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Impact of IOT on Different Business Sectors: Deep Analysis Trends after Pandemic

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ABSTRACT

The internet of things helps Humans work smarter, as well as gain complete control over their lives. In addition to offering smart devices to automate homes, IoT is essential to various businesses. IoT makes provisions for businesses with a real-time look into how their systems really work, delivering insights to every business about the performance of machines from start to end of every operation. IoT gives assistance to businesses to automation and reduces labor costs. It also chops down waste and improves service delivery, making it economical to manufacture & supply goods and services, as well as offering clearness in customer transactions. IoT is the most important technology in modern life, and it will only gain popularity as more companies recognize the potential of linked devices to keep them focused and active. In the future what are all the changes that humans can expect through the Internet on things through various activities and also in various sectors can be described in this. The future of human life is living together with digital technology and IoT.

***Keywords*--** Algorithms, Frequency, Gold Rush, Radio Frequency Identification, Tributaries

I. INTRODUCTION

In a presentation to Proctor & Gamble in 1999, Kevin Ashton, a co-founder of MIT's Auto-ID Lab, coined the phrase "The Internet of Things" (IoT). IOT has created a lot of impact on humans in the current generation. And it was also used in various fields of management as well as technology. And the major innovation created was the Radio Frequency Identification technology. He also established the Zensi firm, which manufactures energy sensing and monitoring equipment.

At present linked devices with built-in sensors have the potential to gather and send data at a rapid speed. Integrated technology helps us to interact and connect with others.

The Internet of Things (IoT) has emerged. using the past few years, becoming a more and more regular component in human life, like smart watches, intelligent coffee makers, a clever supply chain system, autonomous automobiles, traffic observing etc.

As we can see, it is currently showing the impact on society and the way that humans are living. Without the internet today no one can be able to survive. That's the impact that the Internet created today and in future we can see that drastically changes in human life with the information that can be accessed easily and quickly within a short period of time. And better security for our data.

In the future the Internet of Things will emerge as a world-leading technology. It has grown in popularity in a short period of time and was adopted by everyone. Furthermore, advances in Artificial Intelligence and Machine Learning have simplified in such a way that everyone can use IoT devices. AI and ML algorithms are essentially integrated with IoT devices to provide optimal automation. As a result, IoT has expanded its range of applications across a variety of industries. This section will go through the uses and future reach of IoT in the healthcare, automotive, and agriculture industries.

II. LITERATURE REVIEW

According to Miraz et al. (2015), present significance and future prospects of the web of Things (IoT) and net of Nano Things (IoNT) have been thoroughly evaluated, and an overview survey report has been awarded. The analysis distinguishes clearly between IoT and IoE. Many of us incorrectly assumed that square measure to be same. After investigating this, the study discusses probable scenarios for progress in the sectors of IoT, IoE, and IoNT for the potential expansion of their applications.

According to Kumar et al. (2019), the Internet of Things (IoT) might be an innovative paradigm that has changed the traditional way of life into a high-tech life. Square measure of a smart city, sensible dwellings, pollution management, energy savings, sensible transportation, and sensible industries. IoT has resulted in such developments. There are various critical analytical studies and investigations being conducted drained in order to build up technology with IoT however, square measure

is still quite useful. There are several obstacles and concerns that must be solved in order to fully fulfil the promise of IoT. These problems and concerns should be considered from many phases of IoT, such as applications. Challenges, sanctioning technology, social and environmental consequences, and so forth. The primary goal of this criticism is to generate an in-depth discussion from both a technological and a social standpoint. The article discusses various challenges and key issues with IoT, design, and vitality. domains of application Furthermore, the essay summarizes and illustrates the existing material. their contribution to a variety of areas of IoT Furthermore, the significance of extensive knowledge and Its examination in relation to IoT has been addressed. This text would benefit readers and workers in study to comprehend IoT and its significance in the vital globe.

II. OBJECTIVES

- To study and analyze the impact of different business trends after pandemic.
- To analyze the Integration and Interconnection by using IoT in different business sectors.

III. DISCUSSIONS

In recent days we can see that IoT has been more trending everywhere and almost everyone has directly and indirectly used IOT at different places. It has been adopted by almost all the major industries and organizations. Because of its automated features, such as low cost, best service, fewer errors, and no maintenance costs, IoT will be able to meet greater demand in the coming years.

