



Use of Artificial Intelligence for HR Tasks

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ABSTRACT –

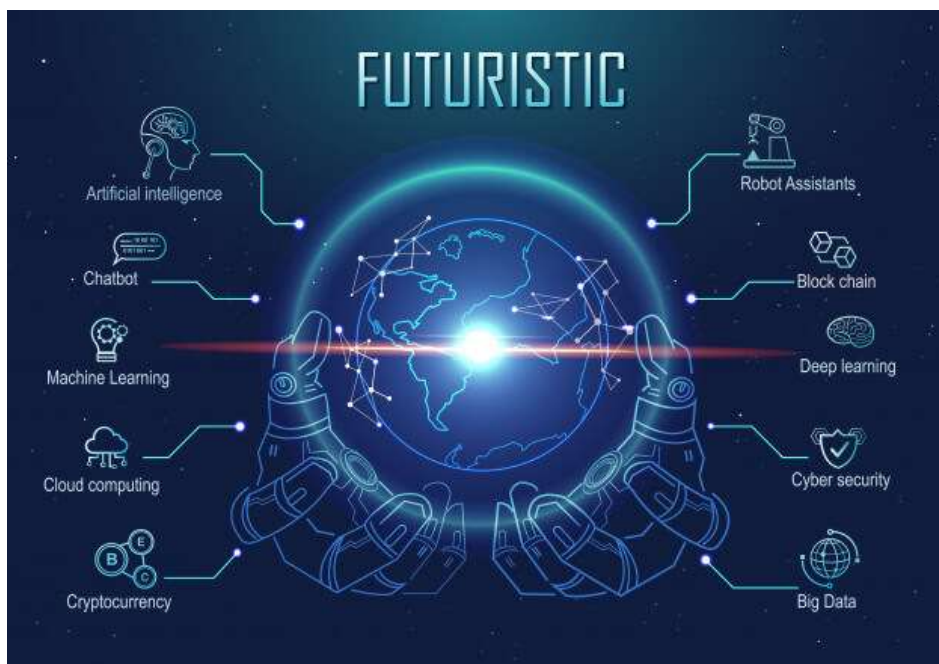
This research study on the use of Artificial Intelligence or AI for the HR concepts and tasks is to understand the processing and simplification of the work and tasks of the Modern Human Resource Management in an Organization, roles and responsibilities, and how the allied technologies of the Artificial Intelligence or the AI will cope with the technological developments in the organization. The wider concept of technology in the present and the modified future, the robotic intelligence will impact the working conditions and industrialization in the organization. It will lead into better optimization of the resources, less wastage, maintains the efficiency and the effectiveness of the employees, make them productive, motivate and encourage them, give a good push and boost their current knowledge, makes them work faster with less time and consumed efforts, etc. and more which eventually the firm, employees and the society will benefit from the advanced automations and technological gear ups. Employees are considered as the real assets of the organization, even though the surge and increased applications of the machineries in the firm or its workshops. Hence, it is the ultimate role of an HR to manage things properly and ensure the smooth flow of the organization with satisfied employees controlling the machines. The Technological advancement and introduction of AI will lessen the labour turnover rate and increased bounds of happiness to the employees, and the HR needs to ensure proper usage in right manner to exercise correct measures of the working environment and culture.

Keywords: - Artificial Intelligence, Human Resource Management, Technological advancements, Assets, Automations and gear-ups, Labour Turnover Rate.

1. INTRODUCTION

Human Resource Management is an essential part of the organization, since the Employees are considered as the real assets of the firm because they are the one operating machineries, handling the manpower in the organization, planning and strategizing policies and regulations for the development of the enterprise, control the cost and conduct the financial analysis, databases and reports, supervision and direction, etc. and many more. As Thomas A. Stewart, mentioned in his book, *The Intellectual Capital: The New Wealth of Organizations*, "Intellectual Capital is the sum of everything, everybody in a company knows that gives it a competitive edge." The Human Resource Management optimally initiates the requirement of significant human personnel in the workplace (includes casual workers, middlemen and employees) and their respective roles and responsibilities in the planning process, the first process in the chain of managerial activities. Hence in this modern era of technological evolution and development, the HR needs to mandate the same managerial process in a new and broader way. With the current technology, the HRM can ensure smooth flow of organizational processes, track employees work and data, filter and sort, remove or add, take virtual ready-to-go meetings, and optimal usage of the resources with inventory tracking management and using different softwares like MIS (Management Information System), CMS (Content management system), accounting softwares like the Tally ERP (Enterprise Resource Planning), SAP (Systems, Applications and Products in Data Processing), these softwares are used in the management as it provides multiple business functions with a single view point and the definite crux of a topic with estimates and comparison of past, current and future position of the enterprise. With the help of upcoming technological tools and equipments like the Artificial Intelligence (A.I.) and its allied technologies, business operations can be simplified and the functions can be broken into smaller parts which is comparatively easier to do faster, with less consuming resources and manpower than large chunks of work.

