

VOICE

Vision of Ingenious Computing Enthusiasts



Internet of Things



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Network of connected things:

The Internet of Things (IoT) is a term that describes the increasingly sophisticated ecosystems of online, connected devices that surround us. The concept originated from the fact that the first iteration of the internet was simply a network of connected computers. As the internet evolved, so did the types of devices that could connect to it. From simple scanners, barcode readers, and industrial machinery to complex medical equipment and self-driving cars. The range of what can be connected to the internet has expanded exponentially. Today, just about any device we use in our daily lives can be online and connected, hence the internet of "things." IoT is a trend that is driving the ongoing evolution of technology in new and amazing ways. Self-driving cars, autonomous manufacturing robots, and remote medical devices that can perform surgeries without a physical presence are all possible due to these networks of connected things. In fact, Ericsson predicts that by 2025, there will be over 50 billion devices connected to the internet globally.

Current trends in IOT:

The Dominance of 5G:

5G was introduced as a power only for a specific audience. However, this is now changing in 2022, that the technology is becoming more generic and accessible to a wider, more generic audience rather than a targeted one. This will be a trend in the upcoming years as well and this will revolutionize the way we interact with IoT devices.

Edge IoT:

Edge computing and the IoT go hand-in-hand. Put simply; it means building devices with on-board analytical capabilities that are as close as possible to the source of the data that's being analyzed. This really only makes sense in the context of certain applications like smart sensors. For example, a basic sensor like a motion detector or a temperature sensor can be placed directly at the source of the data and analyze it locally, instead of sending raw data to the cloud for processing. This is particularly useful for low-power, low-bandwidth sensors like essentially "dumb" sensors, such as basic cameras or microphones, and sent to the cloud to be analyzed. Edge computing allows for more efficient data processing and reduces latency, making it ideal for real-time monitoring and control applications.

Smart Security:

We all have heard this multiple times that there will be a time when consumers will be able to hold IoT-based security systems in their hands. This is already a reality, as several companies have developed and released consumer-grade IoT doorbells. One notable example is the Ring Video Doorbell, which has been in the market since 2016. Other companies like Arlo, Nest, and August have also released similar products. These doorbells allow users to receive video feeds and audio recordings of visitors to their home via their smartphones or tablets. They also have built-in motion detection and can trigger notifications when someone approaches the door. While these devices are still relatively expensive, they offer a convenient and secure way for homeowners to monitor their property from anywhere.

IoT in Business and Industry

Sometimes referred to as the "industrial internet," the IoT has huge implications for the way we manufacture and distribute goods. In the manufacturing industry, IoT can be used to track the location and status of raw materials, monitor production processes, and optimize supply chain management. This can lead to significant cost savings and improved efficiency. In the logistics industry, IoT can be used to track shipping containers, monitor delivery routes, and automate delivery processes. This can help companies to deliver packages faster and more accurately. Additionally, IoT can be used to improve customer service by providing real-time updates on delivery status and offering personalized recommendations based on purchase history. Overall, the integration of IoT into business operations has the potential to transform the way we do business and create new opportunities for growth and innovation.

Internet of Things is going to become a disruptive technology; it is going to make a big difference in system design and implementation. The key challenges to implement IOT effectively are low power embedded system and data analytics. Sensing the real life data, in real time is a big challenge.

About Author



Prof. (Dr) Udaybhanu Singh Chandrawat,
Professor and Head ECE Department,

connected devices. The slightly odd name refers to what grew, phones, office equipment like printers and our homes, offices, factories, or simply wear on our being digitization and datafication of society in many what let doctors diagnose patients and even carry out 3, there will be around 32 billion of these devices

this year we saw that 5G is now being targeted to a s innovation will surely stay for a long time.

tics capabilities, so the computing is carried out as ext of cloud computing, where data is collected by . Edge devices use smart sensors such as cameras

sed smart devices and it is now possible to say that some appliances such as security cameras and video

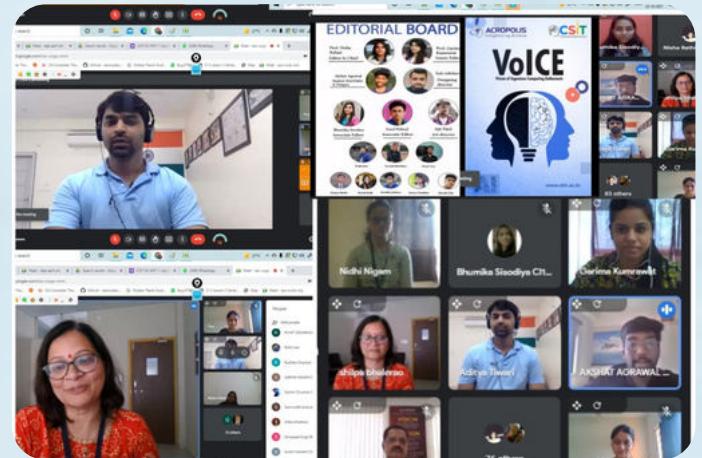
ture goods, provide services, sell to customers and try of robotics and IoT infrastructure “as-a-service”

management and security. Emerging new fields to transferring it on internet and then to handle data in

CSIT Departmental Magazine “Voice” Inauguration

Mr. Ajay Singh Chouhan
(Ninja Agile Coach & Program Manager)

October 23, 2021



CSIT Department Inaugration

Mr. Manish Santlani
Program Manager
Mr. Mustafa Hussain
Program Manager and Agile Coach

October 29 2021



Tcs Visit

Mr. Gaurav Ghelani
(Academic Relationship
Manager)

March 11 2022



Tcs Campus Visit

October 20th 2022





"TCS Placement Orientation Session"

Mr. Gaurav Ghelani
Academic Relationship Manager-India
West & Central, TCS,
Ms Purvi Chouhan
Campus Recruiter at TCS.

June 20th 2022

An introductory meeting of CSIT DQAC

Ms. Taru Mittal,
Head, TCS's Corporate IT Agile

July 30th, 2022



Departmental Visit

Mr. Gaurav Ghelani, Regional Head TCS
Mr. Amitabh Tewari-Center Head TCS Indore
Mr. Akshay Prasad, Recruitment Branch Head, TCS India West & Central

