



Report on 2 Day Hands-on Workshop on IoT & its Applications in Real World

Date: **31.03.2026 to 01.04.2026**

Mode: **OFFLINE Workshop**

Audience: **Students of CSE(IC) and EEE**

Organized by: C A R & EDC, Dept. of CSE(IC) and Dept. of EEE supported by ISTE, Student Chapter

The Corporate Academia Relationships in association with the Departments of CSE(IC) and EEE supported by ISTE chapter The Departments of CSE(IC) and EEE, in association with CAR (Corporate Academia Relationships), successfully organized a two-day Hands-on Workshop on "IoT & its Applications in Real World" on 31st March 2026 and 1st April 2026. The workshop was conducted by the Resource Person, Dr. Srinivasa Setty, Founder & CTO of SST Technologies supported by ISTE student Chapter at campus.



The workshop aimed to provide practical exposure to Internet of Things (IoT) technologies and real-time applications using ESP32 microcontroller boards and IoT-based mobile applications. The sessions focused on enabling students to understand the fundamentals of IoT, embedded systems, sensor integration, wireless communication, and app-based automation.

Objectives of the Event

- To introduce students to the fundamentals of Internet of Things (IoT)
- To provide hands-on experience with NodeMCU Dev ESP32 boards
- To demonstrate real-world IoT applications and automation techniques
- To train students in connecting microcontrollers with internet services
- To familiarize students with IoT mobile applications such as Blynk A

The workshop commenced with an introductory session by the Resource Person, who explained the importance of IoT in modern industries and smart applications. Students were introduced to the Node MCU Dev ESP32 board and its features. During the first day of the workshop, participants learned the installation and configuration of the required software environment for ESP32 programming. The students were guided on how to start programming using the Arduino IDE and understand the basic working of IoT systems.

The practical sessions included LED blinking experiments, understanding GPIO pins, and establishing communication between the ESP32 microcontroller and internet connectivity. Students explored how IoT devices interact with networks and how data can be transmitted through wireless communication. The first day provided a strong foundation in microcontroller programming and internet connectivity concepts.



On the second day, the workshop focused on controlling IoT devices through mobile applications using the Blynk App. Students learned how to install the Blynk application, configure the application using their Google accounts, and connect it with the ESP32 board. The Resource Person demonstrated how coding is integrated with IoT applications for automation purposes.

Participants successfully performed practical activities such as controlling LEDs using the mobile application. When the ON button was activated in the app, the light turned ON, and when the OFF button was clicked, the light turned OFF. Students also learned how to interface sensors with the ESP32 board and control them through internet connectivity. The sessions covered Wi-Fi configuration, network credentials, and the integration of sensors and applications for real-time IoT projects.

The workshop was highly interactive and beneficial for students, as it provided real-time practical exposure to IoT systems and automation technologies. The hands-on training enhanced students' understanding of embedded systems, wireless communication, and smart applications.

Outcome of the Workshop

- Students gained practical knowledge of IoT and embedded systems
- Participants learned programming and interfacing using ESP32 boards
- Students understood real-time IoT applications and automation techniques
- Knowledge about mobile app integration using Blynk App was enhanced
- Students developed confidence in working with sensors and wireless communication
- The workshop created awareness about career opportunities in IoT technologies

The workshop was a grand success and achieved all its intended objectives. The sessions conducted by the Resource Person provided valuable industry-oriented knowledge and practical exposure to students.

The workshop motivated participants to explore innovative IoT solutions and develop real-world smart applications.

Thanking You,

Sincerely,

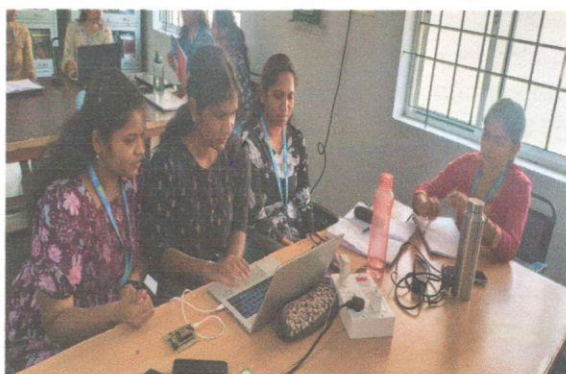
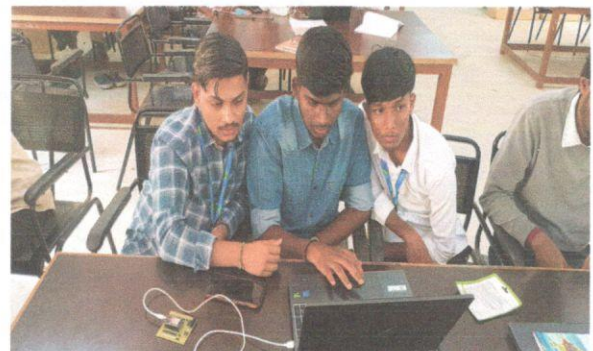
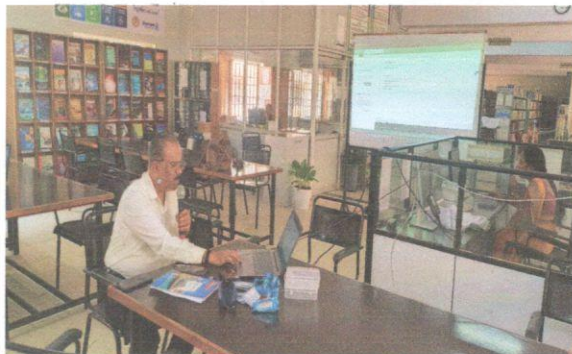
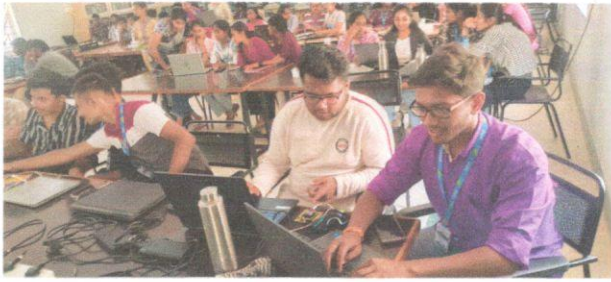
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1. C A R & EDC: *mal - k.v.*

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26/05/2024
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