WIE GAZETTE

WOMEN • TECHNOLOGY • INSPIRATION • EMPOWERMENT

IEEE Women in Engineering

Wie

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INDEX

THEME- INTERNET OF THINGS

The Internet of Things (IoT), are physical devices ranging in sizes from something as small as a bean to something as massive as a truck that are connected to the internet and are involved in collecting and sharing data. It is instrumental in merging the digital and the physical world through internetworking. Discover the intricacies and minutiae of Internet of Things with the April Edition of The WIE Gazette, as it talks about the incredible complexities of this technology.

GLOSSARY

1. **6LOWPAN:**
   6LoWPAN is a protocol that enables low-power IoT devices to directly connect to the internet via TCP/IP.

2. **Application Programming Interface (API):**
   A technique for speeding up connectivity between computers and their respective hardware and software platforms.

3. **Backhaul:**
   The word "backhaul" is often used in the IoT industry to describe the transmission of a signal from a distant site or network to a central location. Backhaul typically refers to a high-capacity cable, which refers to high-speed cables capable of transferring large amounts of data at high speeds.

4. **Embedded Software:**
   A device's embedded system gathers data from a sensor and transfers it to the cloud with a wifi module — in other words, you can transform your embedded device into an IoT device by merely connecting it to the Internet.

5. **Industrial IOT (IIOT):**
   The expansion and use of the internet of things (IoT) in commercial industries and technologies are referred to as IIoT. It includes industrial applications such as robotics, medical devices, and software-defined manufacturing processes.

6. **Lora Protocol (LORAWAN):**
   A long-range digital wireless communication technique to facilitate IoT and Machine to Machine communications.

7. **Beacon Technology:**
   Beacons are miniature wireless transmitters that use low-energy Bluetooth technologies to relay signals to other nearby smart devices. Simply put, they link and send data to mobile devices, allowing location-based browsing and contact more convenient and precise.

8. **Firmware-Over-The-Air:**
   This is a technology that allows users of Internet-connected computers to execute firmware updates remotely and smoothly, without the need for physical device interference.

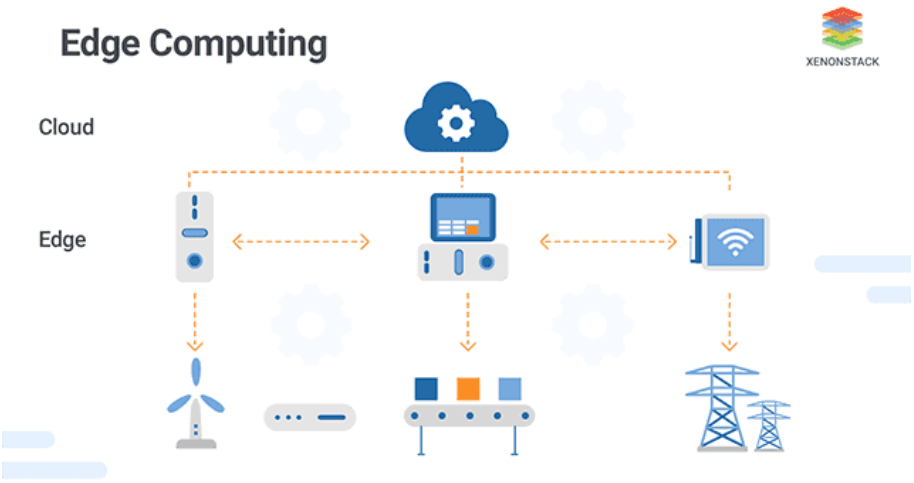
9. **NB-IOT:**
   NarrowBand-Internet-of-Things (NB-IoT) is a standards-based low power large area (LPWA) platform that has been designed to support a variety of new IoT devices and services.

10. **Global Navigation Satellite System:**
    A global navigation satellite system (GNSS) is any satellite navigation system that provides autonomous geospatial positioning, timing, and navigation, either locally or globally.

HEADLINES

The internet of things has been generating a lot of buzz as one of the most prominent technology trends of the 21st century. In a nutshell, the ability to connect everyday objects to the internet which are capable of sending and receiving streams of data is what IoT is about. From smart microwaves to self-driving cars, IoT has already made a huge impact in our day-to-day life. According to IDC, it is expected that there will be 41.6 billion connected IoT devices by 2025, so it is important that we stay in the loop.

Let's look at a few major trends in the IoT industry which are here to stay.



