

|| Jai Sri Gurudev || Sri Adichunchanagiri Shikshana Trust ®

SJC Institute of Technolog

(VTU affiliated, AICTE approved, Accredited by NAAC A+, NBA & Gold Rated by QS I-Gauge)



Chickballapur-562101, Karnataka, India

Department of Electronics and Communication Engineering

6-Days Faculty Development Program

on

## **INTERNET OF THINGS (IoT)**

18th-24th May 2023

In association with IEEE & IETE Student Chapters & IEEE-Bangalore Section, IQAC and IIC



Dr. C Rangaswamy Coordinator Dr. B N Shobha HOD-ECE

## FDP on IoT SUMMARY REPORT



ENGINEERING In association with IEEE & IETE Student Chapters & IEEE-Bangalore Section, IQAC and IIC

Vision of the Institute

Preparing Competent Engineering and Management Professionals to Serve the Society

#### ABOUT THE INSTITUTION

ABOUT THE INSTITUTION Sri Jagadguru Chandrashekaranatha Swamiji Institute of Technology (SICIT) is a premier institute, dedicated to impart quality education since 1966. With divine blessings of Paramapoojya Jagadguru Padmabhushana Sri Sri Sri Dr. Balagangadharanatha Mahaswamiji, the institute is managed by Sri Adichunchanagiri Shikshana Teut<sup>(B)</sup> The truct is under the actube visionany B. managed Trust<sup>(R)</sup>. 1 Trust<sup>(R)</sup>. The trust is under the astute visionary & spiritual guidance of Paramapoojya Jagadguru Sri Sri Sri Dr. Nirmalanandanatha Mahaswamiji. The green environment and is located near Muddenahalli, the birth place of the Architect of Modern India, Bharath Ratna Sir M. Visvesvaraya. Modern India, Bharath Ratna Sir M. Visvesvaraya. The college is situated on Bengaluru - Bellary National Highway (NH-44) about 50 kms from Bengaluru and 20 kms from Kempegowda International Airport. The Institution is accredited by NBA, NAAC and offers ten UG Courses: ECE, CSE, CSE(CS&D), CSE(AI&ML), CSE(DS), ISE, MECH, CV, AE & AS and Five PG Courses in Engineering and MBA along with Eight VTU recognized R&D centers. Engineering and MBA along with Ei recognized R&D centers. ABOUT THE DEPARTMENT

The Department of ECE, established in 1986 is offering UG degree with an intake of 180, PG degree in Digital Communication & Networking and degree in Digital Communication & Networking and also has Research Centre. It is well equipped with state-of-the-art laboratories. The department is strengthened with the dedicated faculty to exploit all the available teaching and training aids to impart quality education. All the laboratories are geared with wide range of Test Equipment and their accessories, modules/models, experimental workbenches to undertake prescribed experiments. Various Training Activities/Seminar/ Workshops will be regularly organized to improve the Technical Skills of both faculty and Students. Students from our department have been placed in the top most our department have been placed in the top most Companies with good packages.

#### Vision of the Department

To Achieve Academic Excellence in Electronics and Communication Engineering by Imparting Quality Technical Education and Facilitating Research Activities

#### OBJECTIVES OF THE FDP

- To prepare faculties with fundamental knowledge and overview in the field of Internet of Things with Familiarization of the concept of Evolution of IoT, IoT Sensing & Actuation and IoT Processing Topologies & Types with a qualitative insight into applications in data communications.
- To equip faculties with a basic foundation of Internet of Things by delivering the basic Architecture and Protocol and IoT Case Studies, Future Trends and Applications

