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ROLE AND IMPACT OF ARTIFICIAL INTELLIGENCE  
IN E-BUSINESS**

# ROLE AND IMPACT OF ARTIFICIAL INTELLIGENCE IN E-BUSINESS

## INTRODUCTION

The need of introducing Artificial Intelligence (AI) is essential in this era because the work of every individuals is increasing day-to-day. So, it's a good idea to automate the routine work. This saves the manpower of the organization and also increases the productivity. Additionally, through this Artificial Intelligence, the company can also get the skilled persons for the development of the company. Moreover, the companies today think that they want to mechanize all the regular and routine work.

In this pandemic AI is very helpful for a company as well as the employees to perform their routine work with the help of automated machines rather than visiting the company often for repeated work. So, it will reduce the time-consuming process. Today, E-businesses are implementing Artificial intelligence to improve E-business standards, customer experience, and revenues and fast processing. The customers are provided with a personalized experience and easy to choose products based on previous searches (machine learning technique).

Artificial Intelligence in E-business is impacting customer choices thanks to its knowledge of previous purchases, searched products, and online browsing habits. Product recommendations provide multiple benefits for E-business retailers including higher number of returning customers.

This article brings you an over view of following areas:

1. Trending robots in the pandemic era with respect to artificial intelligence
2. Virtual work team culture influenced by artificial intelligence
3. IOT with reference
4. Artificial intelligence influencing e-business arena
5. Gaming zone a game changer in business arena



## 1.TRENDING ROBOTS IN THE PANDEMIC ERA WITH RESPECT TO ARTIFICIAL INTELLIGENCE

The entire world is disrupted by the outbreak of corona virus, technology is playing a key role in this time of crisis. Artificial intelligence to big data and face recognition, all are being used by countries across the world to contain the spread of virus. Robots are leveraged for activities like sanitising hospitals and delivering food and medicines in many parts of the world. Though the idea of robots taking up human's jobs, scientists believe machines can free up hospital medical staff while confining the spread of the virus.



**Robots in agricultural sector:** The use of agricultural robots has notably increased during this pandemic, especially to boost the production of food grains, meet the collective demands of people for food, and fight against the most dangerous COVID-19 disease. These robots are contributing extremely by supporting the farmers in filling the voids created due to labour shortages and taking the production process to an advanced level. From cow-milking robots to cow-herding drones—they have altered the agriculture sector beyond imagination.



**Robots in manufacturing sector:** Manufacturing robots automate repetitive tasks and enable workers to focus on the more productive areas of the operations. Manufacturing robots enables employees to focus on innovation and this process ultimately lays down the preliminaries to work for growth and success. As one of the speedy automation solutions out there, robots are a niche technology that not only will speed up recovery for industries but also will help protect them from any potential future disruptions.



**Role of retail industry in the rise of robots in pandemic of covid-19:** With the pandemic of COVID-19 retail industry is more relying upon the automation techniques for their daily activities replaced with human employees and to free up employees and preventing the virus from spreading. One such software is made by Brain Corp, a San Diego company where automated floor cleaners are used at the retail shops where it reduces the human contact along with efficient time utilization in cleaning up the floors.

## **Role of logistics in the rise of robots in the pandemic of covid-19**

COVID -19 pandemic pushes logistic automation up the agenda –

- **Mobile robots and autonomous vehicles:** This focus on automation of movement in every step of the logistics and delivery chain ranging from a warehouse or a factory to the delivery of goods to the final customer destination. These robots boost productivity and enable many hybrid human-robot interaction modes.
- **Goods-to-person automated carts/robots:** These robots move racks within robot-only zones, bringing them to manned picking stations.
- **Mobile picking robots:** many firms and research groups are deploying deep learning to enable robots to pick novel and irregularly shaped items rapidly and with high success rates.
- **Autonomous forklifts and other industrial vehicles:** Autonomous forklifts and tugs are emerging onto the market. The navigation technology has progressed significantly.
- **Last-mile delivery vans and side-walk robots:** The on-road vans and pods share many technological challenges with other on-road autonomous vehicles. The side-walk robots have their own unique design and technology challenges
- **Long-haul truck delivery:** Long-haul trucks are a prime target for autonomous mobility. This is because autonomous mobility can address many industry pain-points and because there is a clear commercial case, unlike passenger vehicles.

