

An Intelligent Approach for Automating Data Inputs on Web Portals for Several Apex / Statutory Bodies in the Field Education using Robotics and Machine Learning

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ABSTRACT

World is upgrading day by day and education system is going side by side using that technologies. Automatic data inputs is a data entry process which means taking information from different sites and sorting them out in a particular section. This is very important part for any business and automating process helps this work easy as it is quite tough to do all the work for a single person. It is very essential for one student to get knowledge about machine language as it will be helpful for them in the future. Machine learning technology helps to keep all the data up to date and also for cyber security. Children are always finding something which is easy to remember and funny, hence learning new thing using robotic function helps them a lot. After COVID-19, most of the education filed has started online classes and using MI and robotic things, it is easy for them to gaining knowledge that are not able to attend schools.

Keywords: Robots, machine language, data, education, methods, upgrade

I. INTRODUCTION

Nowadays, human are leaving a digital life which is full of technologies and that making life easier and helpful and most essential it saves time. Intelligence approach for automating data upload on web portals helps the work easy; therefore it has a risk factor also. Technologies are upgrading but all the people are not using this for a good purpose and sometimes hackers are using it for their profit [4]. An intelligence approach is a part of machine language and knowing thing language for one is very helpful for their career for future. Gaining knowledge from young age, especially from schools, developing their brains easily. Robotics use in a classroom help students to know about new things and what is necessary for them and collecting data. Education is the most essential part for any human life, and it is the best time for making them responsible and enough educated to get a job easily [11]. Now the world is full of technologies and if someone has no knowledge about machine language then it will be difficult for them to stay upgraded. Robotic education is funny and easier for primary and infant education. Computer can only understand machine language, and it is making with 0 and 1, and it helps the work automatic.

Robotic studies help the student skill in different ways, like children became more creative and intelligent. It helps the student to do a team work and learning from each other mistakes [14]. One who gets motivation for learning new things is always considered own thinking, developing the communication process. Machine language is mainly a human creativity, and it is the most impressive technologies which makes work easy. It helps to store data safely in a particular part, and finding it out for future use is easy to find. Machine can learn from past and improving its own mistake easily and for an organization it is necessary to keep it as there are huge data available.

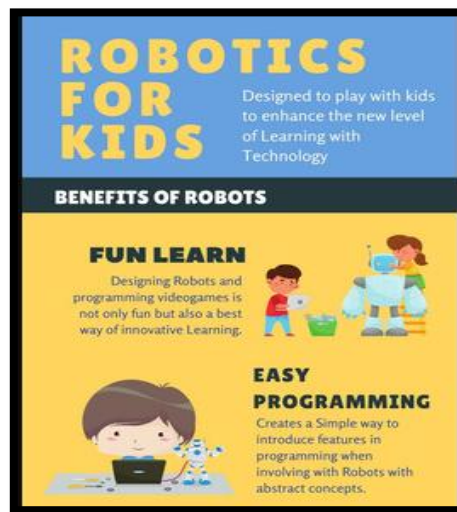


Figure 1: Machine language and robotic use in education

(Source: 15)

1.1. What is Artificial Intelligence?

The ability of a digital computer or computer-controlled robot to carry out actions frequently associated with intelligent beings is known as artificial intelligence. Another definition of AI is an artificially intelligent organism that can carry out tasks with intelligence even without being given specific instructions which is capable of humane, logical thought and behaviour. A researcher in artificial intelligence (AI) would respond that the term refers to a collection of algorithms that can do tasks without being specifically told to do so. Artificial intelligence (AI) refers to the intelligence exhibited by machines. With the development of artificial intelligence,

In the modern world, artificial intelligence has become extremely popular. It is the imitation of natural intelligence by devices that have been programmed to pick up on and imitate human behaviour. These machines are able to learn from experience and carry out jobs that humans would carry out. AI and other emerging technologies will significantly affect our quality of life as they develop. Everyone today wants to interact with AI technology in some way, whether it is as an end user or by seeking a profession in the field. Robots would be associated with technology by a layperson with a cursory comprehension of it. They would describe artificial intelligence as an autonomous terminator-like figure that can act and reason for itself.