#### PROGRAM SCHEDULE:

PROGRAM SCHEDULE:							
Days Timings		Contents	Resource				
			Person				
<b>Day - 1</b> (18/05/2023)	Session - 1 9.30am-12:30pm	Inauguration & Keynote Address Introduction, Evolution of IoT	Dr. Ravindra K Director, Purup Academy, Bengaluru				
	Session - 2 1:30pm-3:30pm	IoT Sensing and Actuation	Dr. Ravishankar C V Vice Chairmen IETE				
<b>Day - 2</b> ((19/05/2023)	Session - 3 9.30am-12:30pm	IoT Processing Topologies and Types	Prof. Thyagaraju T Dept. of ECE BMSIT				
	Session - 4 1:30pm-3:30pm	Associated IoT Technologies Cloud Computing	Dr. S N Anand Prof. & HOD, ASE MITE-Moodabidre				
<b>Day - 3</b> (20/05/2023)	Session - 5 9.30am-12:30pm	Hands-on Session	Dr. B N Shobha Dr. Pranjala Tiwari				
	Session - 6 1:30pm-3:30pm	Hands-on Session	Dr. Nagendra Kumar M Prof. Manjunath S				
<b>Day - 4</b> (22/05/2023)	Session - 7 9.30am-3:30pm	IoT Case Studies and Future Trends Vehicular IoT, Fundamentals of ADAS	Dr. Purushothama T L, Dept. of ECE SIT Tumakur				
	Session - 8 1:30pm-3:30pm	Agricultural IoT & Healthcare IoT Introduction and Case Studies	Dr. Anil Kumar D Dept. of ECE BMSIT				
<b>Day - 5</b> (23/05/23 )		Industrial Visit					
<b>Day - 6</b> (24/05/2023)	Session - 9 9.30am-12:30pm	Hands-on Session	Dr. C Rangasamy Prof. Nirmaladevi Prof. Asharani M				
	Session - 10 1:30pm-3:30pm	Valedictory Function & High Tea					

#### ADICHUNCHANAGIRI MAHASAMSTHANA MUTT

Sri Adichunchanagiri Mahasamsthana Mutt with its roots firmly embedded in the folds of time (1500 Years), situated on rocky hill, 63 miles west of Bengaluru, Karnataka, has been working towards the betterment of human life and society. Following the Guru Parampara, the mutt has been striving to elevate mankind. The mutt's benevolent activities of social service gained an accelerated momentum under the guidance of pontiff, His Holiness Jagadguru Sri Sri Sri Dr. Balagangadharanatha Mahaswamiji.

Paramapoojya Jagadguru Sri Sri Sri Dr. Nirmalanandanatha Mahaswamiji is a guiding spirit for the development of education and social spirit for the development of education and social activities all over Karnataka and other parts of the country. Under his guidance, the trust has established many schools & colleges in the rural and urban parts of the country. The mutt is dedicated to the cause of quality education, health and managing in more than 515 institutions all over Karnataka, Andhra Pradesh, Delhi, Tamilnadu, Maharashtra and other narts of the country. More Maharashtra and other parts of the country. More than 1,50,000 students are studying and getting the benefit.

#### IMPORTANT DATES

Last Date for Registration Confirmation through E-Mail :15/05/2023 :16/05/2023

#### REGISTRATION

Registration fee Rs. 800/for 6 days, includes registration kit, lunch and certificate. The online fee payment could be done using the given QR code.



The registration form can be downloaded from the college web site: <u>www.sjcit.ac.in</u> Please send the filled-in applications by E-mail to

Also, fill in the details in the Google form: https://forms.gle/5F1N3wRn9bqxkVr79

DIVINE BLESSINGS His Holiness, The Divine Soul, Jagadguru Padmabhushan Sri Sri Sri Dr. Balagangadharanatha Mahaswamiji, Founder President, Sri Adichunchanagiri Shikshana Trust

#### CHIEF PATRON

His Holiness Jagadguru Sri Sri Sri Dr. Nirmalanandanatha Mahaswamiji, President, Sri Adichunchanagiri Shikshana Trust<sup>(R)</sup> PATRON

Poojya Sri Sri Mangalanatha Swamiji Secretary, SACST, Chickballapur

PROGRAM CHAIR Dr. G T Raju Principal, SJCIT, Chickballapur

ORGANIZING CHAIR

Sri. Suresha J Registrar, SJCIT, Chickballapur

#### CONVENER:

Dr. B N Shobha, Prof. & Head, Dept. of ECE CO-ORDINATORS

Dr. C Rangaswamy, Assoc. Professor, Dept. of ECE Prof. Manjunath S, Asst. Professor, Dept. of ECE Prof. Nirmala Devi A C, Asst. Professor, Dept. of ECE Prof. Asharani M, Asst. Professor, Dept. of ECE

