Continuing Education and Training
with
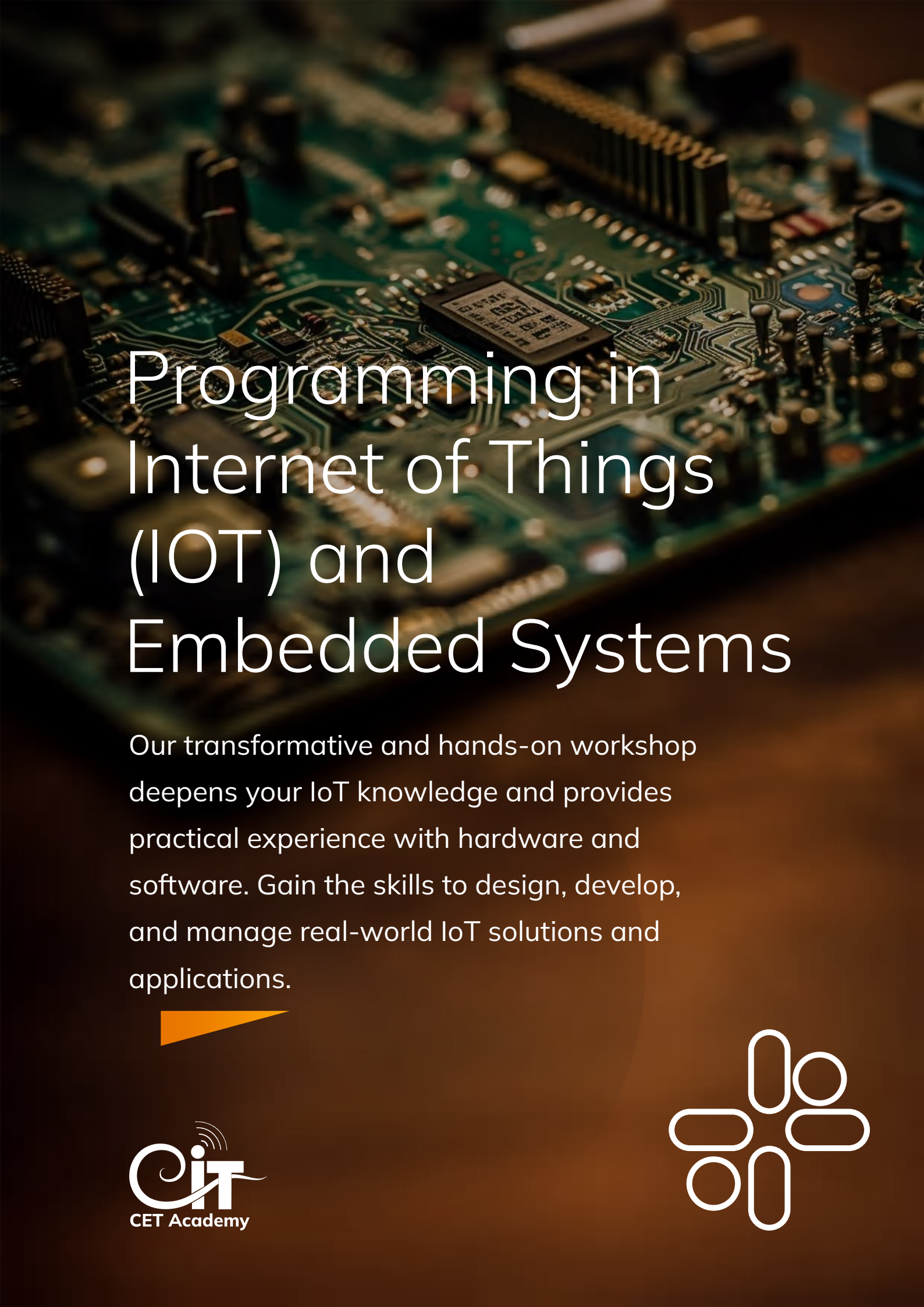
GCIT

