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Existing Trends in Successively Knowledge - Current it Experts

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Abstract: *The majority of services are currently made possible by IT. Technology development has had both positive and negative effects on society's way of life. The majority of human life today is impacted by new technology. Cloud computing, mobile computing, social media, ubiquitous computing, data analytics, data science, and the Internet of Things (IoT), a network of a large number of computing devices embedded with microchips, sensors, and actuators, have emerged as a result of this development.*

I. INTRODUCTION

The history of Information Technology is traced to early civilizations when the art of recording the information developed. It followed mechanical and later electronic path as in today's society. In the early age, information was recorded on objects such as stones, metal plates, cloth, and paper like materials. The term Information Technology is a collective term for the various technologies. The various technologies involved in the processing and transmission of information, including computing, are collectively referred to as Information Technology's involved in processing and transmission of information, which includes, computing, telecommunication and microelectronics just to mention a few[1].

Evolution of Information Technology included some steps, which led to various developments. The first break through was the invention of paper and Ink. The invention of the paper in 105 A.D. in China and subsequently the ink also. Paper provided better and durable writing medium than the earlier fragile ones[1]. The other most important landmark in the history of recorded knowledge was the invention of movable type by Gutenbergin 1438. A.D. in Germany. It led to the proliferation of literature and brought a revolutionary change in the development of library.

It is well known that information technology has impacted people's daily lives in practically every area of their lives, including business, communication, healthcare, and education [2]. We can gather, share, manage, and connect a massive volume of data and information with the use of information technology. Numerous IT-related technologies, such as cloud computing, mobile computing, social media, etc., are developing quickly and transforming how work is done. [2]. With the help of cloud computing we are able to get hardware and software resources virtually on pay per demand basis [3].This helps an individual as well as organizations to avoid installing heavy and costly software on their systems. [4]Through cloud computing we are able to get applications, platforms as well as infrastructure over the internet[3].

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II. RELATED LITERATUR ON IT TRENDS

The information technology industry has been characterized as a new sector experiencing rapid technological advancement [7].Since its inception, the sector has experienced numerous significant trends. Since the beginning of the new millennium, information technology has made a significant contribution, and the majority of businesses share a few common objectives to promote technological innovation. Using previous studies, reviews of the literature, and journals, this paper delves into the current trends in information technology and the path forward for experts in the field [7].

2.1 Cloud Computing

Cloud Computing is one of the latest developments in information technology that has had a greater daily impact on the expansion of businesses is cloud computing. It is said that cloud computing is made up of a pool of shared resources like servers, storage, networks, services, and applications. These resources can be shared with people and businesses on a pay-per-use basis at a low cost. Third-party providers typically own and manage cloud computing services, which are provided to users on a pay-per-use basis [3].The following are some of the most important computing services offered by cloud computing for customers: SaaS (software as a service):Customers are very familiar with the SaaS type of cloud service. The highest level of cloud computing architecture is Software as a Service, which provides customers with a complete application over the internet [5].

CRM applications like Salesforce, storage solutions like Google Drive, Drop Box, and productivity applications like Google Apps are among the most well-known software as a service (SaaS) applications currently utilized by businesses [3].

Platform as a Service (PaaS), which is the middle layer of cloud computing architecture and provides software developers and end users with an execution environment as a service without the need to download or install software, is another important service [3].Microsoft Azure and Google App Engine are two examples of Platform as a Service (PaaS).Infrastructure as a Service is the other service.

IaaS Services: The lowest level of cloud computing architecture is Infrastructure as a Service, which provides virtualized sharing of hardware resources for service execution [5].

2.2 Mobile Computing Technologies

According to Kumar (2016), mobile computing technology makes it possible to transmit data, audio-video, and voice over any device with a wired or wireless network connection without having to connect to a specific physical location. The popularity of mobile computing has increased as a result of the proliferation of portable computing devices and the desire to connect to the internet

without returning to a fixed location. Recent advancements in mobile computing, such as GPS, GPRS, Long Term Evolution (LTE), 3G, 4G, and Wi-Max, have greatly increased the use of mobile computing.5].

The following mobile computing devices help make the service possible: Wearable devices include smart phones, personal digital assistants (PDAs), laptops, and head-mounted displays like Google Glass and Apple's smart watch. The development of mobile computing has resulted in a number of benefits and drawbacks, including: Due to its effectiveness and efficiency, it increased productivity some of the image signs for communal social media platforms.

2.3 Social Media

Due to its expansion and increased use as a communication tool, the majority of nations' media are now regarded as the fourth estate or fourth pillar of democracy. Social media now provide support for this fourth estate of media [5].All of today's social issues can now be discussed on social media. The world is becoming more integrated thanks to social media. By raising important social issues, social media also contribute to making the world a better place to live. The development of information technology is altering all facets of daily life, and social media platforms have emerged as significant instruments in the expansion of business marketing [5].

