


NANDHA ENGINEERING COLLEGE, AUTONOMOUS- ERODE-52



DEPARTMENT OF SCIENCE AND HUMANITIES



Activity		Introductory Domain Specific Workshop for First year Students	
Target Group	B.E – Computer Science Engineering (Internet of Things)		
Date	07.12.2024		
SDG Alignment	SDG- 4 Quality Education Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all		

EVENT REPORT

SESSION DETAILS:

DATE	TIME	Workshop Title	RESOURCE PERSONS
07.12.2024	9.15 am – 4.30 pm	Design and Development of IoT Nodes using ESP 32	Dr.V. Ananthanarayanan Associate Professor Department of CSE, Amritha School of Computing Coimbatore Dr.C. Arunkumar Assistant Professor (SG) Department of CSE, Amritha School of Computing Coimbatore

PARTICIPANTS DETAILS:

Students of First Year B.E – CSE (Internet of Things)	58
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Inauguration Agenda:

Welcome Address & Chief Guest Introduction	Mr. R.Thiruneelakkandan ,HoD- S & H
Key Note Address	Dr.U.S. Ragupathy, Principal
Session by	Dr.V. Ananthanarayanan & Dr.C. Arunkumar

Intended Outcomes:

By the end of this workshop, participants will be able to:

1. **Understand IoT Basics:** Define the concept of IoT (Internet of Things) and explain its components, architecture, and applications.
2. **Identify Hardware & Software:** Recognize the capabilities of the ESP32 microcontroller and its role in IoT systems.
3. **Set Up Development Tools:** Install and configure the necessary development environment, including IDEs (e.g., Arduino IDE or Platform IO) for ESP32 programming.
4. **Develop Simple IoT Nodes:** Write and upload basic firmware to the ESP32 to read sensors, control actuators, and establish communication.
5. **Implement Connectivity:** Demonstrate how to connect ESP32 to Wi-Fi and transmit data to a cloud server or IoT platform.

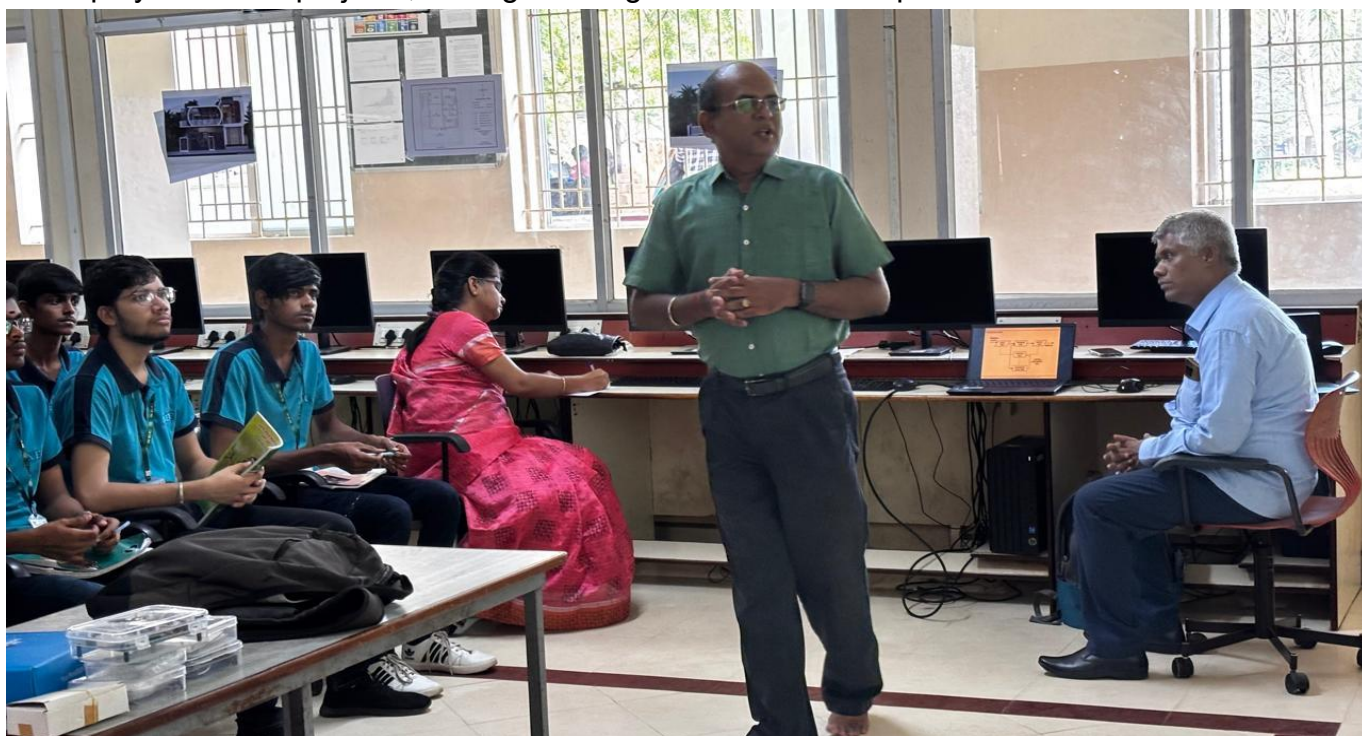
SDG Alignment:

