence** has been defined in many ways: the capacity for logic, understanding, self-awareness, learning, emotional knowledge, reasoning, planning, creativity, critical thinking, and problem solving.³ Intelligence means ability to understand or think

Artificial intelligence is a technology which enables a machine to simulate human behaviour. *“It is the study of how to train the computers so that computers can do things which at present human can do better.”*⁴ **AI as taught in computer science courses.** •

Reasoning • Knowledge • Planning • Learning • Natural language processing • Perception • Manipulating the physical world

- **Machine learning** is a subset of AI which allows a machine to automatically learn from past data without programming explicitly. The goal of AI is to make a smart computer system like humans to solve complex problems. **The acquisition of knowledge or skill.**
- **Deep learning** is a subfield of machine learning, which itself is a subfield of AI, which itself is a subfield of computer science.
- **Data science** is a recent umbrella term (term that covers several subdisciplines) that includes machine learning and statistics, certain aspects of computer science including algorithms, data storage, and web application development.
- **Robotics** means building and programming robots so that they can operate in complex, real-world scenarios. In a way, robotics is the ultimate challenge of AI since it requires a combination of virtually all areas of AI.

❖ AI APPLICATION IN INDIA

- **Automation business process.**

Business process automation is the known way to implement **processes** in an organization through the following activities: Use of specific technologies.

1 – Create interface prototypes. ... 2 – Create Integrations. ...

3 – Apply the business rules. ... 4 – Monitor and prep – BAM.

- **Chat bots**

It use deep learning, natural language processing, and machine learning algorithms to mimic human interactions. The best **chatbots** require massive amounts of data to interpret and predict what the correct response should be to the end user.

³ <https://en.wikipedia.org/wiki/Intelligence>

⁴ <https://www.geeksforgeeks.org/difference-between-machine-learning-and-artificial-intelligence/>

➤ **Natural language processing**

It is a branch of artificial intelligence that deals with the interaction between computers and humans using the natural language. The ultimate objective of NLP is to read, decipher, understand, and make sense of the human languages in a manner that is valuable.

➤ **Image recognition**

Image recognition, in the context of machine vision, is the ability of software to identify objects, places, people, writing and actions in images. Computers can use machine vision technologies in combination with a camera and artificial intelligence software to achieve image recognition

➤ **Agriculture**

Precision agriculture uses AI technology to aid in detecting diseases in plants, pests, and poor plant nutrition on farms. ... In addition to ground data, farmers are also taking to the sky to monitor the farm. Computer vision and deep learning algorithms process data captured from drones flying over their fields.

➤ **E commerce**

Electronic-Commerce will undergo massive transformation due to AI. With robots navigating the space to collect products and execute customer orders; to be sent or even delivered to customers, also automatically with autonomous drones and cars. Thus reducing the demand for salespersons and network stores.

➤ **Health care**

A Patient required a nurse to monitor patients' health at regular intervals and notify the doctor regarding patients' health. But now with the help of AI-enabled devices attached to patients body so that doctors can monitor patients health at regular intervals and thus enabling him to take necessary decisions regarding patient's health. Thus there would be no need for a nurse to monitor patient's health at regular intervals.

➤ **Education**

A virtual assistant is a software agent can perform the task for task-based human verbal commands. Now a days virtual assistants are being designed in such a way that they can teach students like human teacher. Thus students can study online with the help of virtual assistant at an affordable price and soon the need for teachers and professors would drop down.

➤ **Courier**

Courier and delivery people are already being replaced by drones and robots within few years automation would dominate this field. It is expected this space would grow by 5% in 2024.

➤ **Information technology**

It is expected that automation would increase by 12% in 2024. Previously for testing any software code we needed a human for it. But now there is no need for any human tester as automated testing is performed. Thus reducing the need for IT professional's in industry.

➤ **Real estate**

Real estate plays a significant role in buying and selling of the home. In this age of information, everything is possible on our fingertips. Online services like magic bricks and 99 acres help customers to search for their properties. Thus a tech-savvy seller would easily be able to reach customers without any need of agent.

➤ **Transportation**

It enhanced automation and machine learning we are able to design and create vehicles that are capable of sensing environment and move safely with no or little human input. These vehicles are self-driven and do not require any human driver for its movement. With the growth in these automated vehicles the demand for professionals like car drivers, sailors and pilot would rapidly dropdown.

➤ **Banking**

Artificial Intelligence is the future of **banking** as it brings the power of advanced data analytics to combat fraudulent transactions and improve compliance. ... Features such as **AI** bots, digital payment advisers and biometric fraud detection mechanisms lead to higher quality of services to a wider customer base.

MISC

In future, humans will be able to augment themselves with robots. There will be more numbers of smart cities as vehicles, phones, home appliances will be run by AI. 'Home robots' will help elderly people with their day to day work. Robots will take over hazardous jobs like bomb defusing, welding, etc.

❖ CONCLUSION :

(AI) is the intelligence of machines and the division of Computer Science that endeavour to generate it. AI, or Artificial General Intelligence (AGI) refers to a machine that can handle any intellectual task. It is an autonomous and adaptive system. It machines imitating intelligent human behaviour. AI, and in particular, machine learning, is being used to make important decisions in many sectors. This brings up the concept of algorithmic bias. What it means is the embedding of a tendency to discriminate according ethnicity, gender, or other factors when making decisions about job applications, bank loans, and so on. Algorithmic bias isn't a hypothetical threat conceived by academic researchers. It's a real phenomenon that is already affecting people today. The human society can adapt to the changes brought by AI. Everything that we have learned about AI suggests that the future is bright. We will get new and better services and increased productivity will lead to positive overall outcomes – but only on the condition that we carefully consider the societal implications and ensure that the power of AI is used for the common good. AI is Reduction of Human error and zero risk.

❖ SUGGESTION:**Transportation**

Road safety should eventually improve as the reliability of the systems surpasses human level. The efficiency of logistics chains when moving goods should improve.

Content recommendation

Aware of the basic principles helps you understand the potential implications: these involve so called filter bubbles, echo-chambers, troll factories, fake news, and new forms of propaganda.

Image and video processing

when such techniques advance and become more widely available, it will be easy to create natural looking fake videos of events that are impossible to distinguish from real footage. This challenges the notion that “seeing is believing”.

Refrence:

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