1. **Edge Computing:**
   Edge computing is definitely one of the key industrial IoT trends which form the backbone of IOT applications that consist of classified data, require real-time or low-latency decision making and occur in environments where cloud connectivity is either spare or unavailable. Unlike cloud- analyzed data, edge computing devices analyze data in -house which leads to zero latency. It also minimizes the cascade of potential bandwidth bottlenecks and is considered to be the most economical architectural choice for industrial implementation of IoT.

2. **Connected healthcare:**
   With the world battling the coronavirus pandemic, the healthcare industry must step up to provide connected healthcare solutions to manage and monitor illnesses. A surge is expected in smart wearables, sensors and other connected devices that will allow remote sensing of body vitals especially for the elderly. It will also be used to minimize unnecessary contact in situations where the risk of viral contamination is expected to be high. Due to its ability to continuously collect patient data, IoT drives proactive decision-making that improves clinical and operational outcomes.

IoT technology is constantly evolving and we need to be on the lookout for new trends that can change the course of this industry.

TIMELINE

The Evolution of Internet of Things

- **1800s-**Long-Distance Communication Makes Its Debut.
- **1832 –**In 1832, Baron Shillings of Russia invented the first electromagnetic telegraph.
- **1844-**Samuel Morse sent the first public telegraph letter in 1844. “What hath God wrought!” read the post.
- **1876 –**The first patent for telephones in the United States was granted to Alexander Bell.
- **1900s-**The Evolution of Connectivity.
- **1955 –** Edward O. Throp created the first portable computer for predicting roulette wheels.
- **1962 –** The Bell 103, developed by AT&T, was the first commercial modem.
- **1965 –** For the first time, two computers interacted with each other in the MIT Lincoln Lab.
- **1968 –** Theodore Paraskevakos developed the idea of machine-to-machine technology (M2M) in 1968.
- **1973 –** When working at Motorola, Martin Cooper designed the first cell phone.
- **1974-** Origin of TCP/IP.
- **1984-** The Domain Name System was adopted in 1984.
- **1989-** Tim Berners-Lee proposed the World Wide Web.
- **1990 –** John Romkey invented the first smart toaster that can be controlled remotely through the internet.
- **1991 –** In 1991, Munich created the first SIM card for wireless networks allowing devices to attach to several direct sources. Tim Berners-Lee developed the first web page. The Computer for the Twenty-First Century, written by Mark Weiser, is published.
- **1993-** The Trojan Room Coffee Pot, designed by Quentin Stafford-Fraser and Paul Jardetzky, was housed in the 'Trojan Room' of the University of Cambridge's Computer Laboratory.
- **1994-** Steve Mann develops WearCam.
- **1995-**With Amazon and Echobay(eBay), the Internet becomes commercial.
- **1998-** Google was founded.
- **1999 –** The word "Internet of Things" was coined by Kevin Ashton.
- **2000s -** The Internet of Things (IoT) Industry is expanding Rapidly.
- **2000 –** LG announced plans for a wifi-enabled refrigerator.
- **2003 –** Major corporations begin using the word "IoT" in place of "M2M."
- **2005-** The Internet of Things (IoT) reached a new stage when the UN's International Telecommunications Union (ITU) issued its first report on the topic.
- **2008 –** The Internet Protocol for Smart Objects Alliance, a non-profit organization to put together organizations of all sizes in the pursuit of potential wireless technology standards is founded which is dedicated to the discovery and implementation of new technologies in the field of IoT.
- **2008-2009-** The Internet of Things was "Born".
- **2010s-** The Internet of Things (IoT) gains popularity.
- **2011 –** The most recent version of the Internet Protocol was released in 2011. The official release of IPV6 was a watershed moment for IoT when many private corporations and financing organizations took stock of the IoT industry.
- **2013/2014 –** IoT Devices began Utilizing Sensors allowing users to monitor their home's lighting, garage doors, and thermostats all from their devices.
- **2014 –** Sigfox developed an Ultra Narrow Band Wireless data network. Dublin is designated as the first Internet of Things (IoT) city. Smart Dublin was an effort that used Internet of Things (IoT) technology to boost city functions.
- **2017 –** The Internet of Things becomes more commonly used in the military context. The United States Army Research Laboratory formed a partnership in 2017 to promote research in IoT technology in army operations. 2017 also features the Widespread Use of IoT Devices.
- **2018 –** IoT is making inroads into the pharmacy and life insurance markets. This system enables health care providers to view patient records. It has also raised the standard of portable medical equipment.