Through Internet technologies, we can be able to control almost all the things through the smartphone which can be easily used and easy to carry. Everything will be controlled in your hands. IOT aims at bringing the integration of people with various places and helps them to get connected with each other in an effective and efficient way. Helps every individual to meet anyone digitally. IOT aims to build up an efficient security to its users so that the data of every user can be protected and will not be hacked, and will be safe from cyberattacks.

IOT was designed in such a way that it will reduce human errors and can reduce the labor cost for various organizations. So that the efficiency will be very good and gives accurate results.

As IOT was boosted a lot through pandemic(covid-19), almost all the major things have started digitally available, so that there will be no contact between the persons physically.

It has now become a commercial domain which helps individuals, organizations, and various firms to find out any type of information and to find out various insights which will be useful.

Currently it has been already existed in the following sectors;

Smart Home Technology

Some IoT-based smart home technology products include Google Home, Amazon Echo, and others. These products largely rely on both IoT and machine intelligence.

Automotive & Shipping Industry

Automobiles are being thought of in the internet era in terms of on-demand device upgrades. Modern vehicles come with IoT-based smart sensors that aid in functions such as real-time vehicle tracking, speed control, fuel consumption management, and car rental services. IoT and deep learning support the evolution of semi-autopilots, self-driving automobiles, and automated parking systems.

Medical Industry

Healthcare is a field that industry-grade IoT has greatly benefited from. Smart devices and wearables are becoming more fashionable over time. This permits researchers to incorporate IoT solutions using an increasing amount of data. Through continuous heart rate, step, sleep, and posture monitoring, wearable data is used to help avoid heart attacks. Nanotechnology-based IoT technologies are being utilized to monitor malignant cells within the body. Machine learning and IoT are rapidly altering the business landscape.

Goods Producing Industry

The manufacturing industry environment has undergone significant change as a result of IoT. Smart sensory data are pre-owned for requirement analysis, resource optimization, and the prevention of aberrant breakdowns. IoT solutions assist businesses with smart asset management and performance monitoring, which lowers asset downtime and lengthens the life. and also, it permits large-scale manufacturers with a shorter time to marketability. For instance, the Internet of Things (IoT) enabled Harley Davidson to create whole bikes in just hours as opposed to days.

As we can see already IOT has been already existed today in all these industries and domains, and also E-commerce and Artificial Intelligence (AI) was helping widely usage of the internet as on today lot of us are doing shopping and buying goods and services through various apps(online). And also, we can see that the increase in the usage of social media and people today addicted to social media and also social media marketing is now a trend for every business. As today 40% of the people are following this process in the shopping process in the future it will increase and occupy all the 100%.

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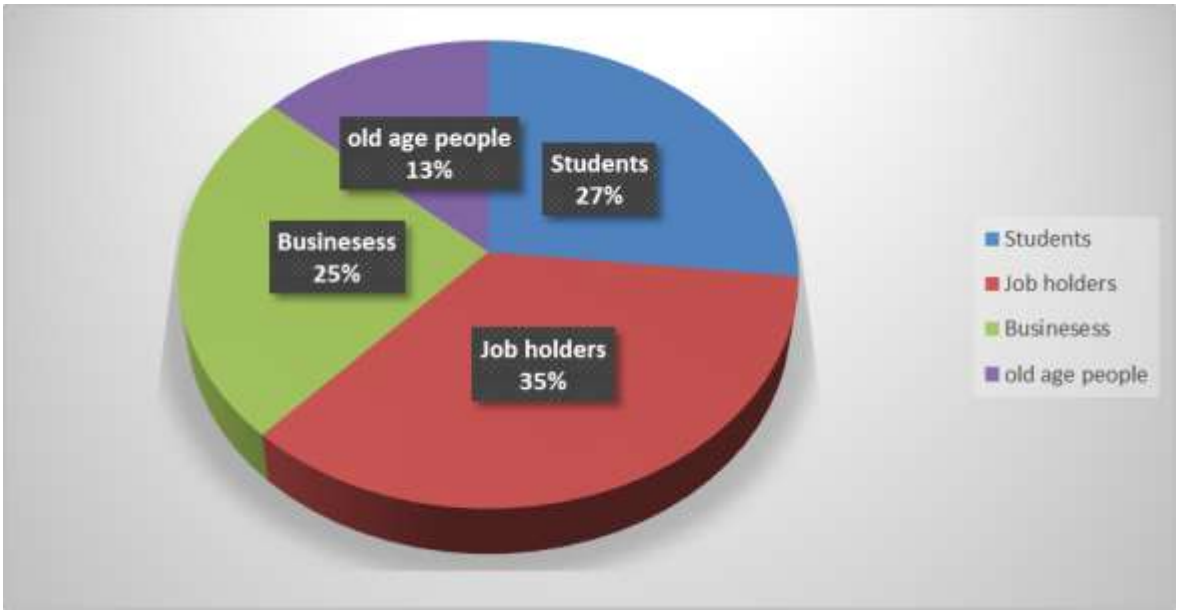
IV. IMPACT OF IOT ON SOCIETY