TECHNICALCOMMITTEE Dr. S Bhargavi, Professor, Dept. of ECE Dr. Shargavi, Professor, Dept. of ECE Dr. Bhaskar S, Professor, Dept. of ECE Dr. Sudhir P, Assoc. Professor, Dept. of ECE Dr. Pranjala Tiwari, Assoc. Professor, Dept. of ECE Prof. Shwetha V, Asst. Professor, Dept. of ECE Der Manual V. Asst. Professor. Dept. of ECE of ECE

Prof. Manjula K, Asst. Professor, Dept. of ECE Prof. Veena S, Asst. Professor, Dept. of ECE Prof. Ravi M V, Asst. Professor, Dept. of ECE Prof. AnilKumar R. Asst. Professor, Dept. of ECE Prof. Ravikiran R, Asst. Professor, Dept. of ECE Prof. Chandini A G, Asst. Professor, Dept. of ECE ADVISORY COMMITTEE

## ADVISORT CONFIRINCE Dr. Nataraju K R, Director, R & D, VTU, Belagavi, Dr. Ravishankar C V Prof. & HOD, Dept. of ECE, SaIT Dr. Manjunath Reddy, Prof. & HOD, Dept. of ECE, GAT Dr. M B Anandaraju, Prof. & HOD, Dept. of ECE, MSIT Dr. Manjunath R, Prof. & HOD, Dept. of ECE, TAME, Dr. Sanjeev Kumar Kubakaddi, CEO, IETE Knowledge Solution Bangalore

#### REGISTRATION FORM

6-Days Faculty Development Program

on INTERNET OF THINGS (IoT) (As per revised NEP-VTU syllabus)

#### MAY 18-24, 2023

Name:

- Designation:
- Qualification:

Department:

- Institution:
- Mobile No:

Email-ID:

Place:

Date:

UPI Transaction ID:

Address for correspondence:

#### Signature of the Participant

#### Sponsorship Certificate

Dr/Mr/Mrs. faculty of our Institution/College/University and is sponsored/permitted to attend 6-Days FDP on Internet of Things (IoT).

> Signature of the Principal/ Head of the Department with seal

Note: A photocopy of this form may be used.

#### About The FDP:

A faculty development program on IoT (Internet of Things) is a training program designed for faculty members who are interested in teaching IoT-related courses or integrating IoT technologies into their teaching. The program aims to equip faculty members with the necessary knowledge and skills to teach IoT-related courses effectively as per new NEP syllabus The program typically covers a range of topics, including: Introduction, Evolution of IoT IoT Sensing and Actuation IoT Processing Topologies and Types

Associated IoT Technologies IOT CASE STUDIES:

Agricultural IoT

Vehicular IoT

Healthcare IoT

IoT Analytics

• Overall, a faculty development program on IoT aims to enhance the faculty members' knowledge and skills in IoT and equip them to teach IoT-related courses effectively. This can help universities and colleges to produce graduates with the necessary skills and knowledge to work in the rapidly growing field of IoT.

#### **Objective:**

- To prepare faculties with fundamental knowledge and overview in the field of Internet of Things with Familiarization of the concept of Evolution of IoT, IoT Sensing & Actuation and IoT Processing Topologies & Types with a qualitative insight into applications in data communications.
- To equip faculties with a basic foundation of Internet of Things by delivering the basic Architecture and Protocol and IoT Case Studies, Future Trends and Applications

#### **Outcome:**

Increased knowledge and understanding, Enhanced teaching skills, Curriculum development, Research and collaboration, Networking and sharing best practices, Practical application and projects & Dissemination of knowledge.

It's important to note that the specific outcomes of an FDP on IoT would vary based on the program's duration, intensity, and the expertise of the instructors. The above outcomes serve as general expectations, and the actual outcomes can only be determined by evaluating the specific FDP you are referring to.