September 8th-9th 2022



Agile Based

DAY - 1

Introduction to Agile



**Ms. Amita
Bhusavalkar**



**Ms. Ruchi
Bobade**



DAY - 3

Backlog Management



**Ms. Ratika
Maheshwari**



**Mr. Govindraj
Tungenwar**

**Mr. Ajay
Mr. Asl**

Credit Course

Y - 4



Singh Chouhan
hutosh Mehta

DAY - 2

Design Thinking



**Ms. Arun Varsha
Karunakaran**



**Ms. B
Priyadarshini**

DAY - 5

**Agile Anti-Patterns
& Agile Tools**



**Mr. Ankush
Bhatia**



**Ms. Snehadhara
Sahoo**



**Ms. Vasanti
Jahagirdar**

Internet of Things (IoT) Towards 5G Wireless Systems

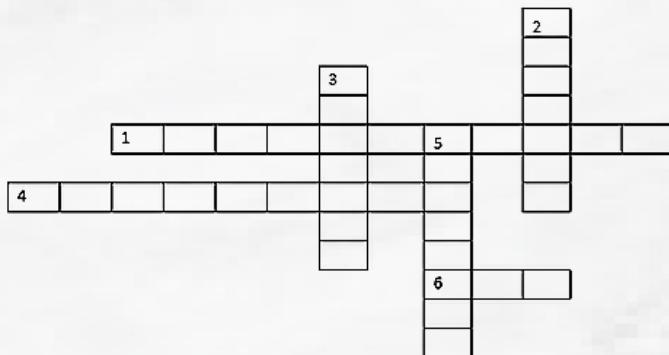
-DIVYA CHOUBEY
CI1 II YEAR

Recently, wireless technologies have been growing actively all around the world. In the context of wireless technology, fifth-generation (5G) technology has become a most challenging and interesting topic in wireless research. This article provides an overview of the Internet of Things (IoT) in 5G wireless systems. IoT in the 5G system will be a game changer in the future generation. It will open a door for new wireless architecture and smart devices. 5G wireless technologies in internet of things (IoT) are expected to use the unlicensed or unused spectrum band and it can only be easily accessed through the low-power wide-area networks (LPWANs), such as sigFox, LoRa, WiFi, ZigBee, and NB-IoT. Narrowband IoT (NB-IoT) is used in three modes, standalone, in-band, and guard band, with their respective application.

Today, there are millions of mobile users with an unusual growth rate of around 25%, and the number is expected to reach 80 billion by 2030. 5G NR are featured technologies in enhanced mobile broadband (eMBB), enhanced machine-type communication (eMTC), critical communication (URLLC). These technologies will enable machine-to-machine (M2M), device-to-device (D2D), and Internet of Vehicles (IoV). Such a communication system must make sure that it is low cost, size, weight and power (CSWAP) enabled. To design and deploy 5G IoT, the concept of 5G requirements and its feasible technologies should be clearly investigated. The key motivation for developing IoT over 5G cellular networks is predicted, and a massive number of devices are expected to be deployed, which requires significant data rates



Think and Solve !



Across ➤

1. The term 'Internet of Things was coined by
4. P in PaaS stands for
6. Global network connecting any smart object

Down ↓

2. First IoT device
3. 3'c of IoT-Connect, Communicate and
5. IoT devices are naturally vulnerable to _____ threats.

-GRESEY PATIDAR
CI1 II YEAR

CAREER in IoT

-ROHIT DESHMUKH
CI3 III YEAR

IoT is open for CS and EC fields. The scope of CS is about 40% and primarily focuses on Analytics, Big Data, Cloud infrastructure etc . IoT is not rocket science but a combination of existing technologies driven towards the goal of bringing connectivity to the things around you in order to acquire data and have control over them.

DATA SCIENTIST

Who can help in analysing the volume of data streams inflowing to the cloud using in-memory computing or batch processing to convert into meaningful dataset.

DESIGNER

CAD Designer who can design an IoT consumer device such as a Wearable.

MATERIAL SPECIALIST

Need to have an understanding of material to be used which can embed a sensor within its key for material selection.



DATA VISUALIZATION EXPERT

Who will be able to provide a visual feel of the data as the final outcome to make business insight.

NETWORK ENGINEER

Who can decide and help establish a Fog Computing network or choose the right gateway, etc.

EMBEDDED ENGINEER

Who can program the electronic component which is part of the IoT Device.

IOT NEWS HEADLINES



IT DIDN'T ARRIVE YET !

Hmm...u might be thinking what am I talking about
My thought train..xD("Ps: it's active 24*7 XD")

I was just sitting and dawdling for my thought train to arrive
And it was just ready with the new pile for me to dive
"Listen to your heart" - the trendy phrase, sounds great
yet far away from reality & as blurred as haze
The ones with hauls of expectations and trust have a big plight :(
They should stay away from these proverbs for their beloved's delight

Judgemental society manipulating - do this & don't do that,
Resulting in personality with indeed more filters than Snapchat
, With time I adapted to the rules and regulations
But my heart - the quora kaagaz again started computation
Are these values and beliefs indeed needed?
Who put that limits which can never be exceeded..?
Is it necessary to follow the predefined good and bad
Jeene ke hai 4 din na jane kab ho jae dead

Then strikes me a subtle reminder, don't argue ahmm...
you are moving with the trust and expectations shade
Concluding.....live with the knot of values engrained
Logic and Questioning...? Somethings better remain unexplained :)

-NEHA SHUKLA
CI-2 II YEAR

कोविड :- जीवन बदलने वाली महामारी

जाने कैसी हम पर ये बला आयी है ,
ऐसा लगता है जैसे ऊपर से हम पर कोई सजा आयी है ॥

मासूम परिंदों को कैद में कैसा लगता है ये बताया है,
उन बेज़ुबानों के दर्द का एहसास दिलाया है ॥

हम दौलत के लालच मे इतने मशगूल हो गए थे,
न जाने कैसे अपनों से ही दूर हो गए थे ॥

शायद ये बला नहीं तरीका है खुदा का अपनों से मिलाने का ,
सबको मौका दिया है उसने अपनों के साथ फिर से मुस्कुराने का ॥

-BURHANUDDIN SAHIL
CI-1 II YEAR

INEXPLICABLE INTERNET

Information overload
Software downloads via illegal copies
Maps showing the roads
also tour various countries.
Chuck the letter, e-mail pops up
get gossip of celebrity link ups.
Read horoscope, book reviews
trade shares or catch up on daily news.
Choose flowers, send them across continents
buy things at ebay with easy payment.
Share thoughts, stories, poems and more
vent out anger or just browse on when bore.
Find love without sharing a kiss
live in anonymity bliss.
Talk to someone over messenger
marry your favourite star or learn to cook sizzler.
All this and more is just a click away
Wired World (internet) is alluring and on display.
Here you can reach for the sky or dream a dream
But you can't see if something is true or just another scheme.

-VIKAS JAIN
CI-3 III YEAR

PAINTING & SKETCHES



SOURABH SHARMA

CI-2 II YEAR



SIDDHARTH JOSHI

CI-2 II YEAR



The Internet of Things (IoT) is a new paradigm that has changed the traditional way of living into a high-tech lifestyle. Smart cities, smart homes, pollution control, energy saving, smart transportation, and smart industries are such transformations due to IoT.

The Internet of Things can be used in many different aspects of life, in both the private and public sectors. *Thanks to IoT*, people can track things like lost pets, their house's security systems, or appliance maintenance schedules.

Consumers can use the IoT to help them make restaurant reservations, monitor their exercise progress and overall health, and receive coupons for a store only by walking by the business in question. Businesses can use IoT to monitor supply chains, track customers' spending habits as well collect their feedback, monitor and maintain inventory levels, and engage in predictive maintenance of their machines and devices.