IOT has impacted a lot on society, when the internet was started in 1983 it was not popular and no one thinks that it will be popular as today. But due to the some of the changes made by the humans to use internet effectively in such a way that everything can be available and every information can be gathered through on click has attracted the society and shows a lot of attractions towards the society.

Now everyone can use the Internet for various things which will help to reduce their physical effort as well as the cost. It helps for various organizations to work digitally, as we can see in covid-19 situations most of the organizations have adopted work from home policy and the management and the employees have been meeting digitally. And also, the digital payments such as Phone Pay, Google Pay, Paytm, Amazon Pay has been developed their services in digital monetary transactions which helps users to go for the cashless transactions and we can see that the Online Education system has been popularized and also a lot of people has been accessed through various courses and online degrees and a lot of guided projects through the electronic devices like laptop, mobile phones etc. which helps them to learn digitally and also in the pandemic situation almost every schools and colleges has been started with online classes and tuitions so that the children will be studied through online. And now with the help of the internet we can order food through various apps like Zomato, Swingy, food panda etc.

Now a days almost everyone was using internet in a direct as well as indirect ways.



V. FUTURE TRENDS ON IOT

Created Digital Society

IOT in the future days will rapidly increase and also it can able to connect everyone in the society digitally in such a way that everyone can be able to use that easily.

Occupies Every Business

According to a new report by Microsoft, by the end of 2025 almost 90% of the businesses will be run with the IoT and also there will be complete digitalization.

Complete Automation

In the next generation it is difficult to see the labor complete manufacturing process will be done by the automation process which helps to reduce the cost and eliminate errors.

Availability of Data

In the future for the collection of the data the researchers may not be collect data through the traditional ways which are time consuming, they can easily collect data through various websites available on internet and find out target audience easily.

