



## FUNDAMENTALS OF IOT

IEEE MVSR SB Computer Society has conducted a session on Fundamentals of IoT on 06th April 2021. The main objective of the meeting was to discuss the fundamentals of IoT (Internet of Things). Internet of Things is transforming the everyday physical objects that surround us into an ecosystem of information that will enrich our lives.

### Student Branch Mentor:

Dr. Atul Negi,  
Professor, School of CIS,  
University of Hyderabad

### Student Branch Advisor:

Dr. G. Kanaka Durga,  
Principal and Professor,  
MVSR Engineering College.

### Student Branch Counsellor:

Dr. D. Hari Krishna,  
Associate Professor, EEE Dept.,  
MVSR Engineering College.

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Women in Power	Ms. T. Snigdha

### WIE Affinity Group Advisor:

Mrs. A. Vijaya Vahini,  
Assistant Professor, IT Dept.,  
MVSR Engineering College.

### PES Student Chapter Advisor:

Dr. D. Hari Krishna,  
Associate Professor, EEE Dept.,  
MVSR Engineering College.

### CS Student Chapter advisor:

Mrs. B. Saritha  
Associate Professor, CSE Dept.,  
MVSR Engineering College.

### CASS Student Chapter Advisor:

Mrs. S. Aruna  
Assistant Professor, ECE Dept.,  
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## Session Details:

**Date:** 06<sup>th</sup> April,2021

**Time:** 6:00 pm- 8:00pm

**No. of attendees:** 90

### Speaker for the session:

Mr T.Sujanavan,  
Assistant Professor,  
Department of CSE,  
MVSR Engineering  
College.

The meeting was accompanied by Dr.D.Hari Krishna, Student Branch Counsellor, IEEE MVSR SB, Mr Prasanna Kumar, Head of Department of CSE, Mr T.Sujanavan, Assistant Professor, Department of CSE, MVSR Engineering College, Mrs B. Saritha, Student Chapter Advisor, IEEE MVSR CS, the executive committee members of the IEEE MVSR CS and other registered participants.

The meeting was commenced by, Ms A.Manisha Reddy, Women in Computing IEEE MVSR CS Student Chapter, by giving a gist on topics to be discussed in the session. Later on, Mr Prasanna Kumar, Head of Department of CSE welcomed Mr T.Sujanavan, Assistant Professor and the participants to the meet. Dr D.Hari Krishna, Student Branch Counsellor, IEEE MVSR SB shared his knowledge about IoT. Mrs B. Saritha, Student Chapter Advisor, IEEE MVSR CS talked about the upcoming events on IoT.

The screenshot shows a Zoom meeting interface. At the top, it indicates 'Sujanavan Tiruvayipati is presenting' and the time is 6:15 PM. The main content is a presentation slide with the following text:

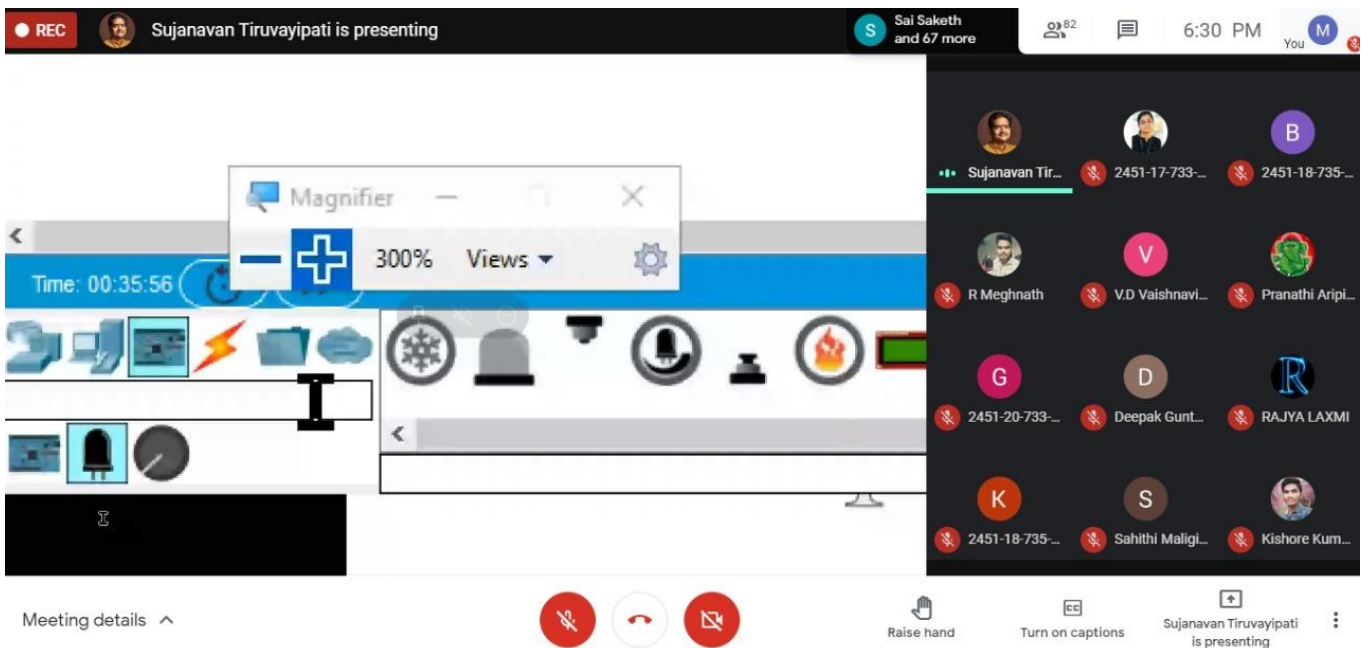
**SUJANAVAN TIRUVAYIPATI**  
ASSISTANT PROFESSOR, CSE, MVSR  
AWS ACADEMY CLOUD FOUNDATIONS TRAINER  
SUSHI LINUX (HOBBY PROJECT)  
A DEBIAN/UBUNTU LINUX OS DISTRIBUTION  
PART-TIME PH.D. RESEARCH SCHOLAR IN IOT  
CSE, OSMANIA UNIVERSITY  
SPECIAL THANKS TO-  
Networking  
**CISCO** Academy  
EduSkills