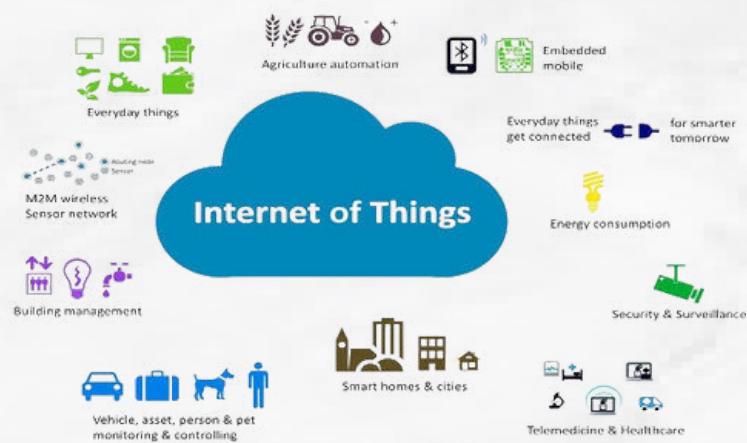
Blockchain, which is being increasingly used as a more efficient and secure method of transaction and data processing, is a natural beneficiary of IoT technology. We can expect to see IoT and Blockchain coming together more often in the future.

AGRICULTURE AND INDUSTRY AUTOMATION

The world's growing population is estimated to reach approximately 10 billion by 2050. Agriculture plays an important role in our lives. To feed such a massive population, we need to advance the current agricultural approaches. Therefore, there is a need to combine agriculture with technology so that production can be improved efficiently. With the advancement of IoT, smart devices and sensors make it easier to control the climate inside the chamber and monitor the process which results in energy saving and improved production.

SMART CITY, TRANSPORT & VEHICLES

IoT is transforming the traditional civil structure of society into a high-tech structure with the concept of a smart city, smart home and smart vehicles and transport. Rapid improvements are being done with the help of supporting technologies such as machine learning, and natural language processing to understand the need and use of technology at home. Various technologies such as cloud server technology, and wireless sensor networks must be used with IoT servers to provide an efficient smart city.



EMERGING ENVIRONMENTAL & HEALTH-CARE

IoT is completely devoted to providing emerging public and financial benefits and development to society and people. This includes a wide range of public facilities i.e. economic development, water quality maintenance, well-being, industrialization etc. Overall, IoT is working hard to accomplish the social, health and economic goals of the United Nations advancement step

OPPORTUNITIES IN IOT

-AACHAL MANDLOI

CI-1 III YEAR

The emerging era of technology has transformed our life and made it more easier , faster , better and interestingly more fun. Over the past years IoT has become the most important technologies of the 21st century. Smart cities , smart homes, smart transportation are only possible due to IoT. IoT has provided various solutions to the issues and challenges that we face in our life. IoT is becoming the most important aspect of our life and also the fast booming sector nowadays. So, Why not to choose the career in such an interesting field ??

As, IoT is changing every day and will definitely dominate the world in future therefore the future in IoT is very bright, So transforming your career to IoT cannot be a bad idea. For sure it will bring you from the bottom and take you to the heights. With an increasing use of IoT in various domains like business, artificial intelligence and many more the IoT developers have predicted that in coming time it will get more popular and will be in high demand and there will be multiple jobs for IoT developers. IoT is not only a single career domain instead it provides flexible career options and various choices to choose upon. You can become Data Scientist , Networking expert , Risk identifier , Software engineer. Companies are looking for skilled IoT experts to be part of their tech team to address several issues in terms of operations and performances. According to the research the average salary for IoT professional in India is 23,5 lakh per annum. A recent NASSCOM report also said that 96000 fresh IT engineers will be hired by top five Indian IT firms this year and the skills that they are

looking for is the areas like Internet of Things , Cloud computing and Artificial Intelligence. Making career in IoT is not only about just having programming skills it is a field that aspects the person having understanding of how hardware and softwares are interfaced. One must be strong in fundamentals with sound knowledge of different IoT services and IoT protocols.

Lastly , it can be said that IoT s a promising field that can lead you on top of industry and it will be a right choice if you wish to make career in such an emerging and innovative field where you will be able to work closely with evolving technology.



Department



**Intellectual
Property Rights.**

Prof. Sachin Mittal



Cyber Security - “Art of hacking”

Mr. Shubham Malviya

Tectum Technologies Pvt. Ltd.



**Lean development &
startups**

Mr. Pratik Gupta & Mr. Siddharth Natesan from Engineer Babu



08-01-2021



25-3-2021

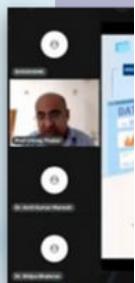


17-04-2021

27-12-2021

**The drawing / painting
competition**

Shri D. C. Sahu(Jt. Director, MSME DI Indore) and Ms. Anugya Handoo (Sr. Statistical officer, MSME DI



Dr.
Prof
Eng
,Raj

Student Activities

Building Successful career in cyber security

Ms. Suma R[Ec-Council Authorized Trainee]

08-06-2021

Entrepreneurship – Possible path to career fulfillment

Ms. Anugya Handoo[Sr. Statistical Officer at MSME- DI, Indore, Ministry of MSME]

31-8-2021

Processing Language Tool, Job Ready Resume Building

Ms. Suma R[Ec-Council Authorized Trainee]

4-10-2021

20-11-2021
Problem Solving and Ideation

Chirag S Thakkar
Professor & Head Govt.
Engineering College
Kot Gujarat



11-11-2021
Living a Healthier Lifestyle

Dr. Bharat Rawat
Associate Director
cardiology
and a Lifestyle guide



27-11-2021
Minor Project Exhibition of III year

Dr. Shilpa Bhalerao and
Coordinators
of III year



Department Activities



GEEK-A-THON
under the aegis of the GFG Students Chapter,
CSIT in collaboration with Institution's Innovation
Council (IIC)



RPA exhibition of projects

22 - 6- 2022

8 - 4 - 2022

29 - 7 - 2022

Cyber Security Career Pathway
Speaker: Mr Talha Jawad,
Manager,EC-Council,Academia





Training on Data Analysis using
MS-Excel for MBA First Year Students

5 - 8 - 2022

16 - 9 - 2022



An Expert talk on
"Trends in Computer Network"
by - Mr. Navanit Choudhury



Engineer's Day Celebration-CSIT Dept

ACRO BOT



ATHON 2022



IoT in AGRICULTURE

DISHANSH TIWARI
ANISHA RATHORE
CI III YEAR

The Internet of Things, or IoT, is the collective term for the billions of physical objects that are now linked to the internet and actively collecting and exchanging data.

- Smart farming based on IoT technologies enables growers and farmers to reduce waste and enhance productivity.
- IoT technologies for agriculture include customised machinery, wireless connectivity, software, and IT services.
- IoT smart farming solutions are a system designed for automating the irrigation system and monitoring the agricultural field with the aid of sensors (light, humidity, temperature, soil moisture, crop health, etc.). Farmers may check on the state of their fields from anywhere.

These are the key areas where the Internet of Things can transform agriculture

Information gathered by sensors in smart agriculture:

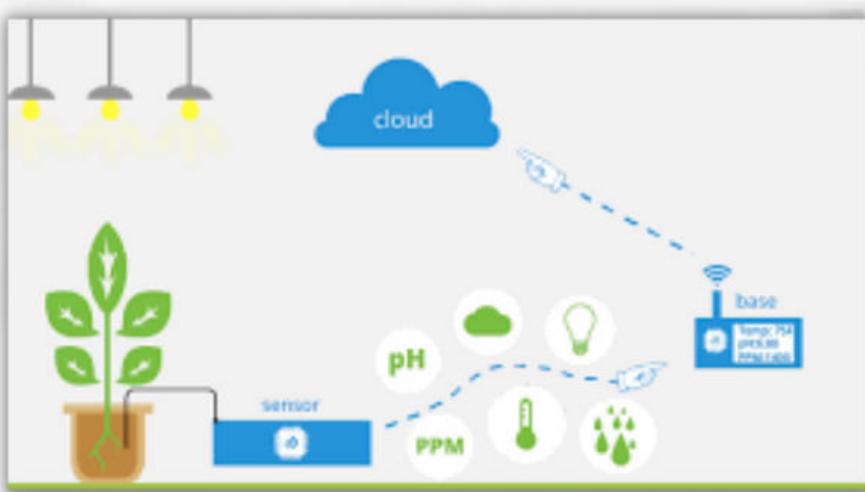
In this approach of farm management, a key component are sensors, control systems, robotics, autonomous vehicles, automated hardware, variable rate technology, motion detectors, button camera, and wearable devices. This data can be used to track the state of the business in general as well as staff performance, equipment efficiency.