2.4 Big Data

In 2018, the technologies related to big data will continue to gain importance. Digital marketing is now more popular than traditional marketing because of its high return on investment, speed of impact, and measurability [9]. This means that big data is now being used by big businesses because many digital marketing campaigns can rely on huge amounts of data to ensure effectiveness and a wider reach. To guarantee conversions from online connections, businesses now rely on data management [9].

2.5 User Interface

Since the introduction of the touch screen, one area that has undergone significant change is the user interface. The application’s user interface has been fundamentally altered by the touch screen’s capabilities. The method by which users can interact with the application is enhanced by the touch screen capability. Without the need for an intermediary device like a mouse, users can now freely interact with the content being displayed [9].

2.6 Data Analytics

In recent years, the field of analytics has experienced rapid expansion. The process of finding informational patterns in data is called analytics. Operations research, statistics, and computer

programming are all combined in the field of analytics. The fields of data analytics, predictive analytics, and social analytics have all contributed to the expansion of the analytics field. A tool for supporting the decision-making process is data analytics. It transforms unstructured data into useful information. A tool called predictive analytics is used to make predictions about the future based on both current and past data. Companies use social media analytics to learn about and meet the needs of their customers. In the past ten years, a lot of progress and changes have been made in the ever-evolving field of information technology. In addition, the emerging trend can be concluded to have a growing impact on business and will assist businesses in better serving customers

2.7 Internet of Things(IOT)

The Internet of Things, or IoT, is a network of interconnected physical computing devices, digital and mechanical machines, animals, objects, or people with the ability to exchange data over the network without human or computer interaction. The term "thing" in the Internet of Things (IoT) refers to a large number of computing devices, including an implanted heart monitor, a biochip transponder in a farm animal, a car with a built-in sensor to notify the driver of a potentially hazardous situation, and so on. These kinds of devices can anonymously exchange data between devices over a network by collecting data through sensors [5]. When actuators and sensors are added to the Internet of Things, the technology becomes more powerful and capable of handling a variety of tasks. Building management, energy management, healthcare management, transportation management, environment management, and other areas are among the IoT's applications.

III. RECENT EVOLVING TECHNOLOGIES

It is essential to note in this paper that some technologies are still undergoing adoption due to development difficulties. Depending on user feedback, full implementation of such technologies may take some time. The following technologies are still in development and not widely used.

3.1 Quantum Computing

You might be surprised to learn that conventional computers perform rather slowly. According to 2019 information technology trends, quantum computers will be the next generation of computers. They are currently actively maturing and will significantly outgrow their ancestors. Based on the phenomena of quantum mechanics, quantum computing is a brand-new method of transmitting and processing data. Information is handled by traditional computers using binary code, or bits. The bit can only exist in one of its two fundamental states, which are zero and one. Qubits based on the superposition principle are used in the quantum computer. Additionally, the qubit has two basic states: one and zero. However, because of superposition, it is able to combine values and

simultaneously exist in all of these states [9].

Using quantum computing's parallelism, the solution can be found directly without having to check all possible system state variations. Additionally, a quantum-computing device does not require a significant amount of RAM or computational power. Imagine: A system with 100 particles can be calculated with just 100 qubits, whereas a binary system needs trillions of trillions of bits. Quantum computing applications have already been developed, and their continued development and widespread adoption are a goal for developers [9].

3.2 Block-chain Evolution

The technology known as blockchain ought to unquestionably be included on the list of tech trends for 2019, as it has been expanding rapidly over the past few months and still possesses enormous potential. Despite the fact that the majority of people only think of cryptocurrencies, block-chain technology can be successfully applied to numerous non-crypto related fields. The development of the block-chain industry's image and its separation from bitcoin and other cryptocurrencies will be the focus of the year 2019.Block-chain technology is likely to merge with IoT, machine learning, and fog computing technologies. Consequently, there will be a rise in the demand for block-chain specialists and the representation of new practical use cases [11].

3.3 Use of Drones Technology

Drones are probably mentioned in discussions of the most recent IT trends on all lists. The so-called UAV (unmanned air vehicle) or UAS (unmanned air systems) industry, which has been in existence for a few years, has blossomed into a whole industry [11]. It is expanding at an incredible rate. Farming, military surveillance, accident monitoring, and other fields all make use of autonomous aircraft. The drone industry will see an increase in investment in the coming year. Worldwide, more and more drone delivery systems will become commercial projects. In fact, NASA will finish the Unmanned Aerial System Traffic Management (UTM) system for controlling drone traffic in the sky.

IV. INFORMATION TECHNOLOGY EXPERTS WAY-FORWARD

The various trends discussed in this paper demonstrate how the rapid advancement of technology will shape the role of IT specialists in the future. However, the use of the new generation of networks is much more widespread. The Internet of Things, self-driving cars, virtual and augmented reality, robotic surgery, and drone delivery, to name a few, will all benefit from 5G's impetus.

The most recent trends in information technology that we have talked about in this paper show that

IT will see big changes and new breakthroughs in the coming years. It is anticipated that the technology will contribute to an overall increase in the growth of ICT by the Business and government news of the

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