### **The rise of robots in the hospitality sector**

Robotic interaction could facilitate more socially distanced models of operation to enable a safer and faster reopening and recovery of some hotels impacted by the Covid-19 outbreak. While service robots are anticipated to increase efficiency and productivity of hotel activities, they may also pose challenges such as high costs, skill deficits and significant changes to the organizational structure and culture of hotels.



### **Kerala introduces robots for awareness campaign**

The Kerala Start up Mission has come up with a pair of robots, the brainchild of Asimov Robotics to fight against coronavirus. The robots are distributing the masks, sanitizers and napkins in the start-up complex in Kochi. Here robots are also informing people about the Covid-19 outbreak, how to prevent and how to take care of oneself. CEO of the robotic firm

said that the institution is thinking of deploying such robots in all public places including airports and malls.

### **Graduates replaced with robots in japan**

With the pandemic of COVID-19 many educational institutions shifted to online education and are finding ways to connected with technology. The Business Breakthrough University at Tokyo organized the graduation ceremony of the students with the help of the robots called “New me” which was developed by ANA Holdings where the robots were dressed in graduation caps and gowns for the ceremony. The robots face had tablets displaying the students face where the students operated the avatar robots sitting at their homes by logging in through their laptops and mobiles.

## **2.VIRTUAL WORK TEAM CULTURE INFLUENCED BY AI**



### **The Positive Impact of AI in Workplace:**

- Fighting fraud and cybercrime: Companies are already using machine learning techniques to develop solutions that help companies to identify suspicious activities.
- Better customer service: I drive systems can facilitate to provide huge amounts of data and in real time which is relatively difficult to be done by a human being.
- Enhanced efficiency: The VA takes that monotonous work from a human agent and open up more time for more creative, high-end, high-value activity where human beings excel.

### **The Negative Impact of AI in workplace:**

- AI Bias: Since AI algorithms are built by humans, they can have built-in-bias by those who either intentionally or inadvertently introduce them into the algorithm.
- Loss of certain jobs: Thanks to AI technology, there will be jobs people do today that machines will take over. Hence leading to job loss in various sectors.

- Global regulations: AI technology requires new laws and regulations and will need to be determined among various governments to allow safe and effective global interactions.
- Accelerating hacking: With automation, nefarious acts such as phishing, delivery of viruses to software and taking advantage of AI systems because of the way they see the world, might be difficult for humans to uncover until there is a real quagmire to deal with.

### **Scope:**

1. Recruitment: candidates experience becomes a priority to the company's recruitment operations and as result today most companies have invested in AI to help them analyses a candidate's previous work experience and interests and match them with open roles best suited for them.

2. Chatbots:

- Customer Service Bots: Automated Call Agents are probably the business bots with which people are most familiar. They intelligently interact with customers to answer questions and solve problems.
- Human Resources Bots: HR bots are available for every stage of employment, from screening candidates to training.

3. Robotic Process Automation: RPA is an application of technology that can literally teach robots to capture and interpret a methodology that is being continually used for executing a certain action.

4. Surveillance in the workplace: According to a Gartner survey, more than 50% of companies with a turnover above \$750 million use digital data-gathering tools to monitor employee activities and performance. This includes analysing the content of emails to determine employee satisfaction and engagement levels.

5. Workplace robots: Physical robots capable of autonomous movement are becoming commonplace in manufacturing and warehousing installations, and are likely to be a feature of many other workplaces in the near future.

### **Benefits:**

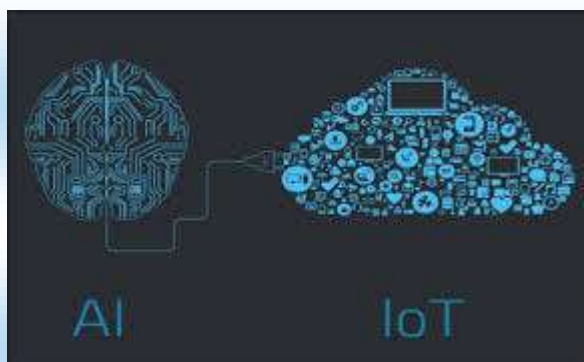
AI is bringing the huge benefit to society: By deploying AI the workplace can automate the day-to-day tasks and processes, save money and time. AI also helps in prediction based on the data collected through cognitive technologies. It also leads to improving customer services by

reducing delivery time which can resolve the employee and customer issues. Ultimately, AI is an enormously positive phenomenon that strengthens organizations through personalized training, engaging employees and upping retention rates and productivity