Smart Greenhouses:

An IoT-powered smart greenhouse can intelligently monitor and regulate the climate without the need for human involvement.

Livestock tracking and geofencing :

Wireless IoT applications can be used by farmers to gather information about the whereabouts, condition, and health of their cattle. This knowledge lowers labour expenses and aids in the prevention of sickness.



"Farmers are beginning to understand how the IoT may drive up agricultural production while also being cost-effective."

Word Search

ANISHA RATHORE

CI-1 II YEAR



Think and Search

S	I	N	E	T	W	O	R	K	I	N	G	R	W	G	W	S	U	R	I	V	S	V	J
Z	I	N	B	D	R	C	P	6	E	R	A	W	Y	P	S	S	U	S	Z	E	T	B	C
B	N	K	F	M	I	H	W	S	G	N	G	F	H	W	V	N	E	H	F	G	C	F	H
A	O	P	A	O	O	H	B	M	S	F	Y	N	E	S	A	P	H	C	I	I	I	F	S
E	Z	S	P	N	R	D	A	O	K	C	W	R	K	U	M	G	K	H	U	G	W	Z	D
C	K	T	E	W	M	M	M	T	A	H	N	T	T	F	R	B	M	U	R	H	B	X	
E	E	B	G	I	Z	E	A	V	A	A	X	H	U	E	G	T	O	R	P	M	I	K	K
A	R	T	R	N	W	W	I	T	J	D	O	L	6	W	V	V	E	W	D	R	T	T	L
G	D	6	Y	A	H	R	E	O	I	R	R	M	6	L	H	S	I	U	J	R	S	6	Y
K	M	X	R	A	P	K	R	Y	I	O	G	N	O	I	T	A	T	I	O	L	P	X	E
O	A	E	C	A	E	T	A	S	T	K	N	Y	B	G	D	E	D	G	F	Y	C	C	X
O	M	M	T	U	L	W	E	G	T	B	W	F	N	W	T	H	C	R	W	Y	S	D	J
B	E	A	A	T	E	D	N	H	A	D	R	I	A	L	E	C	A	N	B	P	H	A	M
E	D	O	W	T	E	I	W	V	S	K	T	R	D	U	N	F	Y	E	E	A	B	A	C
M	T	E	A	6	H	L	I	U	I	U	E	D	R	T	R	S	R	L	C	F	L	Y	F
O	R	G	M	S	H	N	E	F	P	O	P	S	R	U	E	A	A	K	H	W	F	K	K
R	V	M	I	I	F	P	O	M	J	V	I	O	L	A	T	E	E	E	A	M	W	O	V
H	A	H	X	O	R	I	O	X	A	U	M	E	6	T	N	R	Y	R	T	Z	A	Y	G
C	P	T	O	X	Z	C	N	T	N	T	D	J	A	A	I	Y	E	F	O	F	V	C	H
H	Z	R	Y	W	D	K	S	E	R	V	I	C	E	S	R	C	D	I	B	J	V	X	S
W	R	T	V	U	O	H	X	K	F	E	K	C	P	A	S	S	W	O	R	D	U	U	H
S	U	P	O	C	O	D	I	N	G	W	F	K	S	N	F	I	W	N	Z	R	S	L	R
N	A	L	C	D	G	Z	A	P	Y	D	N	A	P	W	O	L	6	P	G	E	J	G	Z
E	C	G	E	C	O	M	P	U	T	E	I	O	Z	T	C	I	H	R	C	W	U	C	

- Networking
- Data hide
- Cyber attack
- Data privacy
- Exploitation
- Unauthorised
- Information
- Hacker
- Trojan
- Crime
- Phone,ICT
- Worms
- Info,Scam
- Chromebook
- Computer
- Internet
- Password
- Phishing
- Security
- Services
- Figures
- Malware
- Offence
- Spyware
- Violate
- Adware
- Coding

Programming languages: Real or Fake?



Cobra Pascal Ada Ruby RattleSnake Sindarin DGB C# NIN Longbow SQP
Promethium Objective-J Javanese C++ Squeak Achilles Perl D++ CUBE++
JADE SCORPIO D French BTTF OmicronPersei-8 Fortran Objective-C KroCoDile
C## GammaRay Falcon Polygon-Z JScript IDL Visual Basic Uranium 238 Asteroid
Objective-K Oberon PHP C+ COBOL Oxygene Python C Magnesium Klingon
MATLAB Java