## Department of Electronics and Communication Engineering

<u>6-Days Faculty Development Program on Internet of Things</u> From 18-05-2023 to 24-05-2023

#### From 18-05-2023 to 24-05-2023 Event Agenda (Inaugural Program)

Timings	Event	Details
09:30 – 09:35 AM	Invocation Song	Ms. S Bhavana 6 <sup>th</sup> C
09:35 – 09:45 AM	Welcome Speech	Dr. C Rangaswamy
09:45 – 09:50 AM	Lighting of Lamp	By Dignitaries
09:50 – 10:00 AM	About FDP	Prof. Manjula K
10:00 – 10:05 AM	Introduction of Chief Guest	Dr. Sudir P
10:05 – 10:40 AM	Keynote Speech	Dr. Ravindra K
10:40 – 10:55 AM	Presidential Address	Dr. G T Raju
10:55 – 11:00 AM	Vote of Thanks	Dr. Nagendra Kumar

Master of Ceremony - Prof. Shwetha V

Days	Timings	Content	Resource Person	
Day-1 (18-05- 2023)	Session-1 9:30 – 11:30 Session-2 1:30 – 3:30	Inauguration and Keynote Address Introduction, Evolution of IoT IoT Sensing and Actuation	Dr. Ravindra K Director, Pump Academy Dr. Ravishankar C V Vice Chairman IETE	
Day-2 (19-05-2023)	Session-3 9:30 – 11:30	IoT Processing Topologies and Types	Prof. Thyagaraju T, Dept. of ECE, BMSIT	
	Session-4 1:30 – 3:30	Associated IoT Technologies Cloud Computing	Dr. S N Anand Prof. & HOD, MED MITE-Moodabidre.	
Day-3 (20-05- 2023)	Session-5 9:30 – 11:30	Hands-on Session on IoT	Dr. B N Shobha Dr. Pranjala Tiwari	
	Session-6 1:30 – 3:30	Hands-on Session on IoT	Dr. Nagendra Kumar M Prof. Manjunath S	
Day- 4 (22-05-2023)	Session-7 9:30 – 11:30	<ul> <li><u>IoT Case Studies and Future Trends</u></li> <li>Vehicular IoT – Introduction</li> <li>IoT Analytics – Introduction</li> </ul>	Dr. Purushothama T L Prof. Dept. of ECE SIT, Tumakur	
	Session-8 1:30 – 3:30	<ul> <li>Agricultural IoT – Introduction and Case Studies</li> <li>Healthcare IoT – Introduction, Case Studies</li> </ul>	Dr. Anil Kumar D Professor Dept. of ECE - BMSIT	
Day- 5 (23-	Industrial Visit			
Day- 6 (24-05-2023)	Session-9 9:30 – 11:30	Hands-on Session on IoT	Dr. C Rangaswamy Prof. Nirmaladevi Prof. Asharani	
	Session-10 1:30 – 3:30	Valedictory Function & High Tea		

**Inauguration**: The FDP started with seeking the Divine Blessings of Bhairavaikya Parama Poojya Jagadguru Padmabhushana Sri Sri Sri Dr.Balagangadharanatha Mahaswamiji and Parama Poojya Jagadguru Sri Sri Sri Dr. Nirmalanandanatha Mahaswamiji.

More than 50 faculty members are attended the FDP out of which around 15 faculties form different Colleges from Karnataka and remaining from S J C Institute of Technology, Chickballapur.









18/05/23 10:03 AM GMT +05:30

### Session 1 Keynote Speech by Dr. Ravindra K, Director, Pump Academy

The IoT is a concept that refers to the interconnection of everyday objects and devices, allowing them to send and receive data, communicate with each other, and be controlled remotely through the internet. From smart homes and wearable devices to industrial automation and smart cities, the IoT is permeating every aspect of our lives, paving the way for a more connected and efficient world.

One of the fundamental promises of the IoT is its ability to enhance our quality of life. Imagine waking up in a home where the lights automatically adjust to your preferred brightness, the coffee machine starts brewing your favorite blend, and your car notifies you of the best route to avoid traffic. With IoT, our surroundings become more intelligent, responsive, and personalized to our needs, making our lives easier and more convenient.