Less Training More Application
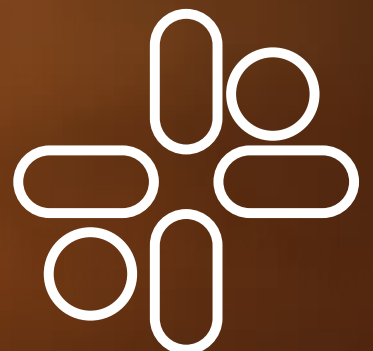
CET Academy

Programming in Internet of Things (IOT) and Embedded Systems

Our transformative and hands-on workshop deepens your IoT knowledge and provides practical experience with hardware and software. Gain the skills to design, develop, and manage real-world IoT solutions and applications.

CET Academy

Learning
OUTCOME

By the end of this course, you will be able to:

Explain IoT Fundamentals

1

Understand IoT Architecture and Technologies

2

Share Hands-On Experience
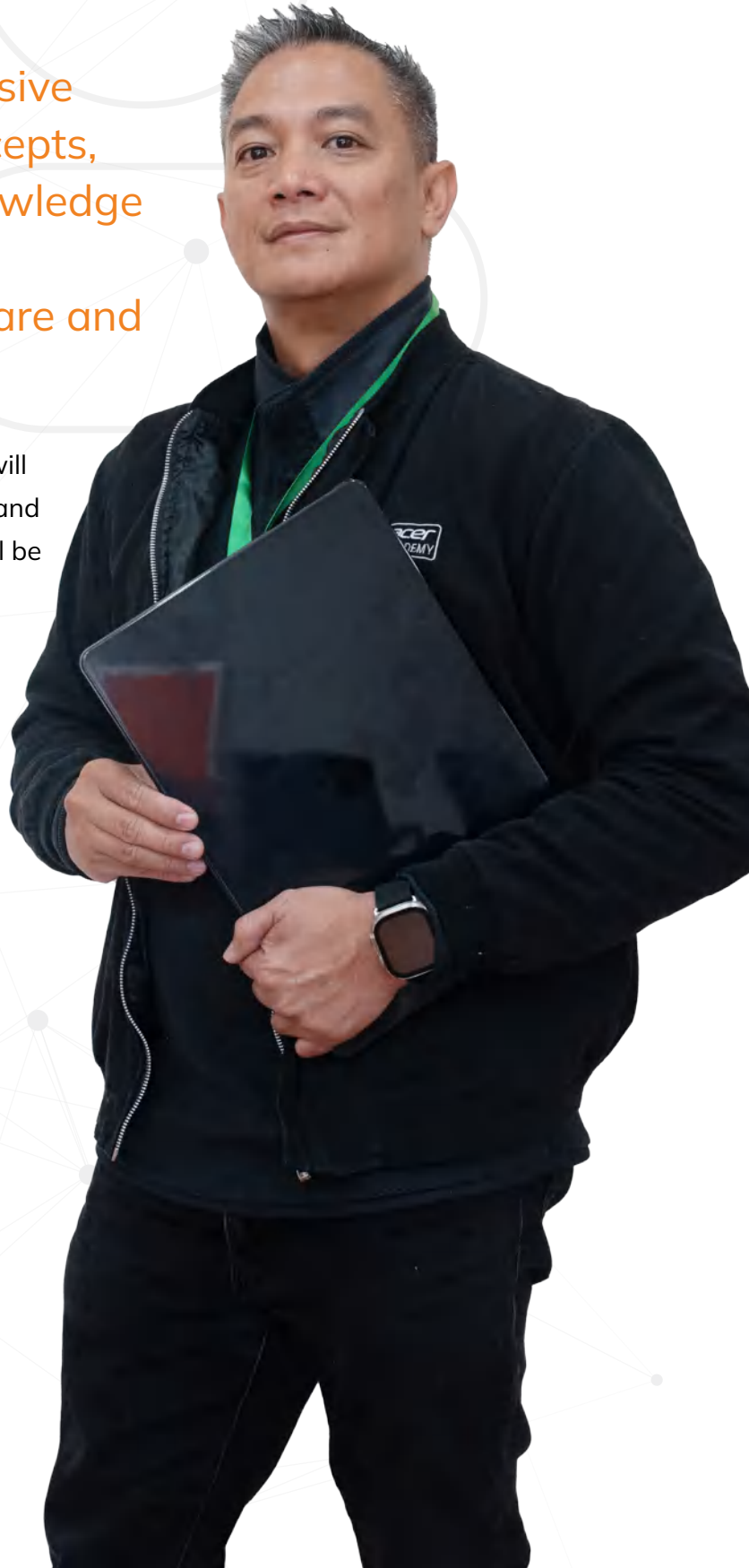
3

Develop IoT Applications

4

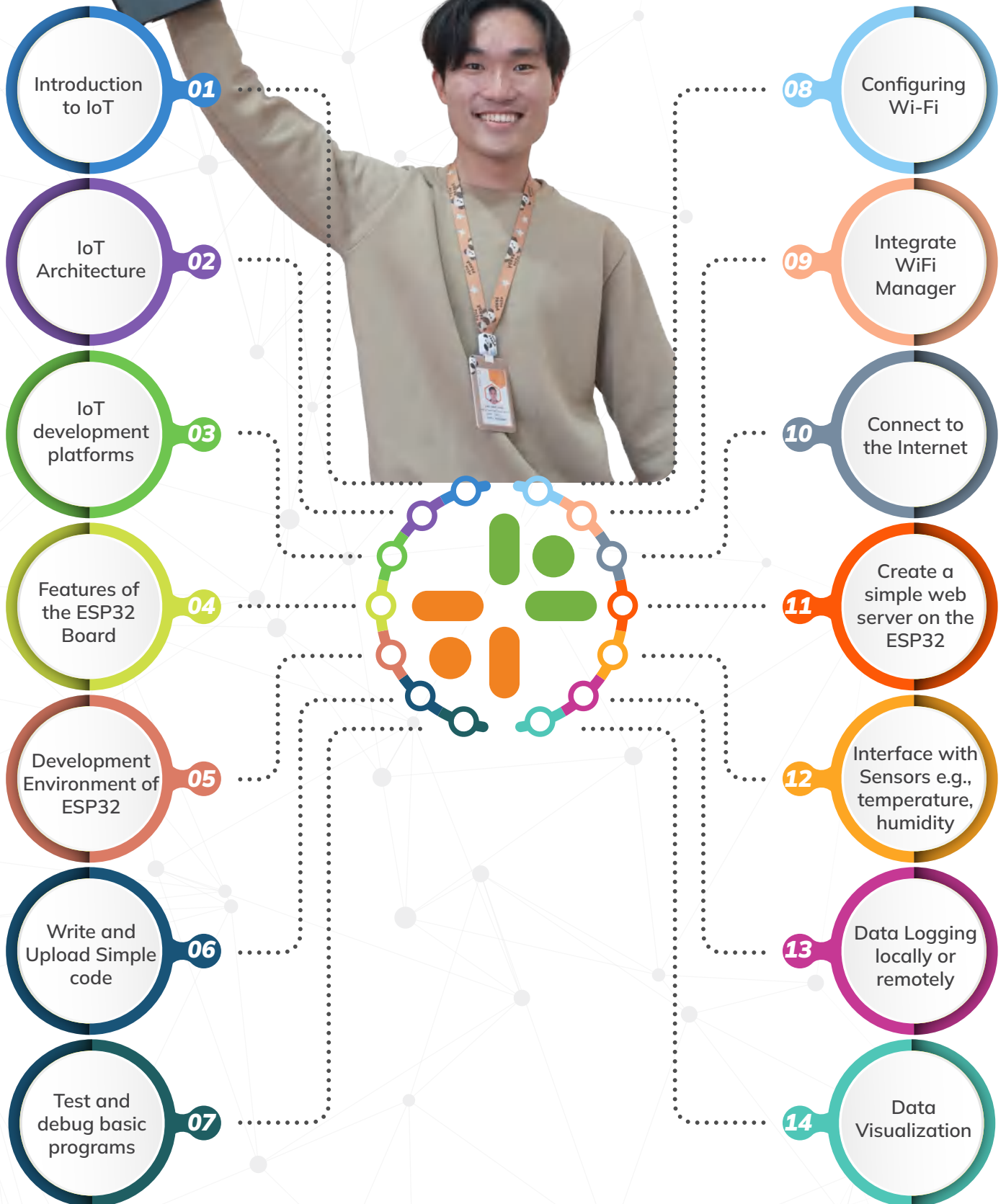**Implement IoT**

5

Collect, store, and analyze data generated by IoT devices

6

This workshop offers participants a comprehensive understanding of IoT concepts, combining theoretical knowledge with practical, hands-on experience in both hardware and software.