Artificial Intelligence or the AI is the ability of a computer or a robot controlled by the computer to do the tasks which are done by the humans, associated with the intelligence of a PC or a monitor to do things faster, effortlessly, lesser monetary requirements, future estimations and calculations, present analysis, databases and research and development. The term intelligence meant for the computer is the ability to take and make decisions accurately or atleast near to the accuracy, precision, consisting lesser resources than humans consume. It is estimated that the Artificial Intelligence will be used by the management of the firms after acquiring the technical requirements to handle and operate in the near future. The AI consists of some primary elements which forms the complete intellectual and the picture of Robotic Intelligence is as follows: -



(Source: - Alexas Solutions)

Key Elements of the Artificial Intelligence and its allied technological components

Elements of the Artificial Intelligence: -

1. **Robotic Assistance:** - Also known as the Robotic Process Automation, which assists the work done by the humans, identifies errors, summarize, analyse, communicate the corrected data with the required personnel who need the information (ensuring proper information dissemination and security with encryption to avoid data losses and leaks from the organization).
2. **Chatbot:** - Chatbot is a pop-up in many websites which offers deliberate answers to the persons and required process for the completion of task which he came through. It navigates the menus and columns of the website and help the user or the recipient to identify and achieve his presumed goal, simply a chat room.
3. **Blockchain:** - Blockchain is a system which records the transactions done by the user made in digital assets or currencies (also known as the cryptic currency or cryptocurrency) which are maintained across the mainframe network of several computers that are linked in a peer-to-peer network. The best thing in the Blockchain as compared to the similarly providing networks is that the information processed and recorded in the Blockchain can neither be changed nor hacked.
4. **Machine Learning (ML):** - Machine Learning is the type of Artificial Intelligence which allows the software applications to become more accurate at predicting the desired outcomes without being explicitly programmed or to do so. The Machine Learning algorithms use the past or historical data as the input to predict the new output values.
5. **Deep Learning:** - Deep learning is a type of machine learning based on the artificial neural networking in which multiple elements of processing are used to extract progressively higher level features from the data. The prototype will use a combination of deep learning, natural language processing and the dynamic networking analysis to detect and examine the cross-platform spread of disinformation.
6. **Cloud Computing:** - Cloud Computing is the practice of using a network of remote servers hosted on the internet to manage, store and process the data stored, rather than a local server or a personal laptop or computer. For the cloud computing, a person needs no external storage devices or a hard drive rather, but it is stored safely in the internet (software application) and can be seen whenever required.
7. **Cyber Security:** - Cyber or the computer security, or information technology security is the protection of the computer systems from information leaks and disclosures, theft or damage to the hardware, software or electronic data as well as from the disruption or misdirection of the services provided or offered.
8. **Cryptocurrency:** - The cryptocurrency or cryptic currency is the digital currency which aims to deal transactions easily, stored in the Blockchain which prevents data leaks, theft, being hacked or typically changed. It is a form of digital asset and a technological monetary tool (currency) to make or receive payments from the others.
9. **Big Data:** - Big Data refers to the data which are too large and complex to be dealt with by traditional equipments and tools (data-processing) application softwares. The Data with any fields offer great statistical power, with the data with higher complexity may lead to a higher false discovery rate.

