

Role of AI and ChatGPT in Education and their Impact on other field

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Abstract — AI and ChatGPT is a new age technology that uses the artificial Intelligence techniques to generate natural language responses to a given prompt or a input. It has also been use in different field like: education, natural processing, marketing, business, agriculture, medical science, automobile, finance, banking, science and technology, research and development etc. This study is focus on the origin of AI and ChatGPT, how it work and their impact on the other field. In this we discuss the role of AI and ChatGPT as well as its limitation and features. In this we also discuss the impact of AI and ChatGPT in the field of education, cyber security, software development, employment and information technology as well as its other related application for researchers and scholars.

Keywords: AI, ChatGPT, Chatbot, Open AI, Natural Language, VLSI, ChatBot, Google Assistance, Open AI (GPT-3, DALL-E, Whisper), Mem, Leap AI, GPS, USD, CAGR, GPS

I. INTRODUCTION

We also knows that Artificial Intelligence by the name of AI, which has become the subject of much discussion in today's era, which started in the 1950s, but it got recognition in the 1970s. Japan was the first to take the initiative and in 1981 started a plan called Fifth Generation. In this, the outline of a 10 year program for the development of super-computers was presented. Later Britain created a project named 'Elvi' for this. European Union countries also started a program called 'Esprit'. In 1983, some private organizations together established a consortium 'Micro-Electronics and Computer Technology' to develop advanced technologies applicable to artificial intelligence, such as Very Large Scale Integrated (VLSI) circuits [5].

Artificial intelligence means – intellectual ability developed in an artificial way. According to John McCarthy, the father of artificial intelligence, it is the science and engineering of making intelligent machines, especially intelligent computer programs, that is, the intelligence displayed by machines. Artificial intelligence is a sub-division of computer science and its roots are based entirely on computing systems. The ultimate goal of AI is to create devices that can act intelligently and independently and reduce human labor and manual work. It uses machine learning to mimic human intelligence. Siri, Alexa, Tesla cars and digital applications such as Netflix and Amazon are some of the best examples of AI technologies [1].

ChatGPT is a type of artificial intelligence bot, whose full form is Chat Generative Pre-Trained Transformer, created by Open AI in 2015; it is a type of search engine. Which works like Google search engine, it works completely on AI system only. That is, it will immediately type the questions asked by you and present them in front of you. Earlier it used to take us hours to do these tasks. The increasing popularity of AI all over the world and its quality

has also put people in concern. Today, there are different types of people who think about AI all over the world. Some groups of people consider it good and some groups of people consider it is bad. The group that believes it is good they think that AI can never replace the human mind [2].

- Using AI we will increase productivity and solve complex problems.
- AI can create immense possibilities in areas like medicine, education, research and development, defense, satellite communication, weather forecasting, agriculture etc

People in the second group believe that AI can become a threat to employment, as AI expands, people will start resorting to computers, or robots, so that they will be able to do many tasks for which earlier we needed human based labor.

II. METHODOLOGY:

AI is completely focused on data and its analysis, due to which the pattern of data is recognized by software and algorithm, as soon as machines get other data of that pattern in future, it starts working according to it, and gives results. . AI based machines act like humans who have a very sharp mind and remember everything but do not have any thinking of their own, it only evaluates and gives results based on the data. AI's inability to think separates it from humans and machines start to understand their own shortcomings, at that day it will be impossible to control AI.

Geoffrey Hingt, former Vice President of Google, says that AI systems are not only as powerful as the human brain, but in many ways more powerful than it, they learn anything very fast compared to humans, for this they go far beyond humans.

Sam Altman, founder of ChatGPT, also believes that we need to create a system that recognizes the risks of AI, or else it will lead to geopolitical challenges.

There is no denying that AI is constantly working to make our lives better day by day. It has made it easier to ensure the quality of products and keep a sharp eye on fraudsters. AI has been used in many areas and their contribution is very remarkable.