The slide also features a diagram of an IoT architecture. A central smartphone labeled 'iot' is connected to a 'SCALABLE TIME SERIES DATABASE'. This database is linked to various components: 'Custom Chart and Dashboard Module', 'Data Billing Module', 'Device Management and Data Acquisition', 'API', 'Web App', and 'Alarm and Notifications'. The diagram also shows 'Processing and Logic' at the bottom.

On the right side of the Zoom window, a list of participants is visible, including Sujanavan Tiruvayipati, V.D Vaishnavi, Pranathi Arip..., SAHITHI CHICHILI, RAJYA LAXMI, Sriya N, Sahithi Maligi..., Kishore Kum..., and R Meghnath.

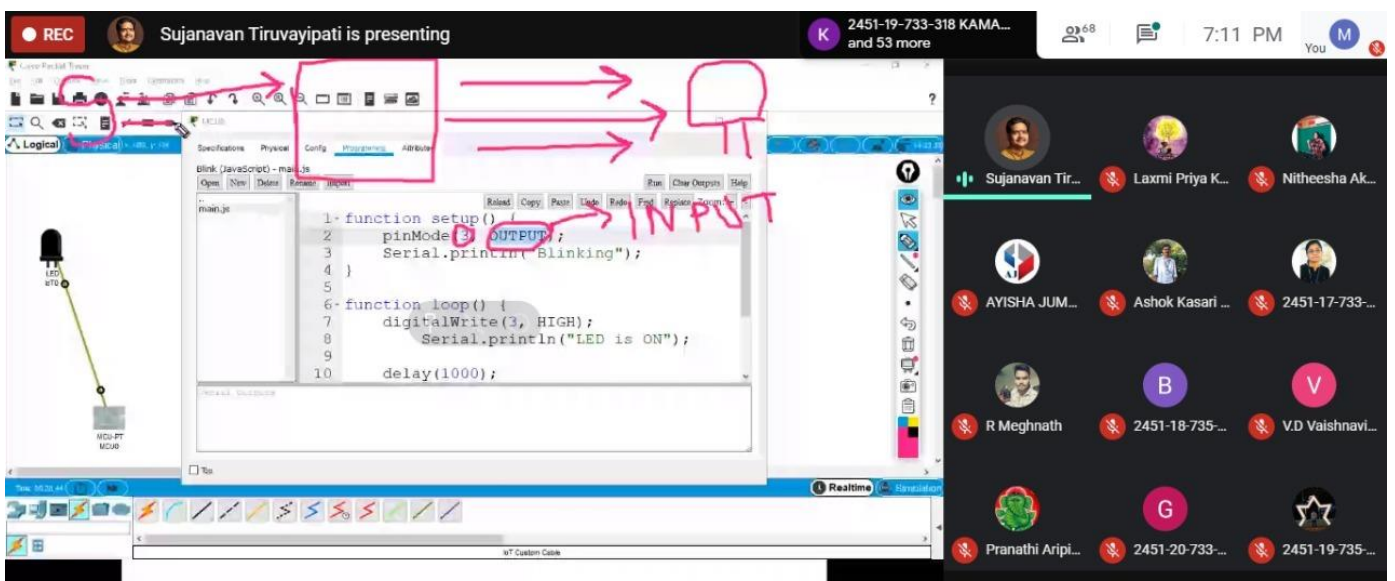
### Overview of IoT and its applications

Later, Mr T.Sujanavan started his presentation on IoT. He demonstrated the basic fundamentals and protocols of IoT. He explained various control systems of Water Overflow Alarm, Washing Machine etc. Later a live demo was given on the Motion Sensor Alarm which is a simple security system using cisco packet tracer. He explained the components and sensors of the Cisco packet tracer.