2. USE OF AI IN HUMAN RESOURCE MANAGEMENT IN AN ENTERPRISE

Above mentioned were the futuristic AI (Artificial Intelligence) and its allied technologies, and how it helps the HRM (Human Resource Management) and the overall management to take decisions precisely. With the help of AI and the allied technologies, it is estimated that the firm can save more than 50 percentage of its work hours on the single project due to multitasking spectrum along with the proper and optimal use of resources with very less amount of wastages in the outcome and the maximum possibilities of getting a higher and quality yields than the regular manpower. It not only makes the work better but also helps the organization in following ways:-

- Better Time Management
- Faster Productivity
- Less Money and Materials consumed
- More Working hours and utility
- Reduction in anomalies
- Easy to use and handle (after getting due training)
- Increased Efficiency and Effectiveness
- Multi-Tasking
- And More

It also leads to the better competitive edge and advantages against the competitors and performs the best against its substitutes which leads to lessening of the overall production costs as there will be demand surge and due to that the price of the product will have a significant effect and attract a larger and premium consumer base. It can result into the expansion and diversification of the business to larger and unexplored areas and have enough funds for the liquidity (as for the safety measures during any recession or shock periods) and the cash flow can be maintained.

The above mentioned explanation can be used in terms of the whole organization in handy and if talking in terms of the HRM or the Modern HR Management of an organization, some of the better use of Artificial Intelligence which can be implemented in the organization by the following ways:-

1. **Thorough Data Analysis:** - One of the most important functions or role of an HR is to analyze the data (random facts and figures) by all the means and convert the same into the meaningful information (neatly sorted data) and present it to the supervisors and present it to the authority (convey the information) for the development and betterment of the organization. It can be done with the use of some softwares in the computers like the Advanced Excel (with updated and modified filters, formulas and techniques), Graph-pad (guides through various statistical tests and graphics analysis as well), XLSTAT, etc.

For HRM Data Analysis and analytics, the provided tools are as follows:-

- Papaya Global (Track equity of gender, age and pay)
 - PerformYard, IntelliHR (Performance Management Analysis)
 - Visier People (Customized Reports)
 - Qualitrics People Analysis, Lattice (Employees Surveys, Feedbacks, Opinions, Suggestions, etc.)
 - Leapsome, IBM Workforce Planning (Manpower and workforce forecasting)
2. **Business Intelligence (BI):** - Business Intelligence or also shortly known as BI is the whole combination of the various segments of technological and business functioning mix consisting of Business Analysis and Analytics, Data Mining and Visualization, Data tools and Infrastructure Management, and other best practices to help the firms and enterprises to take best decisions.

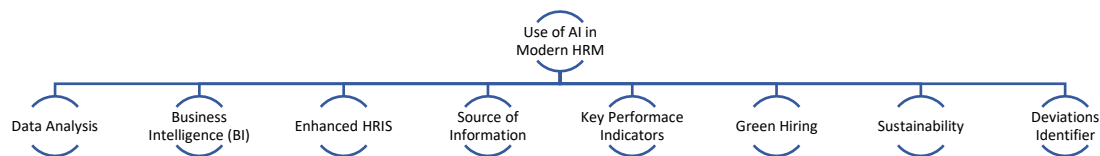
It comprises of the business strategies and technologies used by the organizations for the data analysis and the management of Business Information. It further has some of the tasks like Data Sourcing (Mapping), Situation Awareness, and Risk Assessment, Decision support analogy, Data analysis and Deep research.

3. **Enhanced HRIS (Human Resource Information System):**- Like every other Information systems for the respective departments like MIMS (Marketing Information Management System), Knowledge Management Systems, Office Automation Systems, Transactional processing systems, etc. and many more, the HR Management has its own system namely the HRIS which consists of the employee portal featuring :-
 - Benefit Management (Compensation)
 - Workflow and Communications Management
 - Performance Tracker (Performance Appraisal)

- Demographics and Compensations
- Time and Attendance
- Applicant Tracking (Recruitment Processing)
- Reporting (To seniors and supervisors)
- Time Management (For projects and tasks assigned)
- Skills Management (Training and Development)
- Orientation (For new employees welcoming and familiarizing)

Apart from these available parameters, the HRIS needs to evolve and implement newer elements like breaking the data into segments and useful Informations, summarization (quick progression and readability), filtering the unreliable data and captivating the important one, proper storage utilization (usage of the disk space for the data and memory allocation) with the help of Advanced AI Technology and Blockchain Processing in terms of privacy, cloud storage and vast data progressions.