However, the impact of the IoT extends far beyond convenience alone. Industries such as manufacturing, healthcare, agriculture, transportation, and energy are experiencing a revolution driven by the IoT. In manufacturing, for instance, connected sensors and machines enable real-time monitoring and predictive maintenance, optimizing production efficiency and reducing downtime. In healthcare, IoT devices facilitate remote patient monitoring, enabling doctors to deliver personalized care and improve patient outcomes. And in agriculture, farmers can utilize IoT-enabled sensors to monitor soil moisture, weather conditions, and crop health, maximizing yield and conserving resources.

In conclusion, the Internet of Things is reshaping our world in profound ways. Its potential to improve efficiency, enhance productivity, and transform industries is unparalleled. However, we must tread carefully, addressing the ethical, security, and interoperability challenges that come with this technological revolution.



### Session 2, Speech by Dr. Ravishankar C V, on IoT Sensing and Actuation

Today, I want to delve deeper into the fascinating world of IoT sensing and actuation—the core elements that enable the Internet of Things to function and create a truly interconnected world.

At the heart of the IoT are sensors—small, intelligent devices that can perceive and collect data from their surroundings. These sensors come in various forms, from temperature and humidity sensors to motion detectors, GPS modules, and even cameras. They act as the sensory organs of the IoT, capturing real-time information about the physical world.

The data collected by these sensors is invaluable. It provides insights into our environment, infrastructure, and even our own behavior. By leveraging this data, we gain a deeper understanding of the world around us, enabling us to make informed decisions and take proactive actions.

Actuation, on the other hand, refers to the capability of the IoT to act upon the information it gathers. It involves the ability to remotely control and manipulate devices and systems based on the data received. Actuation allows us to turn insights into action, making the IoT a powerful tool for automation, optimization, and problem-solving.

Imagine a scenario where a sensor detects an increase in temperature in a room. Based on this information, the IoT system triggers an actuator to adjust the air conditioning settings, ensuring a comfortable environment. Similarly, in an industrial setting, sensors can monitor the performance of machinery.

The combination of sensing and actuation capabilities opens up a world of possibilities across industries and sectors. In agriculture, IoT sensors can monitor soil moisture levels and trigger automated irrigation systems when necessary, optimizing water usage and improving crop yield. In healthcare, wearable devices equipped with sensors can continuously monitor vital signs and alert medical professionals in case of emergencies or abnormalities, enabling early intervention and potentially saving lives.



### Session 3, Speech by Prof. Thyagarajan, on IoT Processing Topologies & Types

Certainly! When it comes to processing in the Internet of Things (IoT), various topologies and types of architectures can be employed based on the specific requirements and constraints of the IoT application. Let's explore some of the common IoT processing topologies and types:

*Centralized Processing:* In this topology, data collected from IoT devices is transmitted to a centralized location, typically a cloud-based server or a data center, where the processing and analysis take place.

*Distributed Processing:* In contrast to centralized processing, distributed processing involves performing data processing tasks closer to the edge or directly on IoT devices. This topology is particularly useful when low latency, real-time responsiveness, and reduced network dependency are critical.

*Edge Computing:* Edge computing brings computational capabilities closer to the edge of the network, where IoT devices reside. In this topology, data processing occurs on local edge devices or gateways, reducing the need for transmitting large amounts of data to the cloud.

*Fog Computing:* Fog computing is an extension of edge computing that adds a layer of intermediate nodes between edge devices and the cloud. These intermediate nodes, known as fog nodes or fog servers, provide additional computational resources and storage capabilities.

*Hybrid Processing:* Hybrid processing combines elements of both centralized and distributed processing. In this approach, data processing tasks are distributed across a network hierarchy, encompassing edge devices, intermediate fog nodes, and a centralized cloud or data center.

In addition to the processing topologies, different types of processing can be applied within the IoT context, such as real-time stream processing, batch processing, complex event processing, and machine learning algorithms. The choice of processing type depends on the nature of the IoT data, the desired speed of processing, and the complexity of the analytics required.