BLOG

Terri Lewis:

Internet of Things has sparked curiosity among most of us by this time. But some notable women have taken up that level of curiosity to a greater height and left a significant trail behind them. One such incredible woman is Terri Lewis, whose interests are as multidisciplinary as her work. Terri Lewis is professionally trained as an engineer, however, her perpetual quest to venture into unknown fields led her to explore the dynamics of marketing alongside developing disruptive technology which has helped her company grow by leaps and bounds.

Terri graduated in the year 1987 with a Bachelor of Science degree in Electrical Engineering following which she secured a Master of Business Administration in International Business at EM Lyon Business School. Later, she joined Caterpillar Inc. where she proactively worked for almost 32 years before establishing her start-up, IoT Peoria.

Having explored and worked diligently in eight diverse fields like product development, marketing, supply chain, software development, M&A, etc., Terri decided to pursue her illustrious career in I-Iot execution. Her key project in IoT started in 2013 wherein she devised a strategy function to execute complex tasks in Energy and Transportation vertical. The E&T vertical comprised marine, oil and gas, rail, and industrial segments. She and her team had to withstand strenuous commercial and technical hurdles but the challenging work paid off. By 2015, this function was into execution mode in a hybrid type organizational approach. This introduced a revolutionary change as to how the dealers and the company Caterpillar Inc. interacted with the customer's critical assets. In addition, it gave them tremendous power to specifically monitor and efficiently control the assets.

After brilliantly putting her technological knowledge and strategic expertise to excellent use, Terri Lewis reverently took up her work to another level. She promptly kicked off a project to explicitly define, strategize and develop an IoT solution for the Electric Power Divisions. This program typically included deploying IoT and artificial intelligence into Caterpillar's Power Generation businesses. The business grew tremendously with the innovative products like digital services created in this project are being consumed worldwide in the form of diesel and gas generators, microgrids, etc.

After heading such ground-breaking projects, Terri forayed into the start-up world with the prospect of collaborating with like-minded IoT thinkers. Her pivotal vision is to assemble such profound thinkers, find effective solutions for the concerning problems in the field of IoT. She founded IoT Peoria in the year 2017 to transform this vision into reality.

With so many feathers in her cap, she carved a niche for herself as an established digital leader in the phenomenal world of the Industrial Internet of things. For her exemplary dedication towards this thrilling field of technology, Terri was nominated as the "Women of M2M" in the year 2016 by Connected World Magazine. Furthermore, she had been listed as one of the '21 Women making an impact in Industrial IoT' in the year 2018.

Terri Lewis indubitably remains a technologist at heart and leaves no stone unturned to keep herself updated with the latest developments in the digital space. She has been keenly involved in incorporating ML, AR/VR, AI, etc. in her ongoing projects. Terri Lewis firmly believes in exploring how digital transformation invariably affects individuals. She takes pride in leveraging her extremely diverse functional experiences and passing on that unbridled passion to others. With such a youthful passion for ever-evolving technology, Terri Lewis has been instrumental in bringing significant expertise in the field of IoT.

LEARNING GUIDE

The Internet of Things is transforming our physical world into a complex and powerful system of connected devices at an unprecedented rate. One of the most interesting features of IoT devices is that they are capable of producing large amounts of data. This can be used especially for applications such as Artificial Intelligence and Learning Equipment. Most IoT devices can actually produce various types of Time Series data that are of great interest to Artificial Intelligence.

Advances in technology are making widespread IoT adoption, from small tablet-based cameras that can detect thousands of images in the body, to smart sensors that can monitor plant conditions on a farm, to active smart home devices. But what are IoT building blocks? And what are the basic technologies behind the IoT revolution?