**Demonstration of Cisco packet tracer**

Further, he gave a glimpse about Embedded Systems which is the anatomy of things like MP3 players, digital cameras. He showed the live demo of blinking LED which is the first Arduino program. He gave a detailed explanation of the program and showed the working of the LED light. He then interacted with the participants to clarify their doubts.



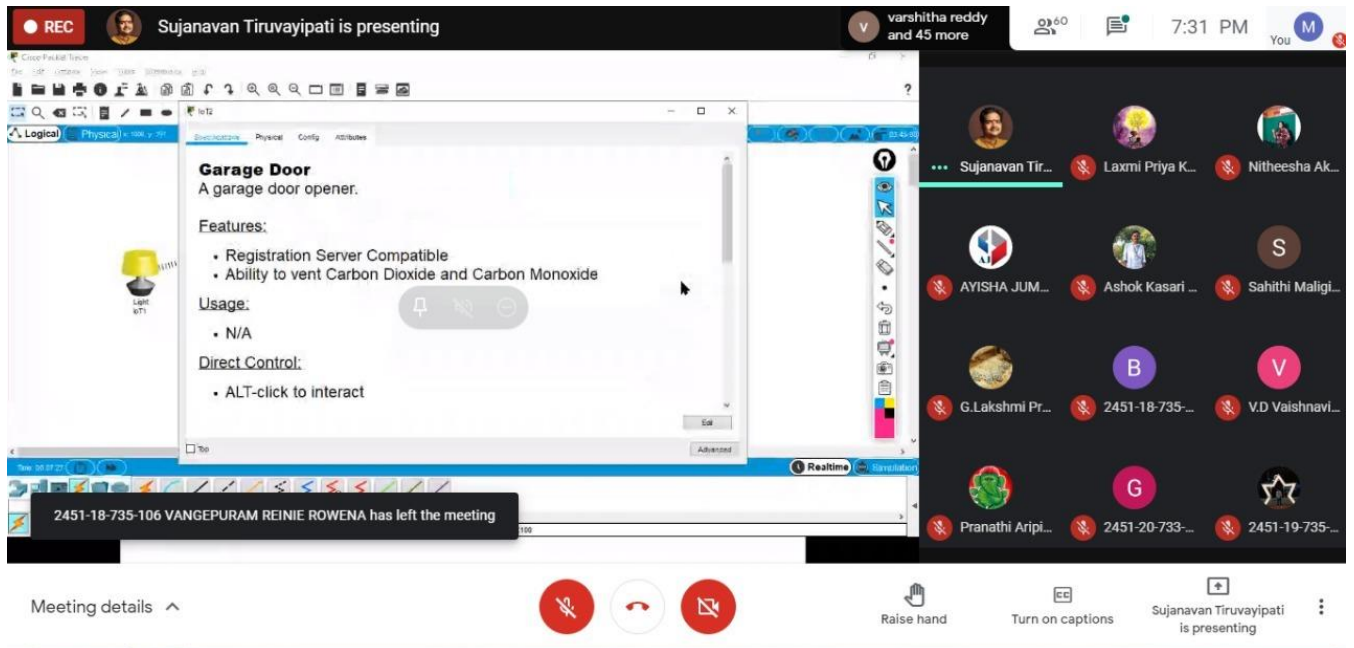
**Demonstration of blinking LED in Cisco packet tracer**

He demonstrated the LED program using a script created by Cisco. Cisco has created a similar script like JavaScript. He explained the process of opening the editor and setting up the device for the



Embedded Systems. He shared examples of IoT and sample files of Photosensors. Various methods used in IoT like Analog, Bluetooth were explained.

Later he shared about smart home solutions with examples and configuration. From refrigerators to parking spaces to houses, the Internet of Things is bringing more and more things into the digital fold every day, which will likely make the Internet of Things a multi-trillion dollar industry in the near future. He then clarified the doubts of the participants.



### Application of IoT in home appliances

The session was informative which gave a clear understanding of basic fundamentals of IoT.

Finally, the meeting was concluded by Mr Haren, IEEE MVSR CS Member.

**REPORTED BY –**

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