#### Session 4, Speech by Dr. S N Anand, on Associated IoT Technologies.

There are several associated technologies that play a crucial role in enabling and supporting the Internet of Things, ecosystem. Let's explore some of the key technologies associated with the IoT.

*Connectivity Technologies:* IoT devices require reliable and efficient means of connectivity to transmit data. Various connectivity technologies are utilized in the IoT, including: Wi-Fi, Bluetooth, Zigbee, Z-Wave, and Thread

*Artificial Intelligence and Machine Learning:* AI and machine learning techniques are employed in the IoT to analyze vast amounts of data, identify patterns, and make intelligent predictions. These technologies enable predictive maintenance, anomaly detection, optimization, and automation in various IoT applications.

*Security and Privacy:* Security is a critical aspect of the IoT ecosystem. Technologies such as encryption, authentication mechanisms, secure protocols, and access control systems are essential for protecting IoT devices, data, and communication.

*Data Analytics and Visualization:* Effective data analytics and visualization techniques are employed to extract actionable insights from the vast volumes of IoT data.

These technologies, in conjunction with others, form the foundation of the IoT ecosystem, enabling connectivity, data management, analysis, and intelligent decision-making. As the IoT landscape continues to evolve, advancements in these technologies will further enhance the capabilities and potential of the Internet of Things.



#### **Day** – 3

Session 5, IoT Hands-on Session, by Dr. B N Shobha & Dr. Pranjala Tiwari Session 6, IoT Hands-on Session, by Dr. Nagendra Kumar N & Manjunath S

### Day – 4

### Session 7, Speech by, Dr.Purushothama T L, on Vehicular IoT & Analytics.

Vehicular IoT aims to improve road safety, traffic efficiency, and overall driving experience by leveraging real-time data and communication between vehicles and the surrounding environment. Here are some key aspects and applications of Vehicular IoT:

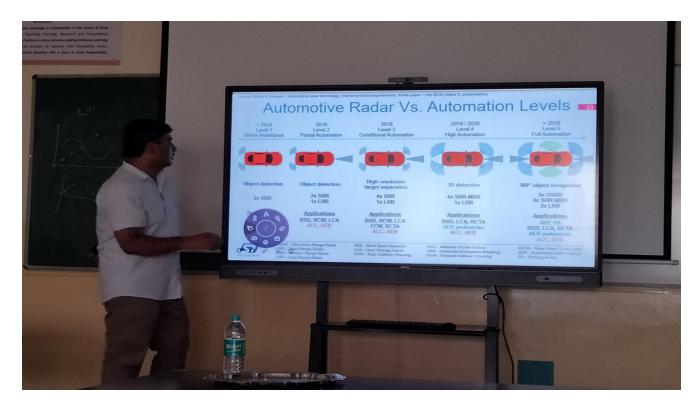
*Vehicle-to-Vehicle (V2V) Communication:* V2V communication allows vehicles to exchange information with nearby vehicles in their vicinity.

*Vehicle-to-Cloud (V2C) Communication:* V2C communication facilitates the interaction between vehicles and cloud-based services. Vehicles can access cloud platforms to upload and retrieve data, perform software updates, and leverage advanced analytics capabilities.

*Intelligent Transportation Systems (ITS):* Vehicular IoT contributes to the development of Intelligent Transportation Systems, where vehicles, infrastructure, and data analytics work together to optimize transportation operations.

Safety and Emergency Services: Vehicular IoT plays a significant role in enhancing safety and emergency response on the road. Connected vehicles can transmit critical information in real-time, such as accident alerts, hazardous road conditions, and emergency service requests. *Traffic Data Collection and Analysis:* Vehicular IoT enables the collection of large-scale traffic data, including vehicle speed, density, and flow. This data can be analyzed to gain insights into traffic patterns, congestion hotspots, and travel behavior.