1. **Tutorials:**
   https://data-flair.training/blogs/iot-tutorial/
   http://www.steves-internet-guide.com/internet-of-things/
   https://www.javatpoint.com/iot-internet-of-things
   https://whatis.techtarget.com/feature/IoT-basics-A-guide-for-beginners
   https://www.edureka.co/blog/iot-tutorial/

2. **Playlists:**
   https://www.youtube.com/watch?v=h0qWfVCSGQQ
   https://www.youtube.com/watch?v=b7GC4Zr74M0
   https://www.youtube.com/watch?v=Ic63-yf-zuc&list=PL3uLubnzL2Tm5PAw88N1jR9MLTJpuPEnX
   https://www.youtube.com/watch?v=LUWIFzOhkso&list=PLBV6VAQlom0n7iq_d1-uzIt3rBMyXj-kB

3. **Recommended Books:**
   Internet of Things-Principles and Paradigms, by Rajkumar Buyya and Amir Vahid Dastjerdi
   Building Blocks for IoT Analytics-Internet-of-Things Analytics by John Soldatos
   Engineering of IoT-Automation Systems by Oscar Carlson
   The Internet of Things by Samuel Greengard

4. **Certification Courses:**
   https://www.edx.org/learn/iot-internet-of-things
   https://www.coursera.org/specializations/iot
   https://www.coursera.org/learn/iiot-google-cloud-platform
   https://www.coursera.org/learn/aws-iot-developing-and-deploying-an-internet-of-things
   https://www.cognixia.com/course/internet-of-things-certification
   https://www.udemy.com/course/introduction-to-internet-of-things-iot-using-arduino/

MYTH BUSTER

1. **IoT invariably revolves around cloud connection**
   The cloud is a concept that is talked about a lot in the IoT industry. The cloud definitely has a profound position in IoT by providing cost-effective, ubiquitous infrastructure for massive data storage and management. But the cloud is not a compulsion for IoT implementation and may not be a preferred option for industrial companies given to the fact that these industrial systems have only limited security features, making them an easy target for cyber hackers when connected to the Internet.

2. **IoT is only about sensors**
   Surely it is because of the sensors in the end devices that the gadgets are able to be networked with each other. However, besides sensors, there are other aspects that play an equally important role: data analysis and processing. The IoT serves no purpose if data is simply collected via sensors and the process ends. The sensors are just the beginning of a successful IoT solution by supplying the data and the data from there must be processed, analyzed and used in a meaningful way.

3. **IoT is extremely capital intensive**
   The demand for a new wireless communication architecture often means a significant investment. However, as you start looking at technological options available today, you'll realize that developing an IoT infrastructure doesn't cost a fortune. A wireless low-power IoT sensor network can be built at a fraction of both capital and operational expenditure.

4. **IoT automates everything**
   Although this is partially true as it eliminates the repetitive process and enables machine-to-machine communication to perform a task. However, in complex procedures, there's always a need for human involvement because machines can't match human intelligence and emotions.

5. **IoT will eventually replace humans in their jobs**
   By automating manual tasks productivity will surely be enhanced, but that doesn't imply that the need for manpower will fade away. Human intelligence is the reason behind IoT implementation and no machine can be as flexible as humans themselves. It's also important to note that IoT exempts people from repetitive, monotonous tasks to focus on more rewarding, higher-value ones. Likewise, one of its ultimate goals is to create a safer and healthier work environment for employees. As such, rather than being viewed as an employment threat, IoT should be seen as a means towards future worker-centric industries.

6. **IoT violates privacy and isn't safe**
   Privacy has always been a debatable issue concerning the Internet. Most people believe that connected devices would enhance security concerns as these devices would have the capabilities to track all the data related to the users. But over the years IoT has evolved only to diminish these security concerns. The main aim of IoT is to make the lives of users efficient and deliver faster results with cognitive computing and is improving security considering every possible viewpoint – system architecture, networks, and data management.

GIZMO

In today's world, IoT devices have become human substitutes. This includes smartphones, smart watches and digitized vehicles that are rapidly becoming the norm! There are two requirements that IoT devices meet:

a. Connection to the Internet
b. Integration with inbuilt technology like sensors that support network connections,

This enables them to interact with other devices over Wi-Fi, allowing users to manage the device(s) according to their need, helping them for more direct integration of the physical world. Here are some revolutionary products:

1. Google Smart Home:

It is a versatile IoT device, a very interactive and intelligent voice assistant. Being connected to the internet, it is activated by saying "Okay, Google!". It sends and receives information from servers and your cloud services to get the most appropriate answer to your question,handling direct IoT device communication. Smart home products can be connected with it by evaluating databases to check for compatibility. The Assistant augments your cloud service to supply a new voice interface for the user's device. Media, alarms, thermostats, volume control and many more functions can be controlled by voice. More can be read about it here.

