

**Soundarya Education Trust(R)**  
**SOUNDARYA INSTITUTE OF MANAGEMENT AND SCIENCE**  
Soundaryanagar, Sidedahalli, Hesaraghatta Main Road, Bangalore- 73  
**Internal Quality Assurance Cell(IQAC)**

Name of the MoU / linkage	Name of the institution / industry with whom the Mo U / linkage is made, with contact details	MoU start date	MoU End date
Proposal for research projects and collaboration	CISCO Networking Academy	08-04-2024	Till 2027

**MOU Title;** Proposal for research projects and collaboration

**Year/Date:** 08-04-2024

**Nature of the MOU;** MOU aims in providing skill enhancement training and other certification courses in IOT

Sl No	Date	Event Name	Co ordinator
01	16-05-2024	CAPACITY BUILDING PROGRAM IoT WORKSHOP	Mr. YATISH S J Mr Santhosh R S
02	31-05-2024	Championship cum workshop series on raspberry pi	Mr. YATISH S J Mr Santhosh R S



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**Internal Quality Assurance Cell (IQAC)**  
**Event Report for the academic Year 2024**

Name of the Department: BCA

Date 16-05-2024

Name of the Event : CAPACITY BUILDING PROGRAM IoT WORKSHOP

Event Coordinator/s : Mr. YATISH S J and Mr Santhosh R S

**Objectives:**

1. Provide introduction to Internet of Things (IoT)
2. Exposure to various sub-fields and technology stacks of IoT
3. Enable people to convert their IoT product idea into a working prototype
4. Provide thorough working knowledge of the Raspberry Pi Platform
5. Bring-up entrepreneurs and innovators by supporting them with investment and mentorship

**Brief Event Report:**

The first-year BCA students were the target audience for the workshop.

The top-performing teams from among the students who participated and were put into groups would be granted internship opportunities.

The IOT kit, which was given to each team, contained the following items:

- Micro USB,
- LED,
- Relay module,
- DHT11 sensor,
- PIR sensor,
- Breadboard,
- Jumper wires,
- ESP8266 node-MCU

As far as we are aware,

"The Internet of Things (IoT) is a system of interconnected computing devices, mechanical and digital machines, objects, animals, or people that are given unique identifiers and the capability to transfer data over a network without necessitating human-to-human or human-to-computer interaction.

This training equipped the IOT with everything needed to understand WHAT THE HACK THIS INTERNET OF THINGS IS.

The workshop involved the concepts to be taught to the students:

#### 1.INTRODUCTION TO IOT:

- What is Internet of Things ?
- Getting started with IoT
- Introduction to Internet of Things (IoT)
- Why as IOT?
- How IOT became 21st Century Hottest Topic
- How Internet of Things works
- How Things Talk to Internet

#### 2.IOT ARCHITECHTURE ESP8266 Node-MCU:

Hardware Introduction

- what is ESP8266 node-MCU
- Hardware knowledge
- Handshake with ESP8266
- Developing the environment
- Overview about the board
- Popularity & scope

#### 3.THE PIN DIAGRAM

- Introduction to PIN diagram
- Pin outputs and PIN inputs
- Feature that makes it difficult
- Analog and digital pinout

#### 4.CONTROLLING THE DIGITAL OUTPUT ENVIRONMENT

- Working : Going its details
- Types
- Programming LEDS
- Making circuits on breadboard & glowing patterns

#### 5.SENSORS

- what is Sensor?
- How sensors work?
- Knowing your sensors

**Enclosures:**  
**1. Invitation**

3-Day IoT Certification Workshop for first-year BCA students

# INTERNET OF THINGS

14th 15th & 16th NOV' 22 | 10 AM TO 5 PM

## AGENDA

- Introduction to IOT
- Architecture of IOT
- Introduction to Sensor
- Raspberry Pi
- Basic of Python
- Industry 4.0