-GARV BHATT

CI-1 III YEAR

CAPTURE

FROM LENS



AARAV SINGH CHOUHAN

ANUSHKA SHARMA CI - 1 III



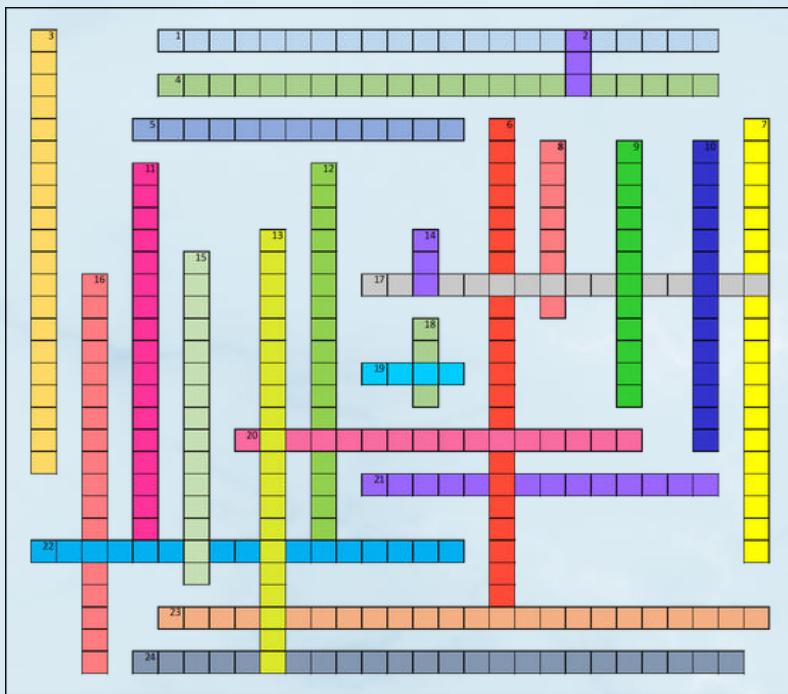
ANSHUL PADIYAR

CI-1 III year



YASHRAJ NIGAM
CI-1 III year

WORDPLAY



Across ➤

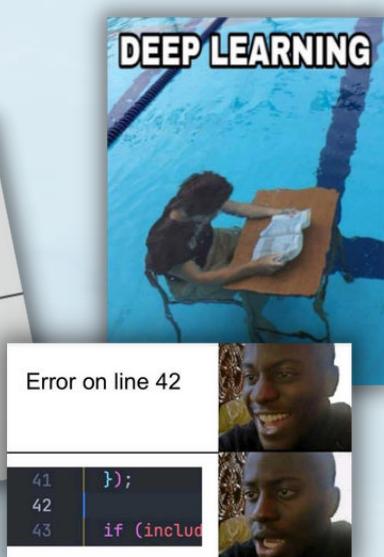
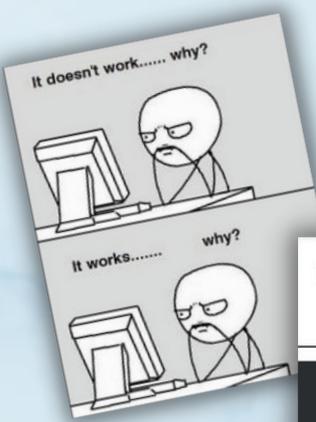
- 2. Global network connecting any smart object
- 8. IoT devices are naturally vulnerable to _____ threats.
- 11. PaaS stands for _____
- 14. what requires data stream management?
- 16. what does Big data collect?
- 18. For supporting real time edge analytics, We need to provide detailed data.
- 9. _____ empowers IoT by bringing together everyday objects.
- 10. One way to see observations addressing IoT analytics is?
- 6. Mobile Cloud applications moves the _____ Power and _____ away from the mobile phone, and into the cloud.

- 3. PDT
- 7. SBC stands for?
- 12. SaaS stands for _____
- 13. what does IoT collect?
- 15. IP

Down ↓

- 1. Which characteristics involve the facility the thing to respond in an intelligent way to a particular situation?
- 4. MCC stands for _____
- 5. _____ in IoT as one of the key characteristics, devices have different hardware platforms and networks.
- 17. What requires Edge analytics
- 19. IoT is a paradigm that involves ubiquitous presence in the environment.
- 20. IoT 21. Mobile cloud computing at its simplest refers to an _____
- 22. _____ gives an exact, up to the second state of all devices on a network
- 23. IaaS stands for _____
- 24. A system that can enable machines to respond to human requests based on meaning

MEMES



AISHWARY VISHWAKARMA

& VIKAS JAIN

CI-1 III YEAR

ATHARVA SHARMA

CI-1 III YEAR

ACHIEVEMENTS



IMA Idea Pitching & Start-up India Hunt



Rohit Jain
Saransh Jain
Sahil Dubey

4th March 2022
3rd Position
Indore

Swachha Innovative Technology

Nominee

Ashutosh Soni
Indore
DEC. 2021



SIH 2022

2 Teams of CSIT II Yr Shortlisted in Internal Smart India Hackathon

TECH. MUSKETEERS

Anushka Sharma
Anjali Patel
Aishwary Vishvakarma
Atharva Sharma
Burhanuddin Sahil
Pooja Birle

VAYU

Jaydeep Singh Chouhan
Kuldeep Pawar
kunal Pratap Singh
Pawar
Mahendra Singh
Shikhawat
Palak jaiswal,
Pooja Dalai

BOTATHON 2.0



Chitransh Madavi
Harshad Lande
Mayank Singh
Ayush Dubey
Chetan Patel
Rishabh Patel
Pratiksha Ved
Sneha Balduwa

JECRC University
Rajasthan

11-12 March 2022

GATE Qualifiers 2022



Amol
Paliwal

Chitransh
Madavi

IoT Competition

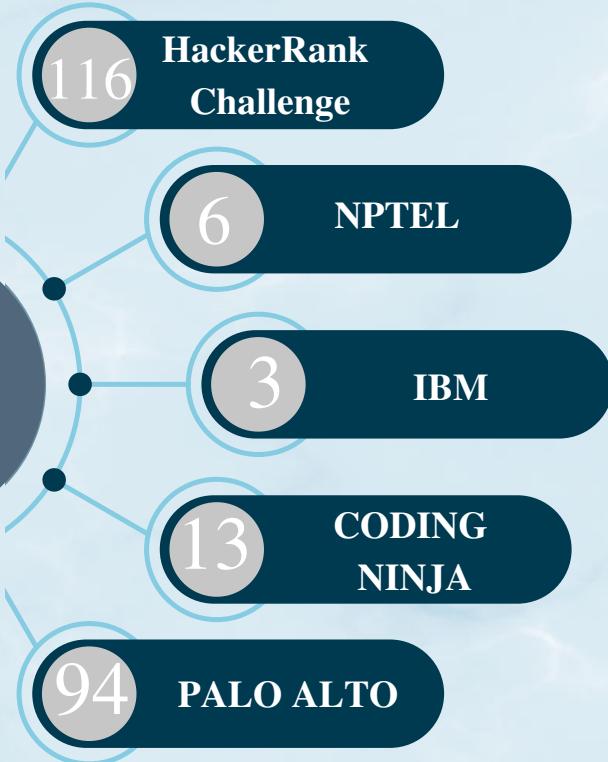
Jaydeep Chouhan
Kunal Pratap Singh
Chitransh Mandavi
Anushka Sharma,
Atharva Sharma
Vivek Badodia
Raj Vishwakarma
Tanu Patel
Ashutosh Soni
Deepansh Jain
Aarav Singh Chouhan



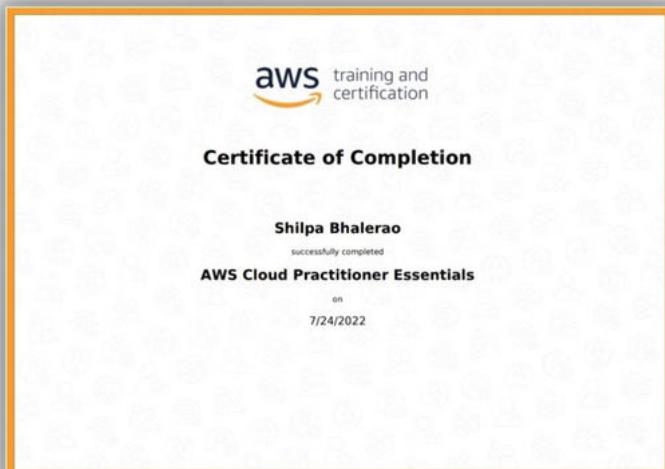
Oct. 2022

ELEMENTS

Certifications



CERTIFI



EC Council CEHv11



SACHIN CHOUHAN
(CSIT)



SIMRAN SETHI
(IT)



DUHITA JAGDEV
(CSIT)



ABHISHEK CHOUHAN
(CSIT)