Vehicular IoT holds the potential to transform transportation systems, making them safer, more efficient, and sustainable. As technology continues to advance, we can expect further integration of IoT solutions into vehicles and transportation infrastructure, leading to a future of connected, autonomous, and intelligent mobility



# Session 8, Speech by, Dr. Anil Kumar D, on IoT Case Studies on Agriculture and Health.

Agricultural IoT (Internet of Things) and Healthcare IoT are two domains where IoT technology is being increasingly adopted to enhance efficiency, productivity, and sustainability.

*Agricultural IoT:* Agricultural IoT refers to the integration of IoT devices and sensors into farming practices to monitor and manage agricultural operations. It enables farmers to collect real-time data about soil moisture, temperature, humidity, rainfall, and crop growth. This data can be analyzed to make informed decisions regarding irrigation, fertilization, pest control, and overall farm management. Some key applications of Agricultural IoT include:

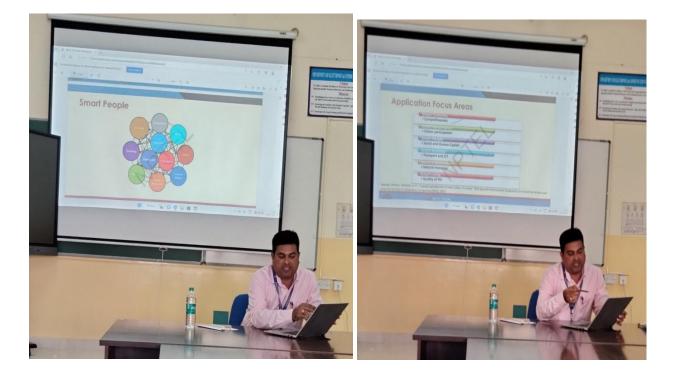
a. Precision Farming: b. Livestock Monitoring: c. Supply Chain Management: d. Environmental Monitoring

*Healthcare IoT:* Healthcare IoT involves the integration of IoT devices and sensors into the healthcare industry to improve patient care, remote monitoring, and operational efficiency. It allows healthcare providers to collect and analyze real-time patient data, enabling timely interventions and personalized treatments. Some key applications of Healthcare IoT include:

a. Remote Patient Monitoring: b. Smart Hospitals: c. Telemedicine:

d. Medication Management: e. Disease Prevention and Management:

In both Agricultural IoT and Healthcare IoT, the benefits include increased efficiency, improved decision-making, cost reduction, and enhanced sustainability. However, it's important to consider privacy and security concerns associated with the collection and storage of sensitive data from IoT devices in both domains.



### As a part of 6-days FDP all participants visited AICTE-ATAL IDEA Lab at VTU Muddenahalli

AICTE has launched a scheme for establishing AICTE-IDEA (Idea Development, Evaluation & Application) Lab in its approved institutions for encouraging students for application of Science, Technologies, Engineering and Mathematics (STEM) fundamentals towards enhanced hands-on experience and learning by doing and even product visualization. The IDEA Lab will make engineering graduates more imaginative and creative, besides getting basic training in the 21<sup>st</sup> century skills like critical thinking, problem solving, design thinking, collaboration, communication, lifelong learning etc. IDEA Labe can facilitate students and faculty to "engage, explore, experience, express and excel" as per new National Educational Policy 2020.





### Day – 6

# Session 9, IoT Hands-on Session, by Dr. C Rangasamy, Prof. Nirmaladevi AC and Prof. Asharani M

#### As a part of Hands-on Session a project is demonstrated on

#### Gas Leakage with Auto Ventilation and Smart Management System Using IoT

In the evolving smart home architectures, the issue of gas spillage and fire is still remaining as a significant hindrance for designing a comprehensive, safe and sustainable kitchen model. In urban areas, most of the kitchens are very small and it doesn't contain proper ventilation system. In such case, Spillage of gas increases the risk of fire accident, suffocation or a blast. To eradicate this challenge, smart management system viz. gas leakage detection and fire detection system should be developed.



