Acharya Institute of Technology

Department of ECE

Summer School -"Embedded systems and IoT "

Registration Form

ACHARYA INSTITUTES Date: 14/03/2023 to 21/03/2023 and 24/03/2023 to 25/03/2023

SI.No.	Email Address	Name	USN	Mobile Number	
51.NO.		Bole Swetha	1AY20EC015	8310613967	
1	boleb.20.beec@acharya.ac.in		1AY20EC016	6361931483	
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3	chandnir.20.beec@acharya.ac.in	Chandani Kumari	1AY20EC016	6362501501	
4	dilipb.20.beec@acharya.ac.in	Dilip Kumar B		7338035123	
5	divyar.20.beec@acharya.ac.in	Divya Dharshini R	1AY20EC027	9905365587	
6	manasam.20.beec@acharya.ac.in	Manasa B	1AY20EC043		
7	prathiks.20.beec@acharya.ac.in	Prathik Reddy	1AY20EC066	8792285951	
8	ritiks.20.beec@acharya.ac.in	Ritik Raj	1AY20EC071	8431518896	
9	shwetas.20.beec@acharya.ac.in	Shweta Patil	1AY20EC082	9632285560	
10	surajd.20.beec@acharya.ac.in	Suraj singh	1AY20EC087	6200176205	
11		Harshitha B R	1AY21EC411	8971500265	
12	harshithar.21.beec@acharya.ac.in chandrayappagaric.20.beec@acharya.ac.in		1AY20EC019	9182123393	
13	atula.20.beec@acharya.ac.in	ATUL KHUNTIA	1AY20EC009	8618324057	

Resource Person Names

	Resource Person Names				
1	sandeepkumark@acharya.ac.in	Sandeep Kumar K			
2	pranitanirajpalsapure@acharya.ac.in	Pranita Niraj Palsapure			
3	raghunath@acharya.ac.in	Raghunath B H			
4	mohan@acharya.ac.in	Mohan N			
5	suma2352@acharya.ac.in	Suma C			
6	trupti2534@acharya.ac.in	Kumbhar Trupti Ravikuma			
7	sumangala2520@acharya.ac.in	Sumangala			
8	shadakshari2501@acharya.ac.in	Shadakshari			
		,			
	Co-Ordinators				
1	mohan@acharya.ac.in	Mohan N			
2	suma2352@acharya.ac.in	Suma C			
3	trupti2534@acharya.ac.in	Kumbhar Trupti Ravikuma			

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Acharya Dr. Sarvepalli Radhakrishnan Road, Bangalore-560 107

DEPARTMENT OF ELECTRONICS AND COMMUNICATION

Report of

Summer School

On

"Embedded Systems and IOT"

Conducted by:

Department of Electronics and Communication Engineering **Acharya Institute of Technology**

Acharya Dr. Sarvepalli Radhakrishnan Road, Bengaluru -560 107







14th to 25th Mar, 2023

Venue: DSP Lab, ECE Department

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION

The Department of Electronics and Communication Engineering, Acharya Institute of Technology had organized a Summer School on "Embedded Systems and IOT" for first year ECE students.

About the Summer School

The workshop aimed at introducing the basic tools and technologies of embedded system, so as to cultivate among the students an interest in the area of embedded systems and IOT

The Session on the Internship began with Labview by Prof.Raghunath B H, Prof.Mohan N and Prof.Sumangala S J from 14th Mar 2023 to 15th Mar 2023. The Internship proceeded with the demonstration of Labview programming basic and building virtual instruments for various applications.

Introduction to Raspberry Pi3 was given followed by Installation of Raspbian operating system using ETCHER,basic python programming.Students were made familiar about various GPIO modes and programming to Interface various sensors and actuators to Raspberry Pi handled by Mr. Sandeep Kumar K, Mr.Shadakshari from 17th Mar 2023 to 18th Mar 2023.

Tinkercad tool with Arduino Uno sessions for interfacing various sensors and actuators to build embedded systems and small projects related to the same is handled by Mrs. Suma C and Mrs.Trupti on 20th Mar 2023.

Introduction to Node MCU was given followed by installation of libraries required for Arduino IDE compatibility and programming to Interface various sensors and actuators to Node MCU is handled by Mrs. Pranita N Palsapure and Mr.Sandeep Kumar K on 21st Mar 2023.

Images were captured using IP webcam application connected to Raspberry PI via WIFI network, These images were processed using OpenCV library on Raspberry PI. Also cloud platforms like Thingspeak, firebase were introduced to send Images and data to cloud. This session is conducted by Mr. Sandeep Kumar K on 23rd Mar 2023.

Problem statements related to Embedded system and IOT were assigned to students. Students worked on these problem statements under the supervision of mentors on 24th Mar and students presented on the same followed by demonstration on 25th Mar 2023.