2.Amazon Dash Button:

The AWS IoT button is an Amazon Dash Button Hardware based programmable button, connected over Wi-Fi. Without writing device-specific code, the button's logic can be coded in the cloud, configuring button clicks to any function such as tracking items, calling someone, sending alarm signals, or providing feedback. The AWS IoT button can also be integrated with third party companies like Twitter. This one click of a button eliminates the time spent on apps installed on your smartphone and decreases friction in doing day to day activities. To read more, check out this link.

3.Smart Mat (Intelligent yoga mat):

This portable sensor embedded mat is responsive; recognizing alignment, balance, pressure and automatically provides real time data or 'feedback' on the user's positions. It connects to its companion SmartMat app, guiding the user by audio or visually. Thus, it tracks and quantifies the user's yoga practice. This gizmo utilises Computer Vision, a technology used by Facebook for facial recognition to detect heatmaps sent by the mat into certain poses. It comprises bluetooth piezoresistive sensors layered in between PVC coatings. Read more here.

4.Nest Thermostat:

Inefficient home heating systems lead to wastage of energy. At setup, this smart device takes in data like location information from the user, where the inbuilt sensors then collects data based on motion, humidity and temperature. It is a self-taught device, understanding patterns and eventually figuring out what temperature the user's environment should be set to. This is because of the algorithms in the software. The climate can also be controlled remotely using home automation via smartphone, tablet, etc. It brings together Big Data and IoT. Click here to know more!

SUMMARY

Unveiling the era of IoT:

The Internet of Things (IoT) refers to the millions of physical devices around the world that are connected to the internet, collecting and sharing data. Although the Internet of Things may be a hot topic in the industry, it's not a novel concept. The term “Internet of Things” was coined by Kevin Ashton in 1999 during his work at Procter & Gamble. Back then, the idea was often called “embedded internet” or “pervasive computing”.

Internet of Things (IoT) is a sprawling set of technologies and use cases that have no clear understanding. One workable view of IoT is the internetworking of physical objects with sensors, software, and other technologies. These sensors can use various local area connections such as Wi-Fi, RFID, NFC, Bluetooth, and Zigbee. Sensors can also have a vast area of connectivity such as GSM, GPRS, 5G, and LTE. These devices can convert information from the real world into digital data that provides increased visibility into how your users interact with your products, services, or applications.

Almost every physical object can be transformed into an IoT device when connected to the internet to control or communicate information. A lightbulb that can be switched on using a smartphone app is an IoT device, as is a motion sensor or a smart thermostat in your office or a connected streetlight. An IoT device could be as small as a child's toy or as serious as a driverless car. Some larger objects might be filled with smaller IoT components, such as a jet engine that's filled with thousands of sensors collecting and transmitting data back to make sure it is operating efficiently. On an even bigger scale, smart city projects are filling entire regions with sensors to help us understand and control the environment.

Key Concepts of IoT:

1. **Hardware:**

The heart of IoT is billions of connected devices with attached sensors and actuators that control the physical environment. In addition to network connectivity to transmit the data they collect, these devices require additional processing and storage capabilities, provided by a micro-controller or an integrated circuit.

2. **Networking:**

Connectivity allows the users to communicate with other devices that are running in the cloud. Cloud infrastructure is useful for data storage, processing, analysis, and implementation of business logic. Also, Network design and management are crucial skills within IoT. It is due to the sheer volume of connected devices and the vast impact of network design decisions.

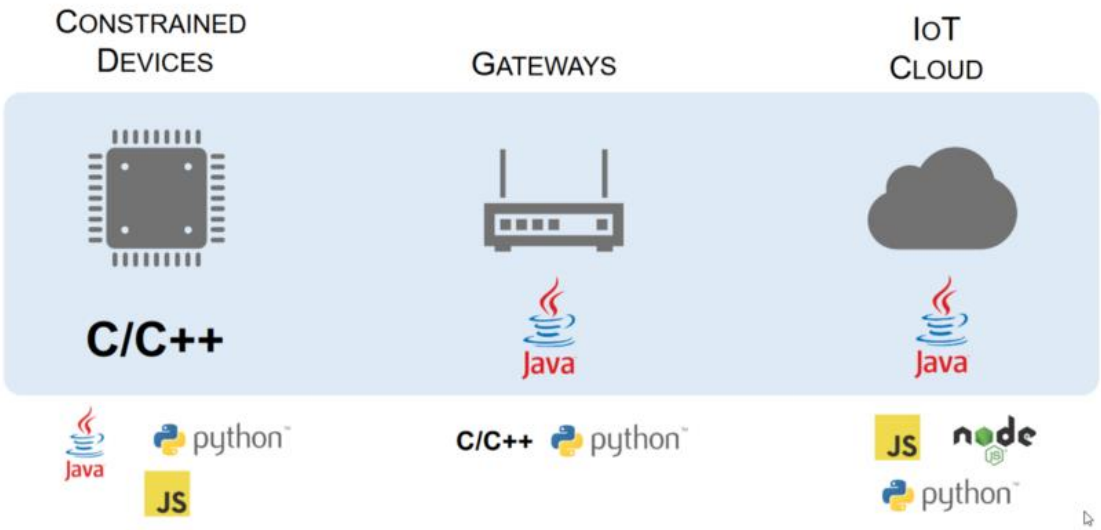
3. **Embedded programming**:

IoT devices are programmed using Arduino or single-board-computers like Raspberry Pi, with custom printed circuit boards (PCBs). Prototyping with these platforms requires circuit design skills and knowledge of microcontroller programming. Understanding hardware communication protocols like serial, I2C, or SPI is also essential. The embedded programs are developed using C++ or C. However, Python and JavaScript are becoming more popular for prototyping IoT devices.

SUMMARY

4. Security:
Cybersecurity is of paramount importance in any IoT discussion. These devices are vulnerable to external attacks. With so much at stake, security engineering skills, like ethical hacking, encryption to ensure data integrity, threat assessment, securing network architectures and applications, and event monitoring move to the foreground of the IoT development projects.

5. Artificial Intelligence:
Artificial Intelligence has become an intrinsic part of IoT networks due to the proliferation of data and the application of better, tailored algorithms. Cognitive computing techniques drawn from data mining, modeling, statistics, and machine learning is also pivotal to IoT understanding. These techniques applied to sensor data streams for predictive analysis helps in making easy decisions.



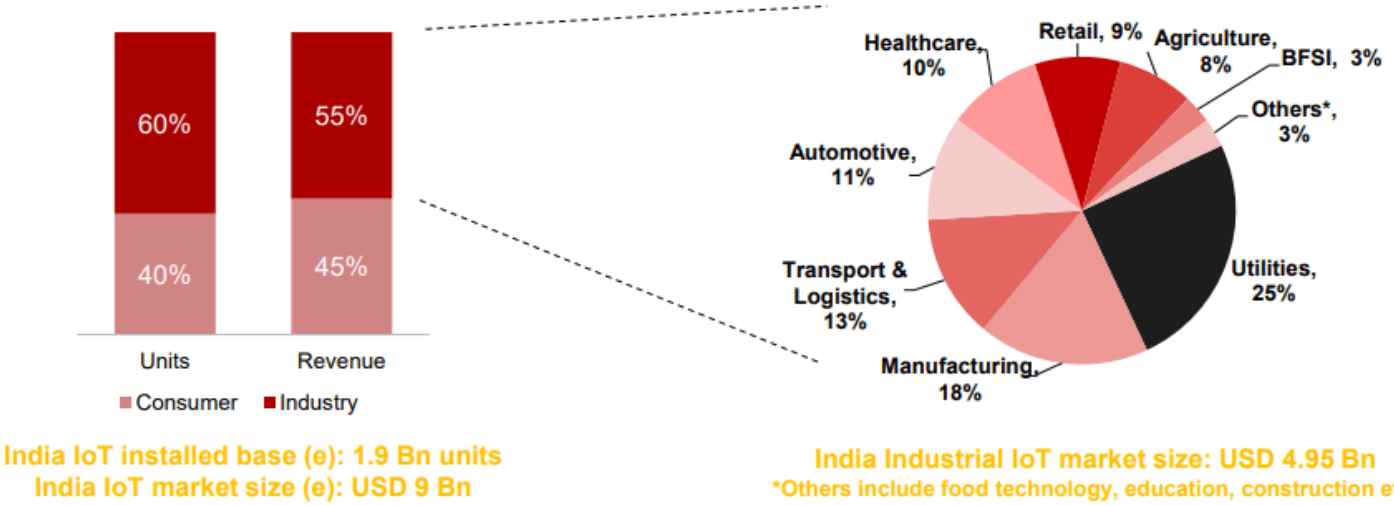
Revolution in Healthcare:

The (IoT) Internet of things has become synonymous with technology embedded in the healthcare industry. Experts estimate that the IoT will consist of about 35 billion objects by 2022. As the amount of connected medical devices increases, the power of IoT grows with the scope of its other applications, be it remote patient monitoring of people with chronic conditions or tracking patient medication orders. It has enabled a touchscreen interface for the users to input data for processing and analysis. As any user inputs the data into the system, it instantaneously correlates and matches the symptoms existing on the file, which again matches the input. This system responds to inputs and generates a particular prescription for a disease.
For instance, the **electrocardiogram** is a widely used diagnostic tool to assess the muscular and electrical functions of the heart. It can detect a range of cardiac pathologies like infarction, myocardial ischemia, palpitations, and syncope. IoT sketches an exciting world from a single sensor to the global network of orchestrated devices.

SUMMARY

Conclusion:

Thus, IoT has the potential to drastically increase the availability of information and transform organizations around the globe. It will not only enable billions of devices simultaneously but also automate diverse business processes. IoT platforms evolve to overcome these challenges through data analytics and AI. Service providers will edge furthermore into web-scale markets – opening entire new streams of revenue.



India IoT installed base (e): 1.9 Bn units
India IoT market size (e): USD 9 Bn

India Industrial IoT market size: USD 4.95 Bn
*Others include food technology, education, construction etc.

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- https://www.intechopen.com/books/internet-of-things-iot-for-automated-and-smart-applications/introductory-chapter-internet-of-things-iot-importance-and-its-applications
- https://medium.com/iotforall/what-is-iot-f825c7304368

FAQs

Q1. What are the main components of an IoT System?

1. Sensors/Devices: They help in gathering data of varying complexity from the surrounding environment.
2. Connectivity: The collected data is sent to a cloud infrastructure. The sensors are connected to the cloud through various networks(mediums), such as cellular networks, satellite networks, Wi-Fi, Bluetooth, wide-area networks (WAN), low-power wide-area network, and many more.
3. Data Processing: The collected data is then processed and analyzed by various software.
4. User Interface: The user sometimes requires an interface that keeps a check on their IoT system. This information is made available to the user through messages, emails, or by triggering alarms.

Q2. What are some IoT standards and protocols?

IoT devices use a wide variety of standards and protocols. Zigbee is a wireless protocol. MQTT (message queuing telemetry transport) publishes/subscribes messaging protocol and Constrained Application Protocol (CoAP) computes constrained devices that are low power operate in IoT.

Q3 What are the most commonly used Programming Languages for IoT Projects.

The most commonly used programming languages are Java, C, Javascript, Python, C++, Swift, and PHP.

Q4. What is the Bluegiga APX4 protocol?

The Bluegiga APX4 is a solution that supports both the WiFI and Bluetooth Low Energy platforms and is powered by a 450MHz ARM9 processor.

Q.5 What is Bluetooth Low Energy?

Bluetooth Low Energy (BLE) is a low-power wireless communication technology that allows smart devices to communicate over short distances. Many of the devices we use in our day-to-day life like smartphones, smartwatches, fitness trackers, wireless headphones, and computers use BLE to form a connection.

Q6. What are the most common IoT applications?

Some common IoT applications around us are: Activity Trackers**,** Smart Outlets**,** Smart Thermostats**,** Parking Sensors, Voice Controllers, AR glasses, security systems, medical sensors etc.

Q7. What is GPIO?

GPIO stands for General Purpose Input/Output. It's a standard interface used to connect microcontrollers to other electronic devices. For example, it is used with sensors, diodes, displays, etc.

Q8. Mention suitable databases and types of sensors used in IoT?

The commonly used databases are: influx DB**,** Apache Cassandra**,** RethinkDB, MongoDB**,** Sqlite etc. and the common sensor types used include the proximity sensors, pressure sensors, gas sensors, motion detector sensors and IR sensors.

Q9. How does IoT work?

The IoT ecosystem uses embedded systems to collect, send and analyze data that is received from their environments. The embedded systems include different processors and sensors. Most of the work is done without human intervention.

Q10. What is the difference between a wireless sensor network (WSN) and the Internet of Things (IoT) network?

In an IoT device, all sensors directly transmit data to the cloud, where it is processed and thus can be interpreted on a front-end interface. However, in a WSN (wireless sensor network), there is no direct connection to the cloud. Instead, various sensors are connected to a router or central node. We can fetch the data from the router or central node when required. A WSN can be used in an IoT system by communicating with its router to collect data.

Q11. What does the future of IoT look like?