Day – 6

### Session 10, Valedictory Function:







### List of Participants

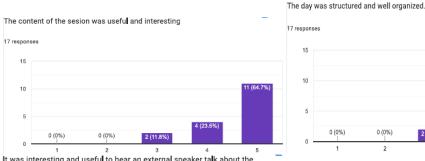
Sl. No	Name	College	Dept.
1	Santosh Kumar S	SVCE Bengaluru	ECE
2	Dr Rekha S	Sharnbasva University Kalaburgi	ECE
3	Dr. RajeshL	East Point College	ECE
4	Dr Manjaiah D H	Mangalore University	CSE
5	Naveen Kumar A	Meru Info Solutions	Team Lead
6	Prakasha G	SVCE Bengaluru	ECE
7	Bharath S	Sambhram I T	ECE
8	Abhishek D G	Sambhram I T	ECE
9	Sreelakshmi T	Sir MVIT, Bengaluru	ECE
10	Mohan Babu C	SJCIT Chickballapur	ECE
11	Chandini A G	SJCIT Chickballapur	ECE
12	Prathiba R	SJCIT Chickballapur	ISE
13	Asharani M	SJCIT Chickballapur	ECE
13	Dr Anil Kumar C	RLJIT Doddaballapur	ECE
15	Dr.Madhu Chandra G	RLJIT Doddaballapur	ECE
15	M Sindhu Sree	Dayananda Sagar College of Engg.	ECE
10	Dr. C Rangasamy	SJCIT Chickballapur	ECE
18	Dr. Levy M	SJCIT Chickballapur	ECE
10	Dr. Nagendra Kumar	SJCIT Chickballapur	ECE
20	Vishala I L	SJCIT Chickballapur	ECE
20	Shwetha V	SJCIT Chickballapur	ECE
21	Dr. Bhargavi S	SJCIT Chickballapur	ECE
22	Anitha S	SJCIT Chickballapur	ECE
23	Padmavathi B	SVCE Bengaluru	ECE
25	Chaithra S	SVCE Bengaluru	ECE
26	N Murugan	SJCIT Chickballapur	ASE
20	Muniraju M	SJCIT Chickballapur	AI & ML
28	Palakshaiah	SJCIT Chickballapur	MED
20	Manjula K	SJCIT Chickballapur	ECE
30	Nirmala Devi A C	SJCIT Chickballapur	ECE
31	Dr. Pranjala Tiwari	SJCIT Chickballapur	ECE
32	Swetha T	SJCIT Chickballapur	CSE
33	Kalaiah JB	SJCIT Chickballapur	ECE
33	RaviKiran R	SJCIT Chickballapur	ECE
35	G Santhosh	SJCIT Chickballapur	ECE
35	Dr.Bhaskar S	SJCIT Chickballapur	ECE
30	Ramegowda M	SJCIT Chickballapur	ECE
37	Srivani E N	SJCIT Chickballapur	ECE
39	Madhukara S	SJCIT Chickballapur	ECE
40	Savitha M M	SJCIT Chickballapur	ECE
40	Srinivasa G M	SJCIT Chickballapur	AED
41 42	Anilkumar R	SJCIT Chickballapur	ECE
42	Bhavana S	SJCIT Chickballapur	ECE
43	Shwetha G R	SJCIT Chickballapur	ISE
44	Manjunath Siddappa	SJCIT Chickballapur	ECE
43	Ravi M V	SJCIT Chickballapur	ECE
40	Shreehari H S	SJCIT Chickballapur	ECE
47		CBIT Kolar	
48 49	G K Venkatesh Praveen P		ECE
		CBIT Kolar	CSE
50	Deepika Lokesh	CBIT Kolar	CSE

#### **Certificate:**



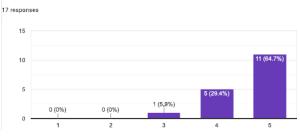
#### Feedback

• At the end of the FDP online feedback taken from the participants

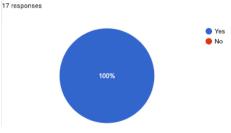


15 10 5 0 (0%) 0 (0%) 2 (11.8%) 3 (17.6%) 1 2 3 4 5

It was interesting and useful to hear an external speaker talk about the lifecycle of IoT.



Was adequate time provided for questions and discussion?



Dr. B N Shobha HOD-ECE