Facts and Figures of AI

- By 2025, Statista projects that the global Artificial Intelligence (AI) software market will generate 126 billion dollars in revenue.
- According to Gartner, 37% of businesses have used AI in some capacity. Over the past four years, there has been a 270% increase in the proportion of businesses using AI.
- By 2025, 95% of client interactions, predicts Servion Global Solutions, will be driven by AI.
- According to a recent Statista report for 2020, the worldwide AI software industry is anticipated to increase by roughly 54% annually and reach a forecast value of USD \$22.6 billion.

Let's now examine the ways in which AI is applied in various fields.

Artificial intelligence applications in education

The education sector is the one that is most influenced by humans, but artificial intelligence has also started to make inroads there. Even in the field of education, this gradual adoption of AI has increased faculty productivity and allowed them to focus more on students than on administrative or office labour.

1.2. Applications in Education field include the following:

1. Automated Administrative Tasks to Support Teachers

Artificial intelligence can assist educators with non-educational tasks like managing enrollment, courses, and HR-related matters, as well as task-related responsibilities like facilitating and automating personalized messages to students, back-office duties like grading paperwork, planning and facilitating parent and guardian interactions, and routine issue feedback facilitation.

2. Developing Smart Content educational contents

Artificial intelligence can be used to digitize information such as video lectures, conferences, and textbook guides. For pupils in various grades, we can customize learning content and apply various interfaces, such as animations. By producing and supplying audio and video summaries and comprehensive lesson plans, artificial intelligence contributes to the creation of a rich learning experience.

3. Personalized Education

Top AI technologies can be used to monitor student data using hyper-personalization approaches, and it is simple to create habits, lesson plans, reminders, study aids, flash notes, and other things.

1.3. Robotics Uses for Artificial Intelligence

Another area where applications of artificial intelligence are frequently applied is robotics. AI-powered robots employ real-time updates to detect obstructions in their path and instantaneously design their routes.

It is suitable for:

- transporting commodities in warehouses, factories, and hospitals
- cleaning huge equipment and offices
- inventory control

Robotic process automation (RPA) is expanded by artificial intelligence (AI), which also boosts organizational effectiveness. An organization's digital transformation can be facilitated by intelligent automation (IA), an end-to-end intelligent automation solution that integrates robotic process automation (RPA) and artificial intelligence (AI).

RPA and AI work together to provide more accurate and effective automation that is supported by up-to-date knowledge. The goal of AI is to replicate human intellect in machines, whereas RPA automates tasks involving logic and structured data. Robotic process automation (RPA) is expanded by artificial intelligence (AI), which also boosts organisational effectiveness.

How does intelligent automation work?

Intelligent automation (IA) combines AI with automation technologies such as cognitive automation, machine learning, business process automation (BPA), and robotic process automation (RPA). IA capabilities streamline operations. Because of this simplification, the user is free to focus on the result or objective rather than the steps used to get there or the distinctions across programmes.

With the aid of intelligent tools like chatbots and virtual assistants, businesses are better equipped to automate tasks and respond to clients more quickly. Optical character recognition (OCR) techniques, for instance, enable paper-intensive industries like healthcare and finance to automate text analysis and promote better decision-making.

The top four ways IA uses RPA and AI to boost productivity

According to Aristotle, "the whole is greater than the sum of its parts" when it comes to how people see things. This concept is best exemplified by the addition of embedded AI capabilities to RPA. To improve the value of their interactions, tools and products use AI to make use of information received from diverse sources. RPA is useful for automating structured data-based activities, many of which once required manual interaction. Every one contributes worth on its own. However, the combination of the two (i.e., IA) offers enormous value in developing solutions that make use of a technological knowledge base to expedite procedures and communications among applications.

The following answers are quicker and more precise, and they help achieve the following four efficiencies:

1. Boost productivity:

Automated programmes and procedures operate more quickly. Organizations can increase their productivity and planning cycle accuracy by automating applications, processes, decision-making, forecasts, and projections using a variety of sources of structured and unstructured data in real time. For instance, RPA was recently employed by Deloitte, an IBM client in the financial sector, to develop bots tasked with automating the creation of monthly management reports.