Features of AI and ChatGPT in the other field are such as:

- Access traffic mapping system information
- Search engine results
- Get desired list of songs on music app
- Results on WhatsApp bot
- Voice Assistance
- Creating Smart content
- Personalized Shopping
- AI-Powered Assistants
- Administrative tasks and Automated to Aid educators
- Personalized learning
- Facial Recognition

- Navigation
- Robotics
- Human Resources
- Health care
- Agriculture
- Gaming
- Social Media
- Automobile
- Marketing
- Finance
- Astronomy
- Data Security
- Travel and Transport
- Weather Forecasting

There are four major stages of AI programming to make it easier and convenient to the users are given as follows.



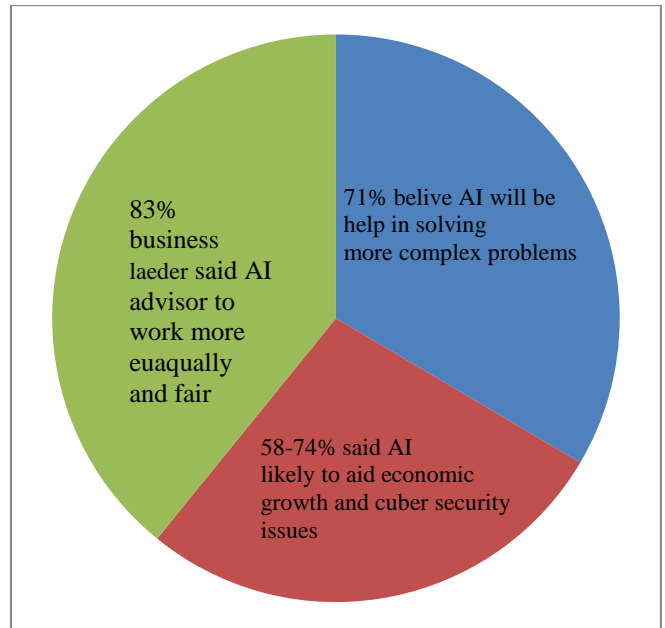
Fig. I: Four major stages of AI programming

- 1) **Learning:** This is the first phase of AI programming in which we collect data, and its rules are also decided and then get results from that data. We call these rules as Algorithm by this we reach to the result.
- 2) **Selection:** In this step it is found that which rule has to be followed to reach the correct result.
- 3) **Correction:** The programming is done in such a way that the software can automatically modify the algorithm to get the correct result for the question, if needed.
- 4) **Creativity:** In this stage AI can be enabled to create new pictures, new articles, new music through neural networks, algorithm based systems and other techniques.

III. METHOD USE:

Systematic Sampling method was use to identify the how many users use the AI and ChatGPT base application in all over the world. So that we can update and modify the AI features according to the need of users demand in future.

Bar Graph -I shows that 71 % group of peoples believe AI and ChatGPT will help humans to solve complex problems, 58-74% group of people said that AI and ChatGPT solve the economic growth ,cyber security and global health care and 83% business leader said that AI and ChatGPT advisor at work will be more or equally fair.



Bar Graph I: (As per the report of Business Today)
Data in percentage (%) how many humans use the AI and ChatGPT base application in different field

IV. ROLE OF AI AND CHATGPT IN DIFFERENT FIELD

There are various fields in which AI play an important role to provide the information by using the different application like ChatGPT, ChatBot, Google Assistance, Open AI (GPT-3, DALL-E, Whisper), Mem, Leap AI etc. There are some examples of different field are given below in which AI and ChatGPT is most commonly use.

- 1) **Health Care:** With the help of AI, we can make health services accessible to the masses very easily, such as
 - Working out the cost of treatment
 - Making medical checkup easy and fast Using AI to book appointments
 - To know the past history of the patient
- 2) **Education:** With the help of AI, we can reduce the increasing work pressure on teachers by automating their work.
 - Understanding the needs of the students and working accordingly
 - Creating syllabus of subjects and making them accessible to students and teachers in a simple way etc.
- 3) **Financial Sector:** With the help of AI, we can also do financial services such as
 - Using AI software and Chat GPT to do insurance
 - Simplify long procedures
 - Preventing financial irregularities through AI and bringing transparency
- 4) **Business:** Many institutions are providing services through the new application of AI i.e. ChatGPT, such as Bank, Amazon, Electricity Department, Municipality etc. so that the customer can access the lot of information by asking the chatbot.
- 5) **Navigation:** AI can also help to find out the particular navigation location by using the GPS system.