The **Introductory Domain-Specific Workshop** for first-year engineering students aligns with **SDG 4: Quality Education** by fostering an inclusive, skill-oriented, and technology-driven learning environment. This workshop introduces students to foundational concepts in their respective engineering domains while emphasizing hands-on learning, critical thinking, and real-world applications. By integrating emerging technologies and sustainable practices, the workshop ensures that students gain practical knowledge relevant to industry and societal needs. Through interactive sessions, expert talks, and collaborative projects, it nurtures innovation and problem-solving skills, empowering students to contribute effectively to sustainable development.

About the session:

The **Introductory Workshop on Design and Development of IoT Nodes using ESP32** is an immersive program tailored for first-year undergraduate students, organized by the Department of Science and Humanities. This workshop is facilitated by the esteemed faculty members, **Dr. Anandhanarayanan** and **Dr. C. Arun umar**, who bring their extensive expertise in IoT and embedded systems to the forefront of this learning experience. Initially the resource persons gave a briefing about the objective of the workshop and the fundamentals IoT. Later the students are exposed to do hands-on training.

Key highlights of the workshop include configuring the ESP32 development environment, interfacing with sensors and actuators, establishing Wi-Fi connectivity, and building basic web servers. Students will also be introduced to essential IoT communication protocols and techniques for data logging and visualization. By the end of the workshop, participants will have the confidence to design and deploy basic IoT projects, setting the stage for advanced explorations in the field.



Dr.C.Arunkumar briefed the objective of the workshop and the fundamentals of IoT



Participants of the workshop

Students Feedback



"I loved the hands-on sessions where we got to build our own IoT devices. It was a great way to apply what we were learning in real-time. The practical aspects of the workshop were really valuable".

- **S. RITHANYA**



"The instructors were really knowledgeable and explained each topic in a clear and concise manner. They took time to answer all our questions, which made the learning experience much better."

- **KAVINRAJ**



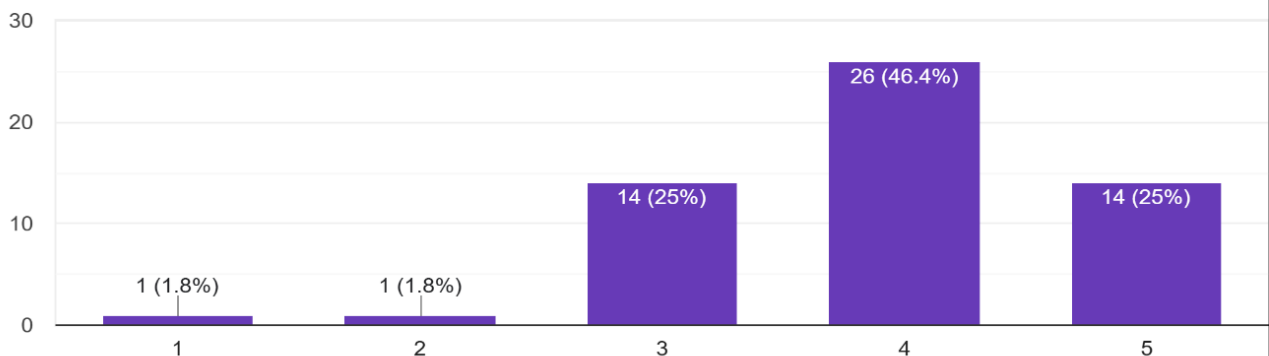
"The workshop did a great job of explaining the ESP32 setup process step by step. The instructors were patient, and the clear instructions helped me avoid any common setup errors".

-**JESRA BEGAM ABDUL RAHUMAN**

Feedback Analysis *(feedback collected through google forms)*

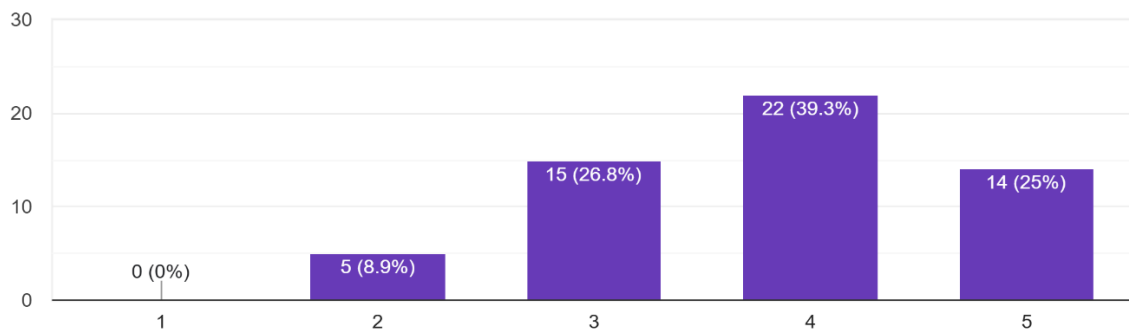
How would you rate the effectiveness of the speaker in delivering the workshop content and engaging the audience ?

