ROLE OF ARTIFICIAL INTELLIGENCE IN THE PRESENT DAY EDUCATION

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ABSTRACT- *Through qualitative research, this paper gives a descriptive overview of Artificial Intelligence, its effect on our day-to-day life on how it would transform the way we think, perceive and most importantly, live. Drawing on from sources including prominent article writers, professors and websites on the same, this paper sheds light on why Artificial Intelligence (AI) is essential in the field of education humankind to progress, especially for the Indian Education System, also expressing the limitless possibilities of AI and its relevance in the in the years to come. This article then explores the sheer magnitude of changes AI has brought forward, in the Indian education sector. Since the year 2000, there has been an exponential increase in IT companies investing in the education sector so as to give the students a customized and personalized learning experience, which has fared well for the students looking to plug the skill gap between a fresher and an experienced working individual. There also has been use of concepts like Machine learning and Image recognition to improve efficiency and provide a multitude of chances of students to excel in an industry of their choosing, with the resources available at hand. Finally, this paper explores the various applications of AI in the field of Education with the perspective of Indian Education system.*

Keywords: Artificial intelligence, education, machines, IT, learning

1. INTRODUCTION

Artificial intelligence in the realm of modern era, is considered to be an essential part of education especially since the expectations in regard, to education has changed over the years. Earlier, the students were expected to rote-learn a lot of their subjects but as the times passed, there was more and more requirement for interactive and tailor-made methods to impart education- here is where artificial intelligence comes in.

According to Neuroscience, each brain is 'mapped differently' and hence 'learns differently' ie, which means that different minds react differently to various methods of pedagogy. Indian education system is mainly based around the 'education for the masses' which has yielded below par satisfaction levels and innovation in general due to the lack of more interactive and scientific methods of pedagogy.

That said, there are various changes which might be brought forward in the Indian Education System when Artificial Intelligence is used:

1. Evolution of the contemporary learning environment
2. New chances to excel
3. Better efficiency
4. Education platform run by Artificial Intelligence [1]

1. Evolution of Contemporary learning environment: With the change in the medium of learning over the past few years, after invention of World Wide Web, education is widely accessible to the masses; Esp. in the case scenario of India where there are 483 million mobile internet users-making education platforms like YouTube, Coursera, Udemy, and Unacademy- highly resourceful and accessible to the commonwealth.

2. New chances to excel: Many new opportunities are presenting itself to excel, with the advent of the internet age, AI enthusiasts are predicting that there will be a steep decline in the amount of plagiarism which is rampant since more and more efficient chatbots, text-recognition and anti-plagiarism software and such will come into play which will reduce the amount of ghost-writers and plagiarism in general. [2]

3. Better efficiency: As education is more and more integrated with Artificial intelligence, some of the menial and repetitive tasks will be handled by AI, which in turn will save the educators and staff a lot of time they could have spent elsewhere with more creative tasks. This in the long term will reduce the time wasted in general and improve efficiency. Tasks like attendance which are usually done manually now can be done in less than a tenth of the time and improve the efficiency.