By the end of the workshop, participants will have the skills needed to design, develop, and implement effective IoT solutions. They will be fully equipped to apply these skills to real-world IoT projects, enabling them to create innovative and impactful applications in the rapidly evolving field of the Internet

Course
STRUCTURE

01 Introduction to IoT

02 IoT Architecture

03 IoT development platforms

04 Features of the ESP32 Board

05 Development Environment of ESP32

06 Write and Upload Simple code

07 Test and debug basic programs

08 Configuring Wi-Fi

09 Integrate WiFi Manager

10 Connect to the Internet

11 Create a simple web server on the ESP32

12 Interface with Sensors e.g., temperature, humidity

13 Data Logging locally or remotely

14 Data Visualization

An IoT workshop holds significant value for a variety of reasons, catering to the diverse needs of individuals and organizations interested in the rapidly growing field of Internet of Things technologies.

It imparts essential knowledge and equips participants with practical skills and up-to-date insights. This makes it an indispensable resource for anyone aiming to explore, implement, or advance their expertise in IoT, whether for personal development or to drive innovation within their organization.

Things To **KNOW**

Prerequisite:

- OS / ESP-IDF,Node.js, Wokwi simulator
- ESP32 / Arduino / RaspberryPi / IoT hardwares
- Technical Staff would be relavent

Class Information:

- Duration: 40 Hours
- Mode: Seminar / Face-to-Face
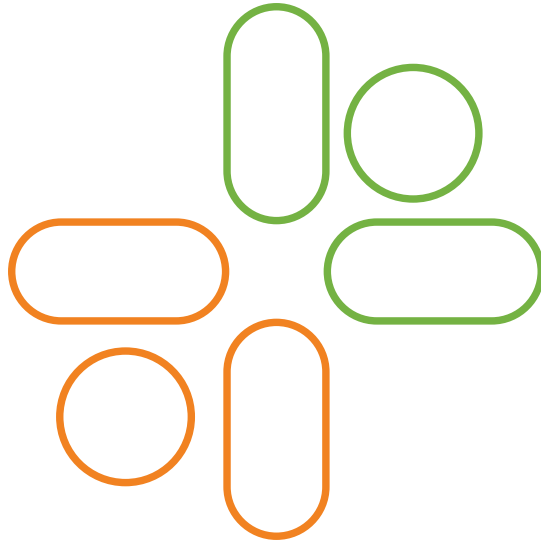
Minimum computer requirements:

- Windows 10 / 11 Operating System or later version **(MAC OS is not supported)**
- Dual-Core CPU at 1.4 GHz or higher (Intel i4 / i6 or equivalent)
- 15 GB disk space available
- 64-bit Processor
- 8 GB RAM
- Microsoft 2010 or above
- Connection to Internet with Wi-Fi access

Capable. Elevated. Thriving.

CET Academy

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