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Highlights of the Summer School

- Interface I/O devices with NodeMCU, RaspberryPi in developing Embedded System Applications.
- Enhanced learning of embedded system applications through simulation using TinkerCad, Labview and Python programming.
- Team building and Communication skills through project-based learning and presentations.

Outcome of the program:

- Hands on exposure on embedded system and IoT
- · Apply intermediate and advance practices in Python, TinkerCad, NodeMCU and Raspberry-Pi
- To relate use of embedded system and IOT to given problem
- To interface input output devices with NodeMCU and RaspberryPi

Resource Persons:

- 1. Mr. Sandeep Kumar K Asst. Prof, Dept. of ECE, AIT
- 2. Mr. Raghunath B H Asst. Prof, Dept. of ECE, AIT
- 3. Mrs. Pranita Niraj Palsapure Asst. Prof, Dept. of ECE, AIT
- 4. Mr. Mohan N Asst. Prof, Dept. of ECE, AIT
- 5. Mrs. Suma C Asst. Prof, Dept. of ECE, AIT
- 6. Mrs. Kumbhar Trupti Asst. Prof, Dept. of ECE, AIT
- 7. Mr. Shadakshari Asst. Prof, Dept. of ECE, AIT
- 8. Mrs. Sumangala S J Asst. Prof, Dept. of ECE, AIT

Convener:

Dr. Rajeswari , Prof and Head, Dept. of ECE , AIT

Coordinators:

- 1. Mr. Mohan N, Asst. Prof., Mob.: 9008727782, mohan@acharya.ac.in
- 2. Mrs. Suma C, Asst. Prof., Mob.: 9739561456, suma2352@acharya.ac.in

3. Mrs. Kumbhar Trupti, Asst. Prof., Mob.: 9036393116, trupti2534@acharya.ac.in

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Quiz conducted at the end of every session using kahoot platform and all the responses are recorded for evaluation. A sample summary of quiz is shown below.

Objectives of the Summer School

- Gain Hands on experience on python, Tinker cad, NodeMCU, raspberry
- Interactive learning with embedded systems and IOT
- To instill the lifelong values of teamwork and individual responsibility

Registration Link/Form: https://forms.gle/nERBJArmL1enfuGT

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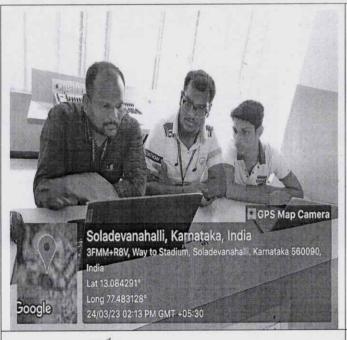
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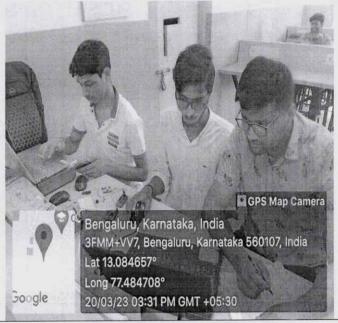


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Photograph of Sessions on RaspberryPi with Python









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Photographs taken during the Summer School

Keynote session by Dr. Rajeswari, Professor and HOD, Department of ECE





Photograph of Sessions on Labview





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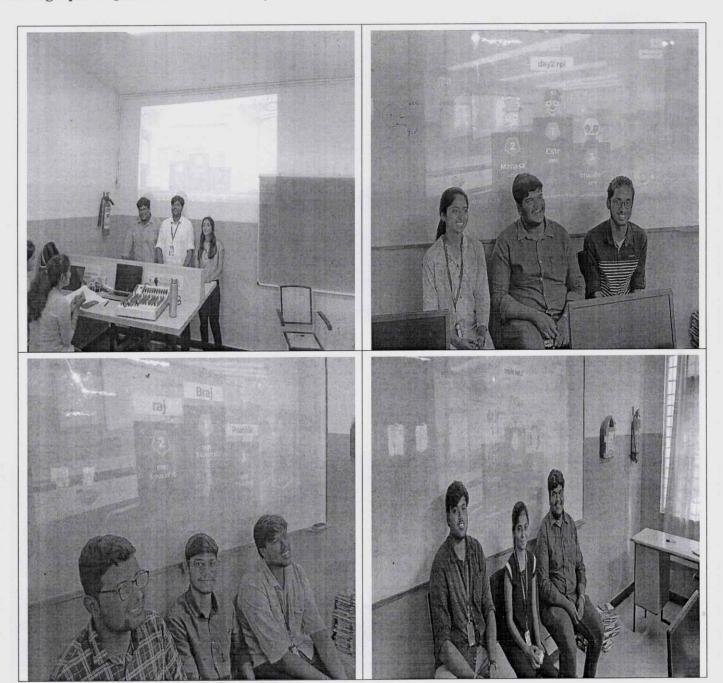
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Photograph of Quiz at the end of every session