### 3. Photos

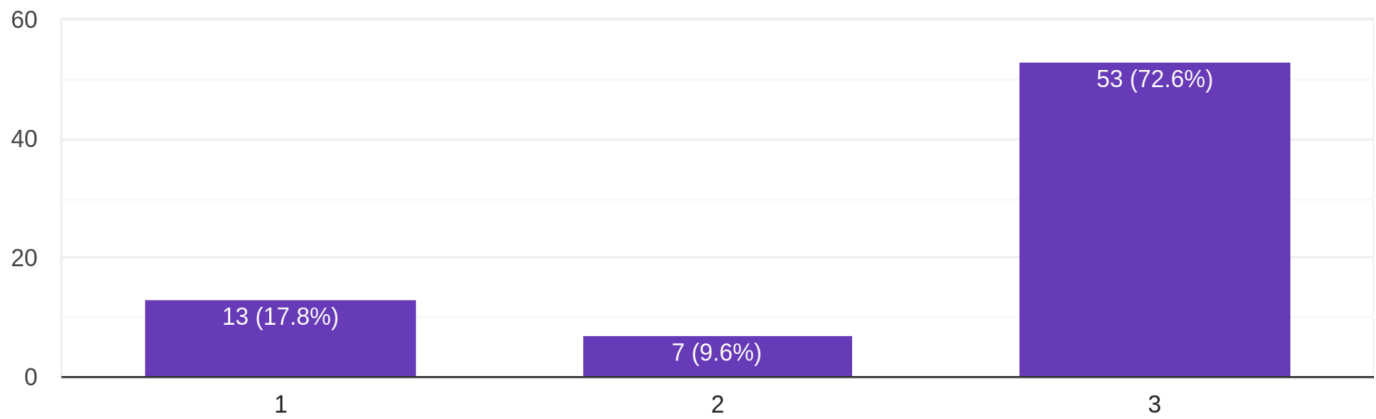


## 5. Any other information of the event

Analysis -

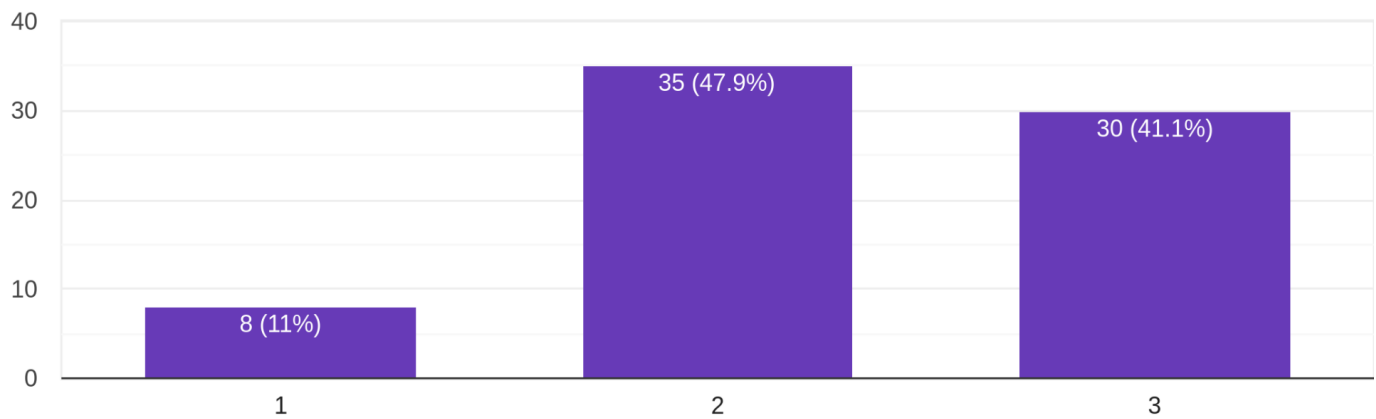
How satisfied are you with the teaching style?

73 responses



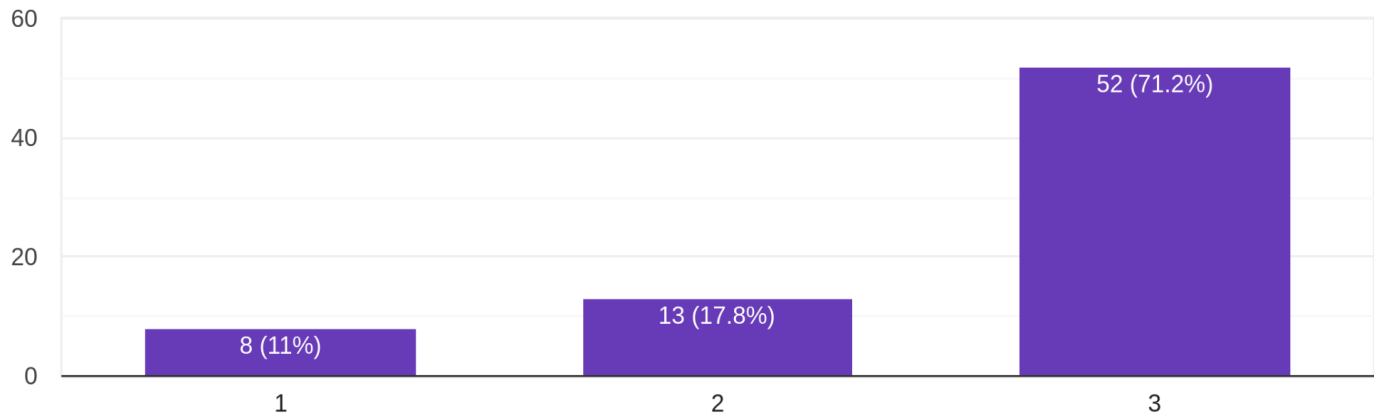
Were your resources/materials helpful? Were they too easy, too hard, or just right?