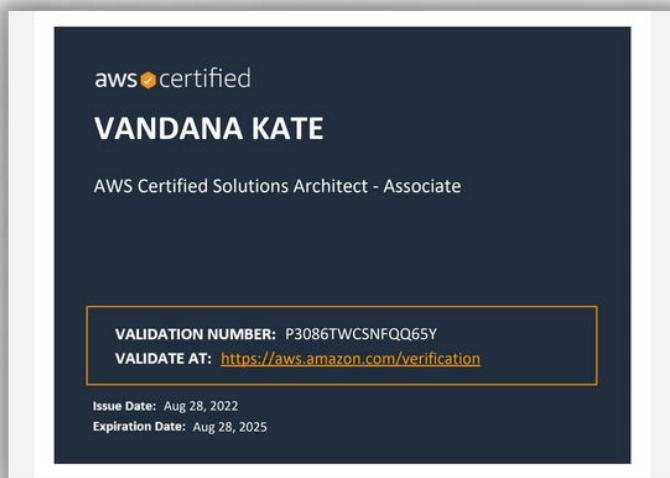
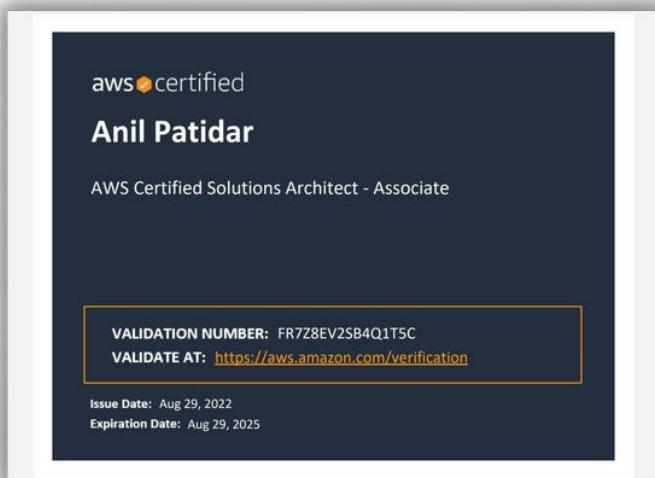


SARANSH JAIN
(CSIT)

Amazon Web S



CATION



ervices (AWS)



Salesforce



IoT technology allows organizations to optimize processes, enhance product offerings, and transform customer experiences in a variety of ways. Although business leaders are excited about the way in which their businesses can benefit from this technology, it is important for them to consider the complexity and security risks associated with deploying IoT solutions.

This whitepaper is a detailed look at how customers can use AWS security services to secure their Internet of Things (IoT) workloads in consumer and industrial environments.

This paper provides guidance on how to understand, approach and meet your security, risk and compliance objectives when deploying IoT solutions with AWS.

- Incorporate security in the design phase.**

IoT applications must be able to continuously model, monitor, and iterate on security best practices.

- Build on recognized IT security and cybersecurity frameworks**

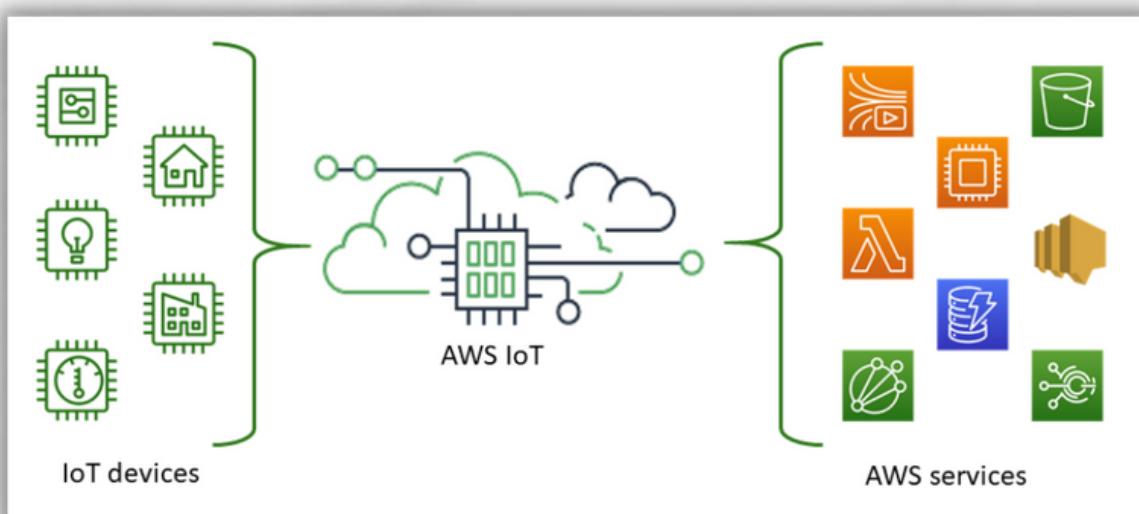
AWS supports an open, standards-based approach to promote secure IoT adoption.

- Focus on impact to prioritize security measures**

Attacks or abnormalities are not identical and may not have the same impact on people, business operations, and data.

- Start with using zero-trust security principles**

Zero-trust principles are intended for an organization's infrastructure, which includes operational technology (OT), IT systems, IoT, and Industrial Internet of Things (IIoT).



Along with an exponential growth in connected devices, each thing in IoT communicates packets of data that require reliable connectivity, storage, and security. With IoT, an organization is challenged with managing, monitoring, and securing immense volumes of data and connections from dispersed devices. But this challenge doesn't have to be a roadblock in a cloud-based environment.

IoT in Defence

ANUSHKA SHARMA

CI1 III YEAR

With the Connected Devices architecture or its autonomous presence within the closed loop network of devices, IoT has already impacted several sectors. Current military operations are focused on a difficult, multifaceted, deeply distinctive, and challenging state. The period of officers is constantly shorter for acquiring a precise assessment, surveying, and deciding possible planning strategies.

The IoT trend has increased defence utility: military intelligence and command and control systems use a myriad of sensors that can be deployed in all domains, thus allowing countries to acquire full situational awareness and control over diverse conflict zones or battle areas and address various issues in war and fighting.



The military may become more efficient and effective by integrating sensor systems, actuators, and control systems with current military infrastructures. Internet of Military Things (IoMT) or Internet of Battlefield Things (IoBT) is a class of Internet of Things (IoT) for modern battle operations and intelligent warfare.

It refers to physical objects in the military domain, which are embedded with sensors, software, and other technologies. These objects communicate with each other to collect and transfer data over the internet to accomplish a broad range of activities in a more efficient and informed way.

Gathering Battlefield Data

Officers can survey the battlefield using airborne drones and connected cameras, to map the landscape and the positions of the adversaries and transmit the data to the command centre. The officials can take strategic judgments using this information. These drones may also be utilised for self-employed border patrols and to alert military staff in the event of a violation or a threat.

Real-time fleet management for equipment and vehicles

Adopting IoT in defence will allow real-time GPS monitoring, displaying speed and motor status, overall engine times, fuel economy, and much more for vehicles embedded with sensors. It can also readily identify abnormalities and quickly forecast failure in the components of military fleets.

Health Surveillance

A range of sensors can be attached to the soldiers' jackets, which can track, sense, and send alerts about their changing medical conditions to the Command Centre where each fighter can be centrally monitored. Medical supplements based on the medical conditions of injured soldiers can be administered.

Augmented Reality Remote Training

Automated models are created using the real field data from earlier times and then a training simulation environment is created. Soldiers may also enhance their goal and precision by practising with no physical injury in this setting and preparing themselves for the real fight .

Research

TITLE

Providing Multi-level Classification of Breast Cancer Image by using Three FCM Variants.