4. **Source of Information:-** In Modern HRM, the AI can be used as the Source of Information as it can be used to track the references, application progress, task progress, reports and data sheets, time sheets and the required data quickly. For example, one can search the data and make a reference or a cross verification with only one word search and then the suggested data pops up too in hand so that he can validate the proof of transaction with less time consumption and more data with systematic analysis. Also in the times of conflicts and disputes, the enterprise can show the proof of all the records in one place without the need of carrying huge servers and carriage costs by just the usage of cloud computing, where anyone (accessed person) with the access key or the password to open the protected files can be presented online without the threat of being hacked or the change of information (with the help of Blockchain technology which records and saves the transactions once happened which cannot be hacked or even changed)



5. **Key Performance Indicators:** - Employees are considered the real Assets of the firm because even though the machines are the most productive, less time taking, optimal and effective producers, and the human capital is the one for the charge of the machines and make sure that it works properly. So, with the help of AI, the firm can track the employees of not only its region or a particular territory but they can trace the employees and employers data from all over the world by just typing the required keywords and selecting options. With this, the supervisors and bosses can track and evaluate the performance of the employees, their productive hours, even their health indications (if they have any illness or diseases which prevents them from working their best), and importantly performance indicators for their compensation allocation and payment and can be referred to the employees as well if they have any interest of dispute or conflict regarding their working pay.
6. **Better hiring and recruiting techniques (Green Hiring):** - In earlier times there were two methods (in general) to hire, one was to post advertisements in the print media like magazines, newspapers, banners, posters, etc. for the in-office working personnel (employees) and the another one was the traditional way of recruiting the labourers and casual workers for the factory or industrial work by hanging the 'Hiring' boards or posters in the front gate so that some workers passing by can have a look on it and can apply if interested. But nowadays, the hiring mostly happens through the Internet or the Digital Medium saving lots of money and time, along with the measurement of many parameters like the background check of candidate from the open source, previous experience, resume and application processing with the help of HR Softwares and Information systems. Through this the organization saves a lot of resources by just posting the hiring status in the web and attracting potential applications and many softwares in the help to filter the best possible pool of talented candidates and right fit for the suitable position saving time, money, waiting period (of the employees), in-depth analysis of the application, etc. with the help of Artificial Intelligence.
7. **Sustainability:** - Sustainability means saving the resources of firm or an enterprises, optimal use of the resource (usage in the best possible way) with more productivity and yield, and less or minimal wastages. As mentioned various techniques and implementations to save time, capital and other resources. It not only saves the resources but also prevents wastage (lessens it) and produces a possible solution to use the saved resources in the other ways to boost the profit, growth and development of the organization. Sustainability can be achieved with the help of many AI solutions and softwares available in the diversified platforms for various purposes and functions in the organization (depending on its exposure and expertise for special workings in its respective fields)

8. Deviations Identifier:- Performance appraisal is one of the most important function of the HRM in any organization irrespective of its type of work, expertise, status (loss making or profit generating), location, background, or any other factors which ensures the employee a cross-check of his performance at the end of the particular frequency (monthly, bi-monthly, quarterly or annually) depending firm-to-firm which indicates and reflects on his compensation and benefits structure (can increase or decrease or even remain steady based on the decision of the authority and management reviewing the appraisal). This process helps the firm identify their best and worst performing employees, vacancy status, flow of money to the employees (employee benefit expenses), productivity and importantly deviations or the obstacles striking them to make their best in the organization. This makes the HR and the entire management aware of the needs or requirements of the particular employees or the group of employees lacking behind which can be identified through softwares indicating their average working hours, attendance, working performance, work speed per hour (actual performance), etc. and many more.

As we seen above, the AI helps the management to beat the obstacles in work and make sure that the organization is on the way to the road ahead in its progress as planned in the initial stages (incorporation) and the measurement of actual performance to the standards set and forecasting the future demands, needs and the possible structure of the organization setting some parameters of its own making the firm better and its overall development.

3. POTENTIALITY OF AI IN ORGANIZATIONAL DEVELOPMENT

Artificial Intelligence or AI is rapidly developing day-by-day with new features and unbelievable implementations with the future potential and soaring demand due to its elasticity and broad segmentation of services and solutions it provides and defines the problems arising so that it can be solved as quick as possible. Recently, Facebook (now Meta) launched Metaverse, a digital immersive where one can play, work, visit remote places and explore many things with his friends, families, or any person he willing to be present with the current moment virtually even though the another person living miles across over the seas and oceans. This provides an opportunity to get closer and maintain connections (especially in business and companies) helping in quick scaling and expansions without the need of a physical infrastructure but just a virtual environment.