IoT in the future would offer limitless possibilities. There is bound to be an increased focus on security and privacy, a surge in the IoT ecosystem in the healthcare sector, IoT based work from home solutions and an increase in the number of smart cities.

SPOTLIGHT

Domain: Management

The entire professional universe, whatever be the field of concern, requires synchronous cooperation between all the elements involved that can only be brought by the facilitation of synergic interaction through effective and efficient management. In fact, every single entity requires some form of governance to proceed with its functioning. Therefore, it goes without a doubt, that the art of proper management is the key to execute anything and everything immaculately. Given the extensive responsibilities, including the need to bring about a balance between all the constituents involved, the people in the management part of an organization act as the infrastructural pillars to ensure that integrity is maintained in all their undertakings. In the IEEE-WIE chapter of VIT, the Management Domain plays that role. In this edition of the WIE Gazette, I was given the incredible experience of being able to interact with the one and only, **Shreya Rastogi, who is the phenomenal head of the Management domain in the IEEE-WIE Chapter of VIT,** and an extremely lovely and highly accomplished person in general. In this interview, she gives us an informative and enthralling glimpse into the fascinating world of the management domain.

everyone's effort in a single direction. We do have monthly meetings to discuss the progress of the ongoing task and plan out upcoming events.

Q2. What are some of the functions of the WIE chapter that the management domain looks after?

Shreya: The management domain is responsible for bringing in new event ideas, approaching sponsors for the event, thinking about publicizing strategies, and planning out the event efficiently.

Q3. Could you give me an illustration of what goes into managing an event of the chapter?

Shreya: Firstly, I need to fill up a D. S. W. form for the event to get approved. After the event gets approved, we go about publicizing the poster so as to gain maximum participants. Then management domain forms a WhatsApp group by adding every participant so we can keep them updated about the timings and to facilitate the provision of the meet link. And finally, after the event one member from the domain makes the event report.

Q4. How do the skills you acquire as part of the management domain aid in professional functionalities?

Shreya: By being in the management domain we learn a lot about teamwork and its significance. Everyone's effort is equally important. We learn to be efficient because one mistake in filling the D. S. W. form or talking to the sponsor can lead to the cancellation of the event or monetary funding respectively. We also learn to be cost-effective because we might not get the required funding every time, and through that, we understand how to work around this factor without affecting the event.

Q5. What is some advice you'd like to share with others from your experience as the Management Head?

Shreya: In the earlier months of my tenure as the management head I really expected a lot from my domain members which wasn’t exactly the right ideology to have since they were quite new to this world as well. I really learned how to be patient and I try to give more time for deadlines of assigned tasks, keeping in mind the pandemic situation because we need to be considerate of others.

STAR PERFORMERS

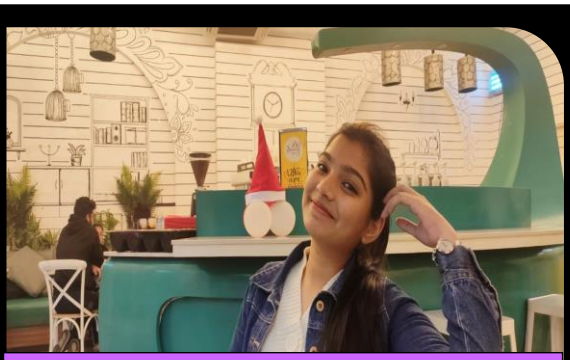
1. **Design:**
   Gurudaya Varshini is awarded the member of the month for her ingineous and remarkable contribution to the chapter. She has designed some beautiful posters for our social media handles and other important events. Her passion and hardwork has paid off and we hope to see a lot more from her.
   Congratulations, Varshini!

2. **Editorial:**
   Akshata Bhat is a diligent girl, with an inquisitive mind. Her succinct and eloquent writing has helped her achieve the member of the month for the editorial domain. She has written several blogs for the chapter and willingly volunteers to complete any task given to her.
   Well done, Akshata!

3. **Management:**
   The true measure of the value of any manager is performance. **Preksha Mathur** has performed incredibly well and is being honoured the member of the month for the management domain. She is responsible, intuitive and committed towards her work. Kudos to you, Preksha!

4. **Technical:**
   Our tech savvy for the month is **Ananya Ghosh**. She has actively participated in all the night sessions and events conducted by the chapter. Her valuable inputs have helped carry out many events successfully.
   Congratulations, Ananya!

EDITORS



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