



## Effect of Artificial Intelligence and the Internet of Things on Company Competitive Climate and its Implications

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**Abstract-**Artificial intelligence plays an increasingly important role in IoT applications and distributions. Both investments and acquisitions in startups that combine AI and IoT have increased in the past two years. Major software vendors for IoT platforms now offer integrated artificial intelligence features, such as machine learning analysis. "AI is computer systems theory and development capable of performing tasks that normally require human intelligence, such as visual perception, speech recognition, decision-making, and language translation." Artificial Intelligence is a broader scheme enabling human-like cognitive intelligence machines. This article delineates and analyze the analyze impact of Artificial intelligence and internet of things on business strategies and implications. It also assesses the role of Artificial intelligence in internet of things.

**Keywords:** Artificial intelligence, visual perception, IOT, decision-making.

### 1. Introduction

Artificial intelligence is the point at which a system can finish a lot of tasks or gain from data in a manner that appears to be intelligent. In this way, when artificial intelligence is added to the internet of things, it implies that those gadgets can examine data and settle on choices and follow up on that data without involvement by a human.

New technologies keep on assuming a critical role in the development of society, including the change of consumer enterprises. With these new progressions and other significant drivers, consumer desires are advancing, industry lines are blurring, and digitally-enlivened disruptors are emerging. Each organization currently winds up amidst a digital transformation as it means to keep up significance in the digital period. To more readily see how organizations are reacting to this epochal move, Euromonitor International led an Industry Insights Survey of 1,445 experts around the globe.

The survey checks where organizations are putting down their tech wagers and how industry players see these activities are affecting trade later on. It is reacting distinguished the cloud and Internet of Things (IoT) as the best two technologies for arranged investments. The greater part of respondents demonstrated their organization was planning to make such investments [1].



## **2. IMPACT OF ARTIFICIAL INTELLIGENCE ON BUSINESSES**

The emerging technologies viz. internet of things (IoT), data science, big data, cloud computing, artificial intelligence (AI), and blockchain are changing how we live, work and divert ourselves. Further advancement of these technologies can contribute to creating hyper robotization and hyper-connectivity, which would bring us at the beginning of the Fourth Industrial Revolution or Industry 4.0 [2].

Principally, the advancement in AI is the core of the upgraded presentation of every single other innovation and the development of Industry 4.0. This technological advancement, ascribed to AI, would encourage human-to-machine interactions, change the rationale of plans of action, and change the way of life and expectations for everyday comforts of the human.

The adoption of AI is bringing about a world that is more intelligent and innovative. Route and traffic mapping by Google maps, value estimation of rides by Uber and Lyft, companions' label proposals at Facebook, spam channels in our email, a suggestion for web-based shopping and cancer location are just a couple of instances of AI technological innovations improving our lives. The mind-blowing speed with which AI is entering each division is constraining organizations to get into the race to make their organization an AI organization.

This is likewise instigating business, strategists, pioneers, business visionaries, and investigators to utilize AI to plan new strategies and make new wellsprings of business esteem. Research assumes an undeniably significant role in the development of innovations and innovations. The research and advancement process brings about monetary development by empowering the development of new markets and improving existing markets. As indicated by the new development financial aspects, Neo-Schumpeterian Economics, there are three significant forces which drive the monetary dynamics: advancement, knowledge, and business [3,4].

### **3. Impact on Business, Economy, Job Skills and Society**

The proliferation of connected devices from 1 per person today to say 10 devices per person in the future will open several new start-up opportunities and will create an ecosystem around the IOT region. If the IOT domain's market value is recognized, new goods, services, and revenue models will emerge that will draw investments and thus create jobs in the IOT field.

This also has the potential to increase imports or exports for such goods and solutions which could, in turn, drive up economies (similar to what IT services have done for India). It may also contribute to the development of ancillary or supporting industries such as smart and connected device production, monitoring and measurement systems, decision making and analytics systems, and security solutions to ensure safe use and resolve privacy issues when it comes to IOT use.



Regulatory bodies will need to specify policies and guidelines regulating the use of IOT when it comes to the type of information that IOT devices gather, the granularity of that information, who has access to it and how it is used. Such constructive behavior would increase consumer trust in the technology and the adoption. The implementation of IOT would also contribute to the implementation of Big Data and analytics technologies which can provide context for rational decision making.

Together with the high volume, speed and structure of IOT data, the large number of devices can create opportunities particularly in the areas of security, data, storage management, servers and data center network, data analytics. In addition to understanding industry-specific use trends, consumer preferences and groundbreaking marketing strategies, this means skills such as knowledge of business research, math and statistics, imaginative design for end user visualization, big data applications, programming and development of large scalable systems and knowledge of devices used in the IOT ecosystems will be in demand. This could also impact the courses and curricula used in schools and colleges [4].