-by Vandana Kate

JOURNAL

International Conference for Advancement in Technology (ICONAT)

TITLE

Breast tissue density classification based on gravitational search algorithm and deep learning

-by Vandana Kate

JOURNAL

International Journal of Information Technology.
publisher : Springer Nature Singapore

TITLE

A Survey on Mobile App Developement Approaches With the Industry Perspective

-by Anil Kumar Patidar

JOURNAL

International Journal of Open Source Software and Processes
IGI Global

TITLE

Smart E-Board

-by Amit Patel , Mayank Gudadhe , Kunal Akhote

Conference

International Conference ICET 2022 organized BVIMIT Mumbai

TITLE

Object Detection Assistance for Visually Impaired People

-by Aayushi Balothiya , Amol Paliwal

JOURNAL

Journal of Network and Information Security

Patent

TITLE

A VEHICLE ASSISTANT SYSTEM
AND METHOD THEREOF

**Prof. Ruchika Chouhan, Prof. Vandana
Kate, , Prof. Simarjeet Singh Bhatia, Prof.
Garima Kumrawat, Chitransh Madavi,
Chetan Patel, Amisha Ghadewal**

Publisher

Govt. Of India, Patent Application
no.202221004188 filed

TITLE

A SYSTEM TO DETECT DOWN
SYNDROME FROM FACIAL
FEATURES AND METHOD
THEREOF

**Dr. Shilpa Bhalerao, Prof. Vandana Kate,
Dr. Surekha Ramchandran, Dr. Maya
Ingle, Prof. Geeta Santhosh, Prof. Nidhi
Nigam, Prof. Nisha Rathi, Dr. Nina Vaidya,
Mr. Parth Bhalerao**

Publisher

Govt. Of India, Patent Application
no.202221004188 filed

INTERNSHIP



Radhika Takjhare
Company:-OneHash
Stipend :-30,000



Shivendra Khichi
Company:- Vestige
Stipend :-30,000



Arunabh Awasthi
Company:-Simyog Technology
Stipend :-25,000



Sudhanwa Kaveeshwar
Company:-BFHL
Stipend :-25,000



Jayesh Purohit
Company:-BFHL
Stipend :-25,000



Vedant Jain
Company:-BFHL
Stipend :-25,000



Palkesh Jain
Company:-BFHL
Stipend :-25,000



Tushar Sharma
Company:-BFHL
Stipend :-25,000



Akshat Agrawal
Company:-BFHL
Stipend :-25,000

Company offering Internships

Career Windows
Viami global service LLP
Simyog Technology
Persistent
BFHL
Metafic
IIT Indore

The Intern Academy
Save nature Foundation
Aurd Infotech Pvt. Ltd.
Viami Global Service LLP
Vestige Marketing
Iniesta Webtech
Broadcastt. co
Simply Local

Saurabh Shukla Classes
Coding Blocks
TuteDude
AccelGrowth
Robotronix
BMK
Arch Labs
Ifortis Worldwide

Hand Holding Solution
OneHash
Internshala
Hand Holding Solution
JP Morgan Chase & Co.
Gurugram cyber police
Ace Overseas
Walkover

Onnes Cryogenies
The Sparks Foundation
CodesandBots
Siteguide
Letsgrowmore
Nagaro Softwares
Cisco Network academy
Pepcoding

Lyricilious
Ziasy Consulting
Youvah
Hope Everywhere NGO
PNINFOSYS
BookMyKainchi Pvt. Ltd,
AK SOFT
Jansvastha

Place



Sanchit Patidar
Metafic
5-8 LPA



Siddhant Sharma
Metafic
5-8 LPA



Amol Paliwal
Metafic
5-8 LPA



Urmi Chauhan
Metafic
5-8 LPA



Anushka Rathore
Capgemini
7.5 LPA



MD. Ayan Sameer
Capgemini
7.5 LPA



Aditya Chouhan
Capgemini
7.5 LPA



Nidhi MEHTA
Capgemini
7.5 LPA



Prakhar Jain
Capgemini
7.5 LPA



Mandvi thakur
Capgemini
7.5 LPA



Shruti Tiwari
Capgemini
7.5 LPA

ments



Dhruv Ghode
TCS Digital
7 LPA



Prahlad Gurjar
TCS Digital
7 LPA



Aniket Verma
TCS Digital
7 LPA



Bhumika Sisodiya
TEKsystems
6 LPA



Sanskar Bandi
TEKsystems
6 LPA



Vidhi Sethiya
TEKsystems
6 LPA



Aman Sharma
EInfochips
4 LPA



Ajit Patel
EInfochips
4 LPA



Hitakshi Ajmera
EInfochips
4 LPA



Vaishnavi Munjewar
Capgemini
7.5 LPA



Ishika Nimade
EInfochips
4 LPA

Certified Courses for IoT

-AISHWARY VISHWAKARMA

CI-1 III YEAR

CertNexus Certified Internet Of Things Security Practitioner

The Certified Internet of Things Security Practitioner course serves this need, equipping participants with IoT-specific knowledge and skills. The three-day course covers eight topics, ranging from securing cloud interfaces to ensure physical device security. The class is available in inperson centers and online forms, ending in a 100-question, 120-minute exam. Costs are similar to those of the Certified IoT Practitioner course but fall a little cheaper, as it's a less comprehensive course. The exam is \$250, with self-study material options ranging from \$99 to \$415.

Microsoft Certified Azure IoT Developer

It equips participants to develop, deploy and manage Azure IoT Edge applications. It focuses mainly on programming an implementation .Candidates must be able to program in at least one Azure IoT SDK-supported language and understand device types and services. Microsoft offers a four-day, instructor-led course in 35 U.S. locations and free online option where participants can go at their own pace. In-person instruction costs range between \$2,000 and \$3,000, depending on the specific learning partner. The test itself costs just \$165, making it one of the most affordable options if candidates choose the online selfstudy option.



Global Tech Council Certified IoT Expert

IoT professionals seeking a more flexible option may find the Global Tech Council's Certified IoT Expert course appealing. The entirely self guided course lasts eight hours in total, and lifetime access means applicants can take it at whatever pace they choose. By the end, participants will learn skills in IoT architecture, protocols, cloud and smart grid applications, Arduino and Raspberry Pi, and more. The training sessions and exam are entirely online, so participants can complete the course from anywhere. There are no formal prerequisites, but applicants should have basic programming and app development skills. The courses and exam go together for just \$149.



AWS Internet Of Things Foundation Series

Amazon Web Services (AWS) is one of the most popular networking service providers globally, so IoT professionals can gain much from understanding it. Enrollment in the 9.5-hour online course is free and covers four topics: telemetry, IoT command and control, fleet management, and predictive maintenance. Since these are mostly application-focused subjects, participants should likely have baseline IoT technical knowledge before starting the class. AWS also offers an introductory course it recommends as a prerequisite. The IoT Foundation Series doesn't grant participants an official certification like other options, but it can act similarly.

Today, technological advances are gaining momentum in the lives of users, but also in the world of business, health, industry, and the military. One of the most promising technologies is the IOT, or Internet of Things, which will allow physical objects to connect to the Internet, thus optimizing their functioning by generating data. However, in a world where data is becoming king, it must be handled efficiently and the means of IT must allow it to store an ever-increasing number of data. This is where Big Data takes on its importance.

Big Data refers to a massive set of data that no conventional data management tool can handle.