The Metaverse is currently in progress and not fully initiated and can be used by the public for now (can be used but full features not available at this moment) precisely in the developmental stages along with other companies especially technological firms with their own technology. Primarily it was thought as an additional feature for the gamers and developers but after the latest technological evolutions, it can be used by anyone differing its purpose, all thanks to the daily improving science and technology which helps the automation in the right direction for betterment of the living beings and not only humans.

Possible potentials of the Advanced AI: -

- Succession Planning (For the future generations): - Planning is done in reference for the future betterment regardless of the type of planning (organizational, general, family, tours, etc.) in the present conditions so that one can estimate all the possibilities and can be prepared for the coming tomorrow. Similarly, the Succession planning is done in every family, county and the entire world regarding the resources (natural or man-made) so that they can also avail the benefits we are having now without sacrificing anything or the need to find other in the replacement of its extinction.

If in terms of an organization or an enterprise, Succession planning is a process and a strategy for replacement planning or passing on the current leadership roles. It is used to identify, analyse and develop new, potential leaders and people who can move forward when the former's position and take the responsibility for the same ahead.

With the help of Artificial Intelligence and technological advancements, predictions and analysis can be made in advance to make sure delays and deviations don't come in hand and proper validations can be made for the respective opinions and decisions

- Sustainability Maintenance: - Maintenance of Sustenance is very important in terms of the future planning and the coming generations so we have to use the resources very careful so that to make sure that they also can make use of it and not run short of it anytime. The main motive of the sustainable maintenance is to reduce the impact on the environment while eliminating wastages. But when maintenance and efficiency go hand in hand, we can enhance the performance of the business entity environmentally, socially, economically and in all the other possible aspects with the possibility of the advancements in AI Technology.

The Sustainability Maintenance involves the reduction of unnecessary maintenance. The Unnecessary maintenance can be prevented by carefully planning the activities and processes on basis of actual building conditions. As the principles of sustainability mentions that it is made up of three pillars: - Economy, Society and the Environment. These principles can be also referred to as the Profits (Economy), People (Society), Environment (Planet). In simple words efficiency and effective boost to the business and general life solutions to make the Earth better by reducing the waste and utilizing the saved resources in another aspect as people say – Resources saved is Resources Earned.

- Environmental Restoration: - Environmental or the ecological restoration is the process assisting the recovery of an ecosystem that has been degrading, depleting or destroyed in the future (a slight possibility by the current activities). Ecosystems are dynamic communities of the formation of plants, animals, and the micro-organisms interacting with the physical environment as the functional unit and even if one component or unit is left out of the total, it can cause a greater impact in the bigger chains and other ecosystems as well.

With the possibility of updations of AI Technology, we can expect very soon that the damaged ecosystems and resources can be renewed and re-processed again to normal. Seeing the ongoing human needs and recent developments for the need of explorations and damage caused to the nature from it, we seriously need to repair and restructure the environment back to its own and restore it back so that nature will protect us back again if we protect the nature in the first place instead of destroying it further.

Some of the examples of environmental restorations can be lessening the wastages and recycling and reusing it again and continuing the cycle or the chain of activities in the effective way.