56 responses



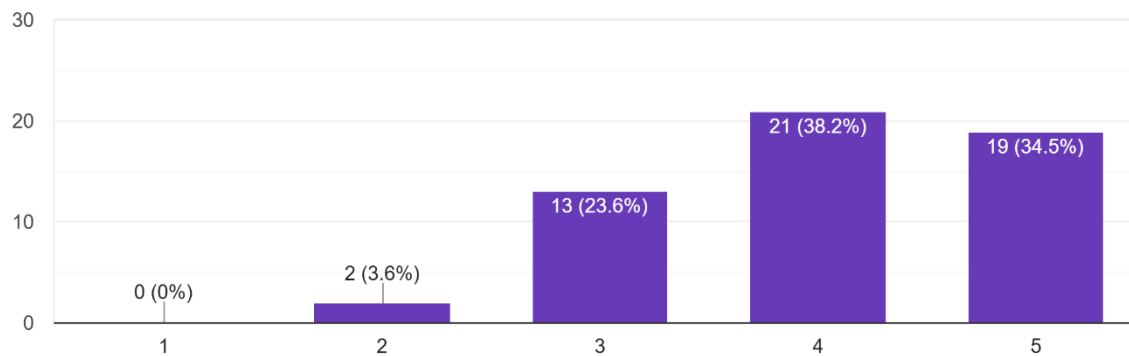
How relevant and useful did you find the workshop content in relation to your academic and professional interests?

56 responses



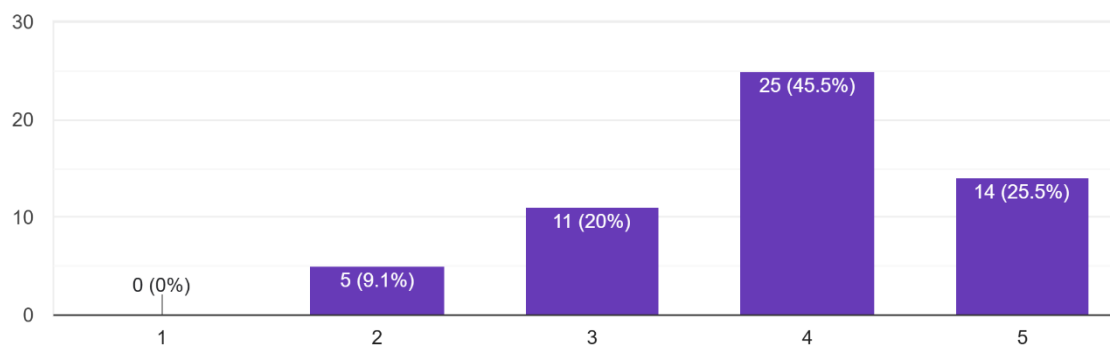
How likely are you to attend future workshops on IoT or related topics?

55 responses



How would you rate the hands-on experience provided during the workshop? Was it sufficient, and did it help you understand the concepts better?

55 responses



What suggestions do you have for improving the workshop content, structure, or delivery?

26 responses

No

Yes

All good

Need more workshops in same way

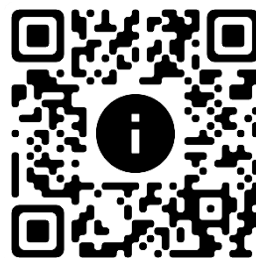
Nope

Delivery

I think monthly once give some workshop things because it's very helpful to us

skills

Event Published Institution's Social Media Handles: *(Facebook & Instagram)*





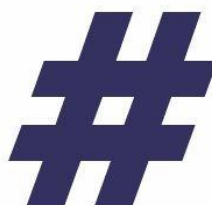
NANDHA

Engineering College (Autonomous)

(Affiliated to Anna University, Chennai, Approved by AICTE, Accredited by NBA & NAAC with A+ Grade)
Erode - 638 052.



DEPARTMENT OF
SCIENCE & HUMANITIES



**EXPERT
INSIGHTS**

(INTRODUCTORY WORKSHOP
FOR FIRST YEAR B.E./B.TECH)

'24

DESIGN AND DEPLOYMENT OF IOT NODES USING ESP32

4 QUALITY
EDUCATION



Dr. V. Ananthanarayanan

Associate Professor,
Department of CSE, Amrita School of Computing,
Coimbatore

December
07
2024



NEC- Block 3
IT Lab

CSE (IOT)



Dr. C. Arunkumar

Assistant Professor (SG),
Department of CSE, Amrita School of Computing,
Coimbatore