Reduce expenses: Although Deloitte reported that "organizations currently scaling intelligent automation say they have already achieved a 27% reduction in costs on average from their implementations," "Executives estimate intelligent automation will provide an average cost reduction of 22%"

Increased accuracy: is achieved by the utilisation of both organised and unstructured data, automation of repetitive tasks, and better decision-making. Less human participation leads to more accurate outcomes. RPA was recently employed by an IBM client in the finance sector to build bots tasked with automating the creation of monthly management reports. The accuracy of these reports and many others was increased by this automation since it removed errors that were introduced into the process through manual data entering. Additionally, OCR may be used to automate data extraction from numerous sources and speed up data processing.

Improve the client experience: Businesses that employ technology are better able to comprehend their consumers' demands, communicate more effectively, and market higher-quality goods. Customers are often happier with their purchasing experience as a result. First-line customer support and price quotes were provided by bots by GAM, an IBM client in the asset management sector. The time it took to

respond to consumer questions was significantly reduced because to this optimization, which also sped up the purchasing process.

II. OBJECTIVE

- To understand the advantages of intelligent approach for automatic data input
- To describe about advantages and disadvantages about MI
- To use of robotics in education field
- To find out the side effects of robotic education
- To analyze the data entry automation

III. METHODOLOGY

Every research has a particular method or process which helps in improving the result and find out how the study process will go. Methodology means the data collection and describes the methods which are using for research. Here the researcher shows the method which was followed for this study like it was primary source or secondary source [7]. The researcher was chosen secondary research methods which include Google Scholar, journals, blogs, and past articles. In the past someone was researched about this topic, and now it will help the researcher to know about some details of study and after going through of those details, the researcher was found some tips. The data collection methods are also described here, and it might be quantitative method which is numerical methods and qualitative methods which means the works or the informative information.

IV. INTELLIGENCE APPROACH FOR AUTOMATIC DATA INPUT

Intelligent approach means how the human using their brains for making new technologies. Educational intelligence approach is collecting data from different places and creates a pattern of gathering all data in one place [15]. It will help future studies and improving the way of thinking. Automating capturing data from different sites and collects them in a particular path using a technology helps the work easy and time saving. Education is a big filed, and it is quite difficult for one person to keep all the data in handy, so if they have started using the automatic process then it will easy. It will reduce the human error and paperwork and save a huge amount of cost.



Figure 2: Automatic data inputs process

(Source: 7)

V. ADVANTAGES AND DISADVANTAGES OF MACHINE LANGUAGE

Every work has some advantages as well as disadvantages, and here the researcher has described about that:

Factors	Advantages	Disadvantages
Cost	Improving any system it takes cost, but it is worth it for its outcome.	It is so much costly.
Enhance the experience	It is easy to gain knowledge in study and funny process	Students are totally involving into it, and it affects their health for continually looking into the system
Opportunities	Knowing about MI will help to get the new jobs easily as now most of the companies are developing their technologies.	Using excess amount of technologies, the companies cut out the human working process and as a result, unemployment increasing.
Security	The data have been collected, are storing in a particular place and due to new pieces of software it keeps safe.	New technologies are arriving and for that there are lots of chances of hacking data from system.
Upgrade	MI is basically the result of human thoughts and brains and upgrading it in a daily basis it will be improving the technologies.	MI is a machine, and it is impossible that it will be upgrading automatically, so without human helps it will stop working.
Ability	One who has proper knowledge of machine language is able to do work easily.	This is not possible for all human to get the knowledge of MI and if there is no ability of learning new things then it will be difficult to get jobs.