### **Challenges:**

1. Computing is not that advanced - Machine learning and deep learning techniques are beneficial, but requires a lot of processing power. Cloud computing has helped in the implementation of these techniques by creation of complex algorithms.
2. Verifiable - Organizations working on AI-based products cannot explain explicitly about their achievements by utilizing AI. A probability which is the mathematical uncertainty behind AI predictions still remains ambiguous and its only solution can lie in making AI, conclusive and transparent. Organizations should incorporate intelligible AI.
3. Data Privacy and security - Machine learning systems are dependent on data which is often personal in nature. Due to this systematic learning, these systems can become vulnerable to data breach and identity theft. European Union has implemented the General Data Protection Regulation (GDPR) that makes sure the complete protection of personal data.
4. Algorithmic bias - They are distorted, and only somehow define the nature and stipulations of a finite number of people with common activities based on religion, nationality, gender, society, and other racial biases. The real change can be brought only by defining some algorithms that can efficiently track these issues.
5. Data Scarcity - The most dominant AI machines are those that are trained on supervised learning. Labelled data is organized to make it reasonable for machines to learn. But organizations are finding solutions to the problem, by investing in design methodologies and concentrating to constitute AI models learning despite the inadequacy of labelled data.

### **3. IOT WITH REFERENCE**



To fully understand AIOT, you must start with the internet of things. When “things” such as wearable devices, refrigerators, digital assistants, sensors and other equipment are connected to the internet, can be recognized by other devices and collect and process data, you have the internet of things. Artificial intelligence is when a system can complete a set of tasks or learn from data in a way that seems intelligent. Therefore, when artificial intelligence is added to the internet of things it means that

those devices can analyse data and make decisions and act on that data without involvement by humans. These are “smart” devices, and they help drive efficiency and effectiveness. The intelligence of AIOT enables data analytics that is then used to optimize a system and generate higher performance and business insights and create data that helps to make better decisions and that the system can learn from.

**Practical examples of AIOT:** The combo of internet of things and smart systems makes AIOT a powerful and important tool for many applications. Here are a few:

**Smart retail:** In a smart retail environment, a camera system equipped with computer vision capabilities can use facial recognition to identify customers when they walk through the door. The system gathers intel about customers, including their gender, product preferences, traffic flow and more, analyses the data to accurately predict consumer behaviour and then uses that information to make decisions about store operations from marketing to product placement and other decisions. For example, if the system detects that the majority of customers walking into the store are Millennials, it can push out product advertisements or in-store specials that appeal to that demographic, therefore driving up sales. Smart cameras could identify shoppers and allow them to skip the checkout like what happens in the Amazon Go store.

**Drone traffic monitoring:** In a smart city, there are several practical uses of AIOT, including traffic monitoring by drones. If traffic can be monitored in real-time and adjustments to the traffic flow can be made, congestion can be reduced. When drones are deployed to monitor a large area, they can transmit traffic data, and then AI can analyse the data and make decisions about how to best alleviate traffic congestion with adjustments to speed limits and timing of traffic lights without human involvement. The ET City Brain, a product of Alibaba Cloud, optimizes the use of urban resources by using AIOT. This system can detect accidents, illegal parking, and can change traffic lights to help ambulances get to patients who need assistance faster.

**Office buildings:** Another area where artificial intelligence and the internet of things intersect is in smart office buildings. Some companies choose to install a network of smart environmental sensors in their office building. These sensors can detect what personnel are present and adjust temperatures and lighting accordingly to improve energy efficiency. In another use case, a smart building can control building access through facial recognition technology. The combination of connected cameras and artificial intelligence that can compare images taken in real-time against a database to determine who should be granted access to a building is AIOT at work. In a similar way, employees wouldn't need to clock in, or attendance



for mandatory meetings wouldn't have to be completed, since the AIOT system takes care of it.

**Fleet management and autonomous vehicles:** AIOT is used in fleet management today to help monitor a fleet's vehicles, reduce fuel costs, track vehicle maintenance, and to identify unsafe driver behaviour. Through IOT devices such as GPS and other sensors and an artificial intelligence system, companies are able to manage their fleet better thanks to AIOT.

Another way AIOT is used today is with autonomous vehicles such as Tesla's autopilot systems that use radars, sonars, GPS, and cameras to gather data about driving conditions and then an AI system to make decisions about the data the internet of things devices are gathering.

**Autonomous delivery robots:** Similar to how AIOT is used with autonomous vehicles, autonomous delivery robots are another example of AIOT in action. Robots have sensors that gather information about the environment the robot is traversing and then make moment-to-moment decisions about how to respond through its onboard AI platform.



#### 4.ARTIFICIAL INTELLIGENCE INFLUENCING E-BUSINESS ARENA

The use of artificial intelligence in online shopping is transforming the E-Business industry by predicting shopping patterns based on the products that shoppers buy and when they buy them. It helps E-Business businesses get closer to their customers. Artificial intelligence has the powerful ability to acquire and analyse large volumes of data and provide decisions for action. E-Business is now adopting this technology to identify patterns based on browsing, purchase history, credit checks, account information etc. This data collected then form the basis of creating customized recommendations for each customer. Many E-Business businesses have started implementing different forms of AI to better understand their customers, and provide an enhanced customer experience. With the facilities of AI, E-Business platforms today are able to utilize large datasets regarding customer behaviour and usage patterns. Artificial

intelligence self-learning algorithms can create personalized shopping experiences for online buyers.

### **Features of Artificial Intelligence In E-Business**

- **Predictive marketing:** If you want to go up the ladder then your E-Business business has to start predicting what the customer might require.
- **Personalization:** With the power of AI, E-Business businesses can now create personalized marketing campaigns to effectively interact with customers. A personalized intelligent automation system can respond based on customer history, current needs, and specific tasks.
- **Customer service:** E-Business websites have adopted a smarter route to satisfying their customers
- **Social media listening:** With an AI-powered E-Business website, your social media acceptance will help you provide opportunities for further growth.
- **Dynamic pricing:** Dynamic pricing now uses AI to adjust the price of your inventory based on the diverse data terminals.



### **Benefits of Artificial Intelligence In E-Business**

- Enhancing products
- Making better decisions
- Informing the creation of new products
- Optimizing processes
- Identifying new markets
- Automating workflows

## **Role of Artificial Intelligence In E-Business**

Artificial Intelligence is now no longer an unheard concept. Simply stated, now machines are assisting us in which we would not have even thought about. As we stay in a profit-driven global world where sales are happening regardless of time of the day, business needs to be available to the customers at all hours of the day. AI in E-Business helps to achieve this objective. It enables companies to gather as well as investigate data in real-time, thus facilitating more efficiency and competence in business. The customers are provided with a personalized experience on of knowledge about their preferences.

## **Way to use Artificial Intelligence In E-Business**

- Identify exceptional target prospects
- Create a more efficient sales process
- Create a new level of personalization across multiple devices
- Implement virtual assistants
- Introduce virtual personal shoppers
- Work with intelligent agents
- Generates sales through wearable technology
- Tackle fake reviews

## **Growth of Artificial Intelligence In E-Business**

Artificial intelligence will help to grow E-business in following ways:

- Smarter Search and Recommendations
- Consumer Personalization
- Virtual Assistants
- Choosing the Best Shipping Options
- Inventory Management Improvements
- Fraud Detection and Risk Mitigation
- Trend and Pattern Detection

## **Impact of Artificial Intelligence In E-Business**

- Customer Experience
  1. AI and A/B testing
  2. Recommender Engines
  3. Chat bots
  4. Visual Search

- Customer Relationship Management
- Warehousing
- Logistics

### **Challenges of Artificial Intelligence In E-Business**

- Risks of Implementation
- Lack of data vs. Lack of skilled people
- Lack of data

E-business is not about conducting business transactions via through internet its impact will be far reaching and more prominent then we know currently, this is because of the revolutionary in information technology is happening simultaneously with other developments, especially in globalization of the business.

## **5.GAMING ZONE A GAME CHANGER IN THE BUSINESS ARENA**



The gaming industry is sometimes also referred to as interactive entertainment industry. The industry deals with making, developing, marketing and selling of game. Some of the positions which are common to this industry include game programmer, games designer, game artist and game tester. A unique way through which this industry can generate revenue is through royalties. Another highlighting feature about this industry is that it can attract any age group. Not only the youth but also the kids and elderly get attracted to a new innovation. This is because of games can be developed to suit and fit the needs and demands of the people.

**Virtual reality businesses in India that can be a game changer:** Virtual reality has been started as a small craze but became a very big business for many companies. Companies like Samsung and Xaomi started selling VR headsets with their phones or as a separate product. The usage of VR is already seen in the gaming section and it is readily accepted by the public. If more the innovation happens, it will attract more companies to invest and innovate the use of VR in our daily lives.

**VR gaming business:** Gaming is one of the main reason's VR came into existence. We already see it being used by many big companies to promote their games and give their consumers a more thrilling experience in gaming. There are big examples like Kaleidozone, Bandai Namco and a few other companies who are developing VR supported games and products for their consumers. Big games like Star Trek: Bridge Crew, Fallout 4 VR, Chronos etc. have been launched on VR for PC and PS4 VR. This trend has also come to android as there are many

free to play games available on android as well like Gunjack 2, Anshar Wars 2, and WANDS VR etc. This introduction to the VR world by gaming has changed the perception of future gaming all together. New possibilities can be seen and more can be done to make this experience even better.

**VR online shopping experience business:** There are many ways that VR can create an immersive shopping experience for all the people who shop online. VR is going to open up many doors for developers to create many more innovative ways of shopping. Companies like Amazon have the capability to invest in such ideas to increase their sales. The customers could look at their products in 3D and this also will help them choose better products for themselves. This would also help the businesses to gain the trust of their clients and make it a better experience for them to buy the product. This would make online shopping more convenient for the consumer and will attract more big businesses to indulge themselves in this innovative idea.

**VR content development in education business:** VR will make many subjects much simpler and interesting to understand for all the students. The experience that VR will give to students will be exciting. The students would be able to look at what they study in a 3D world, where everything they study will come to life. The limitations of doing practical's in their classes in certain subjects could be overcome with videography of that particular practical's that could be shown to the students to give them an overview of different tests. The idea of adding practical for subjects like geography, mathematics and many other subjects would



make it more approachable for the students who don't like the subject. This would make the whole experience of studying very engaging for the students.

**VR Live experience providers business:** This is an exciting thing to imagine. Suppose you are at home, but you wanted to go watch the cricket or football match with your friends. What if you have to just pick up your VR device and put it on and connect to the internet? There you are able to watch the whole match like it is happening live in front of your eyes.

This situation could be seen in many more scenarios and many different contexts as well. There are many different areas where you could go without even having the fear of any kind of danger. This technology will enhance our research skills and give us more information about different areas where it might not be possible for those people to go. The most prominent possibility

would be in the tourism business. Where the person would not have to even leave his/her house and would be able to go to the areas of tourism. The advancement in this technology could make this possible make it a big business

Dr. James Comer of the Yale Child Study Centre noted nearly three decades ago: “Playing games helps children learn to live by rules and establish the delicate balance between competition and cooperation.” He added that game play helps children “learn to manage the warmth of winning and the hurt of losing to believe that there will be another chance to win the next time.” As younger and younger children have made digital play a preferred mode of social expression, their needs for engagement with caring, dependable adults have not changed.

The growing phenomenon of digital game play cannot be dismissed. The debate in the coming decade should, of course, focus on children’s safety first, and on critical issues such as the quality of early education, teaching, and health care A different framework would carefully marshal evidence and explore how, not whether, digital media might best be used. Such a welcome departure from current practices could, simply put, be a real game changer.

## CONCLUSION

We can see that AI is not hype but has the capability of transforming the global economy via technological innovations, scientific knowledge and entrepreneurial activities. The progressive growth of automation and AI in the last decade is attributed to two major factors: the increasing availability of big data and hardware accelerators. These factors are making AI the core technology responsible for extreme automation and connectivity and thus, taking the world towards the dawn of the fourth industrial revolution. This will have profound impacts on governments, communities, companies, and individuals.

The extreme high capability of intelligent agents (IA) in various games, recognition and classification tasks offer opportunities for process innovation as well as product innovation. This is leading to the development of assistive technologies and products for the disable and elderly people. The innovation process and global competitiveness is strengthening as an outcome of the adoption of various strategies by the corporate firms (companies and start-ups) to become AI-firms. The actual intention is to grow with the most advanced technology of AI and win the technological race.

AI will have a significant effect on the way e-commerce businesses attract and retain customers. AI revolution in e-commerce will create plenty of new data science, machine learning and engineering. AI based e-commerce will also generate IT jobs to develop and maintain the systems and software that will be running those AI algorithms. But the confluence

of AI and e-commerce may impact people lacking in-demand skill set face unemployment in coming years.

We believe that Artificial Intelligence in online business will affect transactions, client maintenance, fulfilment, proficiency and some more. Simulated intelligence is changing the manner in which we purchase and move on the web. Artificial intelligence upheaval in e-commerce business will make a lot of new information science, machine learning and engineering. AI based e-commerce business will likewise produce IT employments to create and keep up the frameworks and programming that will run those AI calculations. In any case, the conversion of AI and online business may affect individuals ailing sought after range of abilities confront joblessness in coming years.

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