VI. DATA ANALYSIS OF IOT USERS IN VARIOUS YEARS

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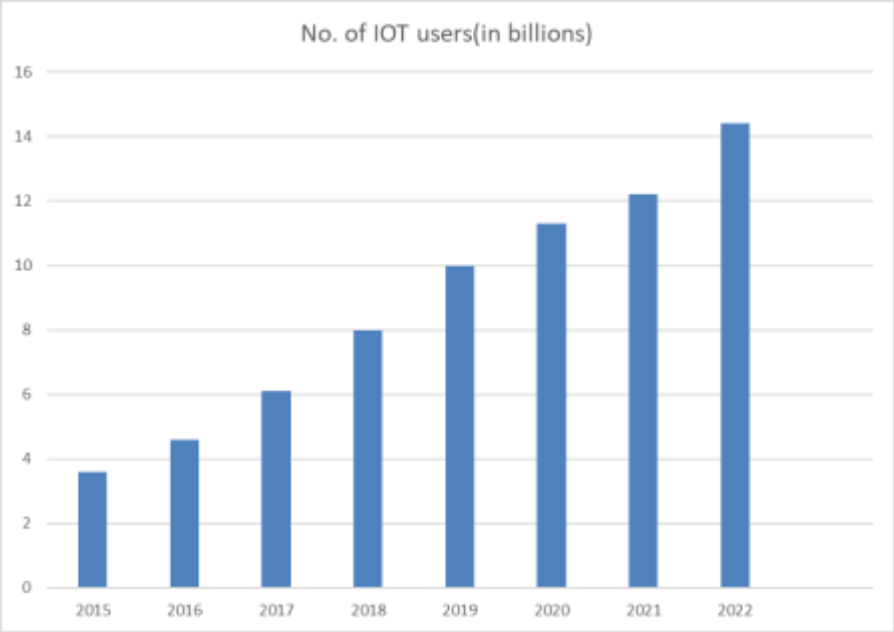
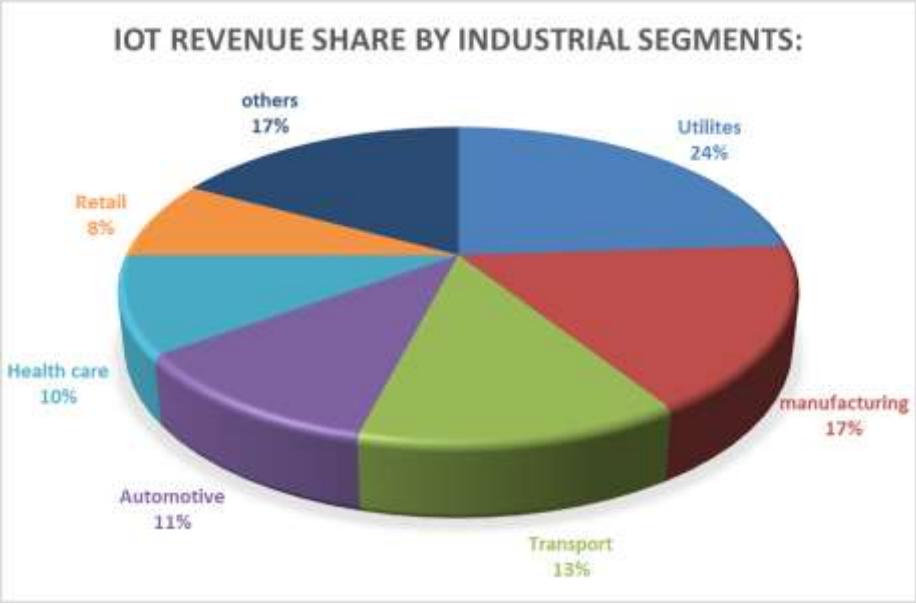


VII. IMPACT OF IOT BEFORE AND AFTER COVID-19

Before covid IOT was majorly used by the organizations in an optimal way and also many of the businesses were doing hybrid strategy i.e. mix of both online as well as the offline businesses. And a small portion was a\occupied by the online Edu-Tech companies like BYJU'S, Vedantu etc. But after the Covid-19, almost every business and also all goods and services are started available in the internet through the effect of the pandemic also we can see the increase in the digital transactions, as well as the online education has become trending and also the users of the internet was more and demand for selling products in online was rapidly increasing. And also, we can see that in the pandemic situation there are only two companies that have earned super normal profits i.e., Facebook, Amazon. Both of them are from the digital platform that has never faced problems like other companies. And it is expected to have 30 billion IOT users in the year 2030.



VIII. CHALLENGES OF IOT

IoT has already become an important security threat, attracting the eye of vital technical school companies and government organizations worldwide. Hacking of baby monitors, sensible fridges, thermostats, drugs infusion pumps, cameras, and even your vehicle radio foreshadows a security nightmare created by the longer term of IoT. With such a lot of extra nodes being supplemental to networks and the net, malevolent actors can have Associate in Nursing infinite variety of attack ways and possibilities to hold out their evil actions, particularly as a result of a big proportion of them have security flaws.

A lot of vital shifts in security can come back from the very fact that IoT can become a lot of implanted in our lives. issues can now not be restricted to the protection of sensitive info and assets. Our terribly lives and health will become the target of IoT hack attacks. There are several reasons behind the state of insecurity in IoT. a number of it's to try to with the business being in its "gold rush" state, wherever each merchandiser is in haste seeking to dish out future innovative connected gizmo before competitors do. beneath such circumstances, practicality becomes the most focus and security takes a back seat.

IX. CONCLUSION

The Internet of Things is nearer to changing into a reality than most of the people believe. The bulk of the essential technological enhancements have already been completed, and several other businesses and agencies have begun to deploy a small-scale version of it. The impact it will wear the legal, ethical, security, and social fields is one amongst the most reasons it has not been absolutely enforced. employees may abuse it, hackers may access it, companies might not wish to share their information, and individual individuals might not just like the complete absence of privacy. And also IoT has not yet been completely developed in some of the remote areas as well as some of the rural areas and also in our country not everyone is using internet a small portion of people are lack of unaware about the Internet & Technology. For these reasons, the net of Things is also delayed for much longer than necessary.

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