Big Data is therefore a concept that allows access to gigantic databases in real time.

It has three main features:

- **The speed at which information is processed**
- **The variety of information stored (in the form of processed or unprocessed data from a variety of sources);**
- **The volume of information listed.**



The interaction between IoT and Big Data is not one-way. IoT could also bring a lot to Big Data. The more important IoT is in your daily life and that of your city, the more developers will be demanding greater capacity in terms of big data and the more this business will grow.

It will thereby be important to improve data storage technologies to develop systems capable of processing even more data. This interaction could thus enable technological growth in both areas simultaneously.

IoT and Big Data are two independent technologies that are inseparable from each other, to enable well-known technological advances. While the IoT would largely collect data from physical objects through different sensors, Big Data would allow faster and more efficient storage and processing of this data.

IOT IN NEWS HEADLINES

Quectel supports India's 5G roll-out with IoT modules, antennas and services
Quectel Wireless Solutions has announced that, with the inauguration of the 5G roll-out in India set later this month, i...

India to be a key hub to accelerate digital, IoT adoption globally: Siemens
India will play a key role in the global rollout of the 'Siemens Xcelerator' programme, said Peter Koerte, Chief Technology Officer and Strategy Officer, Siemens AG.

IIT Jodhpur To Offer MTech-PhD Dual Degree Programme In Sensors, Internet Of Things
The new IIT Jodhpur programme, as per a statement on the institute's website, seeks to produce skilled graduates with deeper understanding of Sensors and IoT systems, along with sensor design, fabrication, calibration, characterization, interfacing, and applications to IoT.

www.ndtv.com/education

In-House Trainings-2022



Robotic Process Automation

The students from the training of Robotic Process Automation with the help of UiPath tool learned to automate basic processes.



Prof. Simarjeet Singh Bhatia



Fundamentals of Programming

Students registered themselves in “Coding Ninjas” platform to participate All India coding competition. To improve their skill sets, students also assigned weekly test and assignments on “Code Chef” platform. Students enthusiastically participated and completed their tasks successfully.



Dr. Praveen Gupta
Prof. Taresh Ayaspure



Alexa Skill Development



Students understand about Alexa and how actually Alexa skill working. By using third party tool Voiceflow students create, test, share and deploy their custom Alexa skills.

Prof. Garima



Kumrawat

Outside Expert- Interaction Session

Data Preprocessing Techniques

-Dr Shilpa Bhalerao

Deep Learning

AICTE

13 Dec 2021

-Vandana Kate

SGSITS Engineering

College

12 Nov 2021



Cyber Awareness

Program

-Nidhi Nigam

Choithram

International School 7 Sept 2022

Design of COs, POs & PSOs

-Dr Shilpa Bhalerao

IES University

25 Feb 2022

Cyber Awareness

Program

-Nidhi Nigam

SDPS International

School, Indore

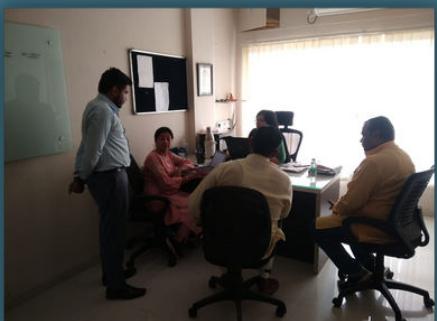
19 July 2022



Team Building Activities

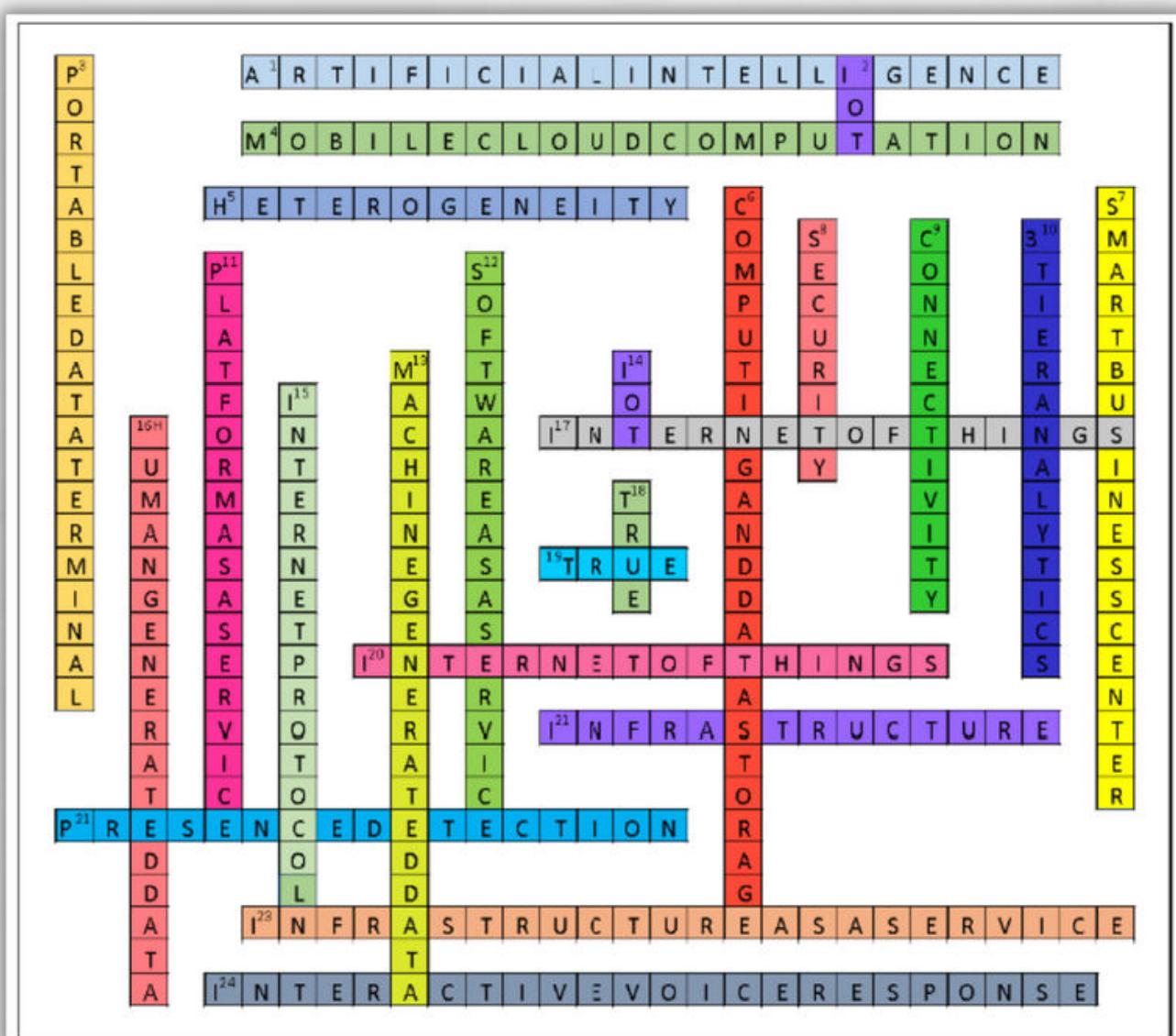


Parents Teacher Meeting





WORDPLAY



Programming Lang. Real or Fake



Word Search