- Better Work-Life Balance (with improved technology): - With the improved and advancements in technology we can have the better access to WFH (work from Home) or flexible working which makes us near to the home and at the same time work can be done with maximum potential and productivity. The balance will be maintained between the work and life eliminating the unnecessary stress and tensions in the office regarding the home problems and vice versa. Apart from that, it can also saves the lot of firm's money like the huge electricity, telephone, internet or Wi-Fi bills (by paying them some reimbursements) which will cost significantly way less than operating in the firm and the dining, meals and other costs as well as the business space (area) can be saved and can be used for the other facilities like Research and Development Unit, Co-Working Space, Additional Warehousing Unit or even can be converted into production unit. In this way both Work-Life Balance can be maintained along with the optimal costs and increased effectiveness.
- Time Management and scheduling in advance: - With the help of Technology, we can schedule some of the automated meetings which are recurring in nature (team meetings, departmental discussions, etc.) and a lot of time can be saved and utilized in any other area of work or can be taken off (for the sake of own as a small break to relax) and at the same time, the participating members can access the important takeaways of the meeting and prepare for the same (Minutes of Meetings) so that they can have the proof of their presence and POVs (Point of Views or Opinion)s in the Meet and scheduling in advance will simply alert or notify them and last minute chaos can be prevented.
- Better Human Development (Combination of Social, Economic, Self and other development): - The most important and reliable development is not Economic, Social development or the physical development but it is ultimately the Human Development because in this world, people are considered first regardless of any other possession because they are the one who will become the part of their organization, circle or the society. Just like the quote says that "Employees are the real assets of the firm, not the money, not the machines and not any other things" because money and other possessions are required to run the firm or the society and acts as just the common exchange of currencies and does not hold any place in reality. AI helps the firm target the needs of personnel, employees or labourers as per their current conditions and tries to fulfill them as soon as possible.
- Increased Effectivity in working: - Efficiency in the organization will increase rapidly with the help of AI in the following ways: -
 - 📁 Employee tracking (Work)
 - 📁 Resource Allocation
 - 📁 Optimal Usage
 - 📁 Implementation of Cost Reduction Techniques
 - 📁 Innovations and Intrapreneurship
 - 📁 Tactics and Strategies for Future Planning of the Firm
 - 📁 Identify the Successors
 - 📁 And many more (Taking in mind various domains and expertise)
- Lessens the wastage (reusing the waste in best possible way to avoid dumping): - Wastes, pollution, excessive dumping, harmful chemicals released in air, huge debris in land, and other pollutants harms the earth from inside and the most suffering beings are those who dumps it – the humans itself, destroying forests, burning agricultural lands, deforesting the nature and its ultimate destruction, but with the help of advanced science and innovations, wastages can be brought down by atleast 50 percentage (Ballpark estimate) and even more than that. Apart from these, waste and facilitation management can be implemented, reduce the landfill wastes, decrease the food waste, recycle the most of the wastes out of the dump in the quickest way (to save that area from degrading and becoming the target of infiltrates) and it can cause an environmental saving at pretty large scale.
- International Peace: - Peace can be maintained with the help of technology by tracking the weaponry and defence items (supplies) only at the time of emergent wars at the bigger stage and a lot of resource (people as well) from becoming the victims from the attacks changing their entire lifestyle and adaptations to the new habitat. At the same time, International Relations can be maintained, trade can be done with the fulfilment and understanding of one nation to the other (fulfilment of the resource needs, i.e., Land, Labour, Capital, Expert People, etc.).
- Safe Transactions Processing (Blockchain Technology): - With the help of Blockchain technology, international transactions can be taken into account which prevents happenings of scams, thefts, black marketing, illegal trafficking, etc. and other illegitimate activities. Finances can be tracked globally from any place (regulated authority with the access) so that it can be cross verified with the transaction (actually done and

mentioned), taxations, flow of capital, etc. and many more. One of the most vital implementations of the Blockchain Tech is that once the transaction happens, it will get recorded safely and the information cannot be hacked or even altered.

- Better Innovations (Ideas for the development of the Earth): - Innovations and Ideas can be generated, unanswered problems can have solutions, growth and progresses can be made with the help of advanced technology in sync with the HR making people's lives better and more balanced than relying on anyone else (dependence).
- And Many More

The above mentioned points are some of the examples of how the Advanced Artificial Intelligence can help the living beings for their growth and development by predicting in early stages the usage of resources and saving it for the future generations as well as we believe in sustainable development- "Sustainable development is the masterful balance of meeting our own needs (current generations) without jeopardizing future generations' ability to do the same" – Light of Mine, it can be also mentioned that Sustainable Development is that which meets the needs of the present without compromising the ability of future generations to meet their own needs and repeating the same for the upcoming generations ahead – The definition of sustainable development from Geo Harlem Brundtland, Prime Minister of Norway and author of Our Common Future (1987).

But, the AI (Artificial Intelligence) has its own negative impacts on the beings like the quote says- "Every Coin has two sides and there is always a different point of view, which is entitled to be heard" or "There are two sides to every question" expressed in the ancient time in 485-410 B.C by Protagoras that whether AI is beneficial or harmful, but it is the mix of both. Apart from the advantages of AI mentioned above, it can lead to the constant addiction (depends person-to-person), mental illness and damage to physical health by the continuous usage of the Internet (current AI features required Internet supply) if used for a longer period of time for the daily basis, night blindness by looking at the VR Headset connected to the digital screen of Mobile Phones, etc. and many more and there is a possibility that it can have its own problems.

Even with some of the disadvantages, AI significantly helps the organization, firm, society, mankind, and all the living, non-living beings to progress ahead and make the earth a beautiful place to live without the need to look for any other planets which have similar environment to live because of the declining Earth's conditions.