- 6) Entertainment: Through AI, we can decide the advertisement of our choice we can also use AI to detect fraud.
- 7) Media: Through AI, we can prepare scripts in a timely manner, for example, AI can also be used to increase the productivity of newsrooms.
- 8) Agriculture: We can use AI in the field of agriculture as well, through which we can give information about the changes in the environment to the farmers from time to time. AI made machines can spray plants and can also detect weeds.
- 9) Automobiles: We can use AI in the field of automobiles as well, which can be used to make smart cars. Cloud services, including vehicles with GPS as well as cameras, Tesla's self-driving cars are entirely based on AI.
- 10) Weather Forecasting: AI can also be used to obtain weather information, so that we can find out about changes in the weather ahead of time, and avoid loss of life and property. .
- 11) Science and Technology: The origin of AI is due to the work done in the field of science and technology. With the use of AI, we can work on many other subjects like intelligent robots, computer games, and language recognition.
- 12) Research and Development: We can also use AI to do research, which will lead us to new discoveries. Today we can do new tasks together with chat GPT and AI, like marketing, business, in sales, in social media we can prepare more fast advertisements, so that we can save both time and money.
- 13) Astronomy: AI can also help us to provide the our past history imagination by using the AI in astronomy
- 14) Data Security: Data security is the one of the most challenging task in digital era by using AI we can provide the digital security from the unauthorized access, digital frauds etc.
- 15) Creating Smart Content: AI play an important role in education which can be use in creating Smart and Digital Content for students and teachers.
- 16) Personalized Learning: AI can be use for personalized learning such as searching E- content, taking out some personal information from Google etc.
- 17) Facial Recognition: AI we can be use to provide the digital security from the unauthorized access, digital frauds etc. by using the Facial Recognition, set the security password these are the some features of AI which protect the device and data from the unauthorized access.
- 18) Gaming: Many of the games are based on AI application which provide the good quality of image, animation, sound quality, contrast, brightness and speed which can attract the users and generate the interest for playing gaming with one or more person together.

There are some similarities and differences between AI application and ChatGPT are given below which make it more useful so that we can use in others filed also [3]

Similarities	Differences
Both ChatGPT and Google AI applications utilize artificial intelligence and	ChatGPT is a Chatbot designed to converse with users in a natural language, while Google AI application encompasses a

machine learning techniques.	wide range of tools and services for various AI-related tasks.
Both can be used for a variety of tasks, including language translation, image recognition, and natural language processing.	ChatGPT is primarily focused on generating human-like text, while Google AI application has a wider range of capabilities, including image and voice recognition, language translation, and more.

V. IMPACT OF AI AND CHATGPT IN EDUCATION

We observe that are many impacts on Education system while using the AI and ChatGPT application for our day to day work are given below [6].

- AI can catalyze the online education market in India which is poised to reach USD 1.96 Billon in 2021.
- By 2024, 47% of learning management tools will be AI-enabled.
- AI speed in the education sector to clock a Compound Annual Growth Rate (CAGR) of 40.03% between 2019-2025.
- Automation of administrative task will enable teachers to utilize time in an effective manner.
- Automation can enable access to quality education to a large population in the form of Smart Content.
- Digital lesson in the form of digital textbooks and study guides can be created.
- AI powered information visualization can help in creating emerging content.
- Curate and customize content as per the student's learning curve.
- Transformation of physical classrooms into virtual ones through web, mobile, and online sites.
- Opportunity for personalized learning through personalized content and performance tracking through apps.

VI. CONCLUSION:

In the 21st century, the future of Artificial Intelligence (AI) and Chat GPT will be very bright and give the outstanding results in all the sector like education, business, science and technology, research, banking, administration, satellite communication, telecommunication, agriculture, automobile, health care etc. By using the AI based application we can work beyond human thinking, which can do the work of thousands humans simultaneously and can save time and money. But we also have to keep in mind that AI & Chat GPT does the work which is already stored in the form of data, AI & ChatGPT does not confirm whether all the work we do is correct or not. So that the authenticity of the data is the most challenging task while using the AI and ChatGPT because of their limitation so that's why we should use AI and ChatGPT be carefully.

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