Table 1: Advantages and disadvantages of MI

(Source: 5)

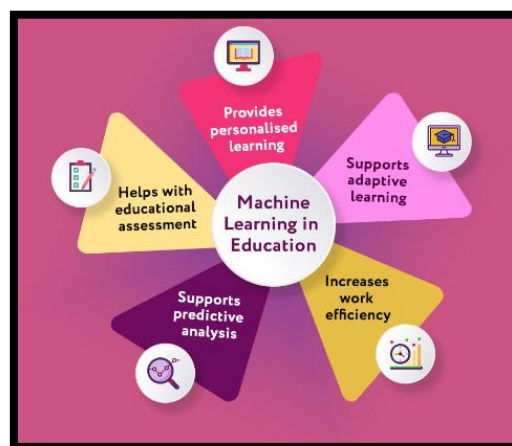


Figure 3: Machine language

(Source: 8)

VI. ROBOTS IN EDUCATION

Robots are the result of human intelligence, and it helps the human work easy and save time. It makes the students independent, and they can do their own study by themselves [15]. The primary school students and infants are enjoying this study process, and it helps them to learn new things. After COVID-19, when the educational systems became online that time the only way of educated the students are these robotic systems.

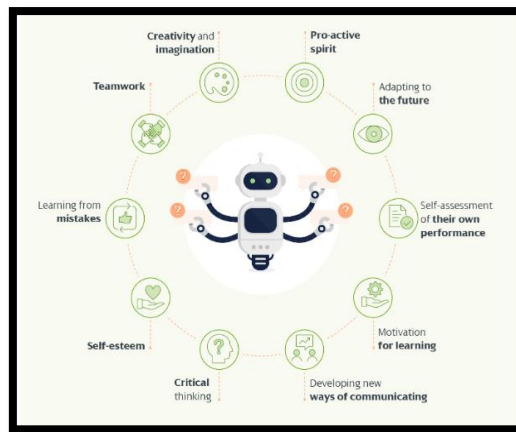


Figure 4: Uses of robot

(Source: 5)

There are different types of games available which helps the students to learn new things and brush-up their knowledge. This robotic process helps the students to learn from their mistakes and discovering their errors [5]. It is colorful; create sounds and lights which makes the children happy and giving encouragement.

VII. SIDE EFFECTS OF ROBOTIC EDUCATION

Every work or technologies has side effects, and sometimes it is harmful for brains and health. There are lots of teachers available who have no knowledge about using these machines. It is a risk for education filed as everything will be working automatically and there will be no need of schools [8]. Staring at the system continually may affect their mental health and create an eye site issue. While the students are totally involving into the system, they are started ignoring the book reading, and they are only started of getting information through internet [6].

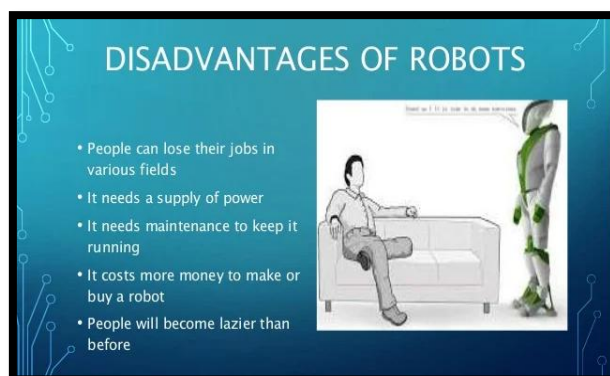


Figure 5: Disadvantages of robot

(Source: 8)

Robotic education is not possible for those students who are staying in urban area and if they are trying to gain knowledge from that it will be costly for them.

VIII. PROBLEM STATEMENT

There are different types of issue can create while doping this study. Researcher has faced few problems and most of the researcher did not want to discuss it with others as it can create an issue in further. Here the main source of collecting data was secondary data, which is already available in internet [15]. Primary source is the best process for collecting data as it is totally original and no copying and pasting. The researcher has used the Google Scholar, journal, and blogs information which was already used by others. Sometimes there are biased decision happening which may create a lot of issue for study.

CONCLUSION

While doing this research, the researcher has found different types of new technologies. Nowadays, technologies are very important for our day-to-day life and someone who is gaining knowledge from childhood it will be easy for them in the future. Technologies are upgrading, and human lifestyle has also changed for that. After Covid, when everyone became dependent that time, technologies helped them to gather knowledge as well as doing their jobs and study to stay at home. Therefore, it is essential for all to know about the technologies and staying up to date with the time.

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