73 responses



## Did they answer your questions effectively?

73 responses



### Outcomes:

1. Current scenario/job opportunities of embedded industries.
2. Understanding the skill set required in a new employee in the embedded industry.
3. Understanding the robotics future and scope Understanding the different microcontrollers available in the industry & their use.
4. In-depth knowledge on design, construction and programming concepts involved in building an autonomous robot Learn & Interact with renowned Industry Experts.

**Principal**

**PRINCIPAL**

Soundarya Institute of Management & Science  
Soundarya Nagar, Sidedahalli,  
Nagasandra Post, Bangalore-73,





## Report on Raspberry Pi

About	
<b>Title of the talk</b>	Championship and workshop on Raspberry pi
<b>Resource Person(s)</b>	CICSO in Association with IOT Bombay
<b>Date</b>	31-05-2024
<b>Student Attended</b>	BCA 5 <sup>th</sup> semester Students
<b>Faculty coordinator(s)</b>	Yatish S J Santhosh R S

### Objective(s) & Outcome(s)

Objective(s) & Outcome(s)		
<b>Objective(s)</b>	<b>1</b>	Introduction to Raspberry Pi: To familiarize participants with the basics of Raspberry Pi, including its setup, programming, and applications in various fields.
	<b>2</b>	Encouraging Innovation: To inspire creativity and innovation by challenging participants to design and develop unique projects using Raspberry Pi.
	<b>3</b>	Collaboration and Teamwork: To foster collaboration and teamwork, encouraging participants to work in groups to brainstorm, design, and execute Raspberry Pi projects.



<b>Outcome(s)</b>	<b>1</b>	Foundational Knowledge of Raspberry Pi: Participants will gain a solid understanding of Raspberry Pi, including its hardware and software capabilities.
	<b>2</b>	Hands-On Project Experience: Attendees will leave with practical experience in building and programming their own Raspberry Pi projects, reinforcing their technical skills.
	<b>3</b>	Understanding of IoT and Automation: Participants will understand how to use Raspberry Pi for IoT applications and automation, with real-world project experience.



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Photos (Geo tag) and Brochures



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Institute of Management and Science



ELAN & DIVISION  
IIT HYDERABAD



Event Name: **Department of Computer Science**  
**IQAC & Research Promotion Cell**  
*presents*  
**CHAMPIONSHIP CUM WORKSHOP SERIES ON IOT WITH RASPBERRY PI**

powered by: **Anchor Embedded**  
**HT**  
WHERE ART & SCIENCE COLLIDES

In association with: **elan & division**  
Indian Institute of Technology, Hyderabad

**Attractions**

- LED Glow & Toggle
- Pattern generation on LED, Buzzer Interfacing, Bash Scripting on LINUX
- Human Detection using PIR
- Temperature & Humidity interfacing
- Showing Sensor values over SSH screen.
- Human Detection Monitor
- Connecting PI to WIFI
- IOT: Home Automation using PI
- IOT & Cloud: Data Logging Monitoring Sensor Data over Cloud
- IOT: Controlling GPIO from any part of the world

**Highlights**

- > Practical Hands on Session with industry experts.
- > Hardware tool kit will be given by team in a group of 10-11 members
- > Duration: 2 Weeks
- > Participant will get the certificate
- > System Requirement:  
Window (64 bit)OS/ MacOS, 5 gb ram  
Good speed Internet Connection

**SATGES**

1. Workshop will be in Campus
2. Hands on Classes
3. Competition for the participant
4. 30% participant will select for the International Championship
5. Certification process.

**CENTRE DETAILS**

On **31-05-2024**