4. Education platforms run by Artificial Intelligence: As we delve more and more into the possibilities of AI, we have come to realize the potential of tailor-made educational services for every student; These services will essentially track the progress of the student and will accordingly train them in areas a teacher cannot; In a class of 40-50 students- it is immensely hard for a teacher to keep track of the needs and requirements of every single student, here's where AI comes in with software which will customize the curriculum and teach the student according to their needs.
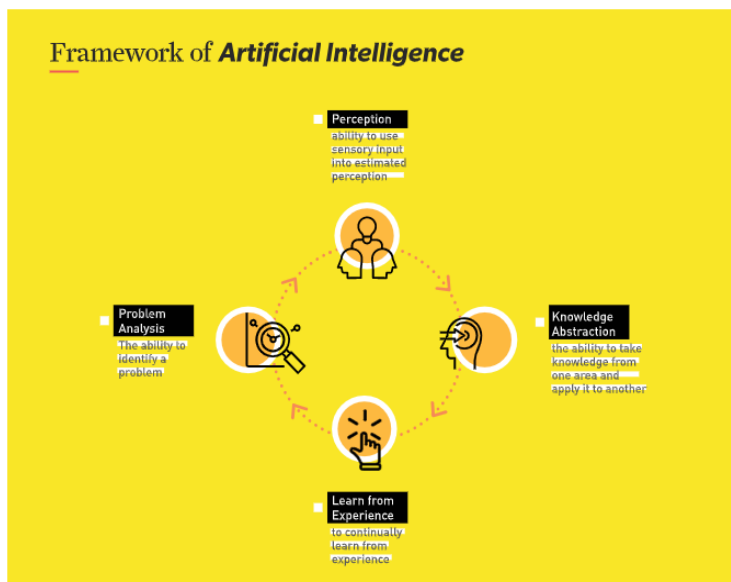

Fig 1: UNESCO MGIEP. 2018. Personalizing 'Learning'- Can AI

Promise Customized Education for 'Humanity'

2. APPLICATION OF AI IN EDUCATION

To understand how AI can aid education, we must first carefully access what AI can do for the successful parts of the educational system; once this is ascertained, we can work accordingly to find how AI can be used to improve education in-general [3]

In the view of Indian education system, there has been a lot of changes since 2000s after more interactive ways of learning like installation of Educomp Smart-class in schools which is well known digital content repository; [4]

Educomp has since come up with a lot of other technologies which involve both students and teachers in virtual environment where the students can learn with recommended lesson plans and teachers and parents can keep up with the progress of the student via cloud based real-time updates.

There have been many more noticeable use case scenarios of AI in Indian education, some of which are listed below:

A. Adaptive Assessments: This technology basically adapts the tests according to the student's understanding of the subject and poses questions according to how the student fares in his test and his grasp of the concepts. If the student answers correctly then a question of higher difficulty is posed-if not, then a lower difficulty question is posed. The adaptive assessments work on the concept of Machine Learning which analyses the student's response and gives a follow-up question accordingly.[5]

B. Remote Proctoring: Remote proctoring allows students to take tests at a remote location while their behavior and actions during an exam are observed by a proctor remotely via video feed, or analyzed to indicate any malpractices or cheating during the exam. Splashgain Technology Pvt. Ltd which is a company which provides remote proctoring services to thousands of schools and universities globally. This service reduces the chances of cheating during online exams since AI based Auto proctoring is used to authenticate and monitor the students.[6]

C. Customised learning: iNurture Pvt. Ltd which is a higher education programs provider merged with KRACKIN which is a service founded in 2016 which allows students to assess their employability, fill the skill gap using customizable and personalized learning assistant. Both these companies in tandem aim to provide students to get jobs they desire and make them industry ready with the knowledge they actually require to pursue those jobs in the long term.[7]

D. Mobile Attendance App: A conventional method of roll call which usually involves manually calling out the names of individual student names or students marking their own attendance thru an attendance sheet takes a considerable portion of the time which could be spent on other tasks; then there is always a risk of 'proxy' attendance marked by students. Here is where ICET solutions provide a Mobile attendance app which can mark the attendance of a whole class with a single picture. It basically works on the computer vision which uses image recognition to mark the

attendance of a student hence automating a task done by human visual; cutting time used for attendance by more than half. [8]

3. CONCLUSION:

This paper explores usage of AI in modern day education and its requirement thus providing a view into usage of Artificial intelligence by educational institutions to enhance the quality of education imbibed by the students, it does so by exploring these prospects in view of the Indian Education system. It also explores the usage of AI like image recognition and machine learning to provide a customizable and adaptive learning environment for the students. With the use of these technologies, it can be expected that the future students will be completely ready to tackle the intense job competition and apply their book-based concepts to real life. As more and more integration of education and technology takes place, more personalized and wholesome experience would be for the student.

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