#### **4. Concerns around IOT**

Along with all these advantages, however, questions arise about security threats and privacy violations. Smart meters optimize energy usage by tracking movements or inhabitant activity in a house and shutting down energy-consuming devices while no one is at home or in unoccupied spaces. However, if the record of our movements or absence in the house falls into the wrong hands, it may compromise protection.

Similarly, monitoring patients' or older people's behaviors may be seen as interference into their private lives. Such excessive surveillance of individuals may also contribute to adverse social consequences and behavioral pattern changes. Then there are questions about the safety of the collected information, who has access to it and how it will be used.

It is not new or unwarranted to have such confidentiality and security issues regarding a coming technology. We felt the same when we first made Internet-based email systems available or when we accessed our data in cloud-based infrastructures. It will be relevant how the industry which promotes IOT addresses such issues. If they can regularly demonstrate the safe use of IOT, this will really open up opportunities for a safer, healthier and more prosperous existence for us all [5].

#### **5. ADVANCED INDUSTRIAL COMPANIES SHOULD APPROACH ARTIFICIAL-INTELLIGENCE STRATEGY**

Artificial Intelligence (AI) has reached a turning point for commercialization. AI is beginning to have a significant effect across markets as a result of many technological developments that are

now converging, large investments by technology firms and start-ups and demand from businesses. Over the next decade, advanced industries such as automotive, semiconductors and industrial manufacturing could harness AI to discover completely new ways of making things better, cheaper and faster.

Although mainstream reporting on the subject frequently appears to concentrate exclusively on developing new business concepts, businesses may apply AI directly to their core business processes and operations. However, many companies still have to think about how they could integrate AI into their strategies and companies. Instead, they take ad hoc methods that may not scale, they can't prove new ideas and they don't create systemic power. Such actions, in the end, have little effect [6].

- *Hype galore, but many businesses are not yet clear on using AI technology*

Though forecasts differ, forecasters tend to agree with an annual revenue-growth rate of about 50 per cent for AI. Analysts are optimistic about AI, saying it has the ability to drive major changes in efficiency through the automation of multitudes of manual tasks in almost every sector. Although the buzz around AI has reached critical mass, many businesses remain uncertain about what to do with the technology. For example, one major concern: findings showed that AI is not a strategic priority for 43 per cent of C-level executives in a McKinsey survey of respondents from Chinese companies. At the same time, the top three obstacles to AI execution were lack of needed talent and skills, AI technology was not mature and top management was not clear about AI's value).





## **How to define an AI strategy**

Based on these results, given the hype and uncertainty that surrounds AI in general, business leaders need to decide what the technology can and cannot do for their organization, and develop an AI strategy.

Typical steps include identifying potential applications, playing out scenarios of disruptions in the AI-generated market, establishing a strategic role and selecting underlying AI initiatives, and bringing about the AI transition. The first two steps concentrate on understanding how the external environment will change, while the second two deals with what the business can do about it [7].

## **6. Conclusion**

Artificial intelligence plays a basic role at business management not only at internal of the organization, but also at external of the organization. It redefines the strategic management and re-evaluates the strategic planning model. AI contributes at all steps of strategic planning, does an accurate SWOT analysis, and chooses the suitable strategy according to the capabilities of the organization and the risks that may has a negative impact on the performance of the organization. Artificial intelligence is the controller and monitor at the business; it does analysis to each step during strategy's implementation and corrects any deviation.

Nowadays, human and AI work side by side to achieve the organization's goals and objectives. Artificial intelligence is not a technology or a tool for the managers and leaders only, it is like a colleague that manages and leads the organization by an effective strategic management. It is the time for the leaders to delegate some of their authorization to the artificial intelligence. In conclusion, AI has a positive impact on the overall business operations and also the creation of market leadership. The business organization that implements AI in their operations can achieve high operation optimization.

The adoption of AI improves overall decision making within an organization by using AI insights to make informed decisions. In marketing, AI is used to ensure an organization marketing efforts are not wasted and product information can reach the potential customers. AI has increased automation of business processes and production processes, which reduce overall production costs and helps create high-quality products for mass consumption. The use of AI helps business organizations have a proactive approach towards cybersecurity, which improves the security of business and customer information.

Undoubtedly, the rapid development of new technologies impact all areas of everyday life and the presented analytics and reports show that these trends will continue and grow in the years to come. Whether we want it or not, we are part of this technological revolution and the most



important thing is to learn how to use it properly and wisely. Therefore the efforts of all players in the world of Internet of Things - device providers, operators, platform providers, systems integrators, application providers, governments and consumers should be united to ensure a secure and safety environment for communication and exchange of personal data. Internet of Things' integration should follow a certain vision and idea, identify opportunities for using technology, attract business institutions and government, and build a culture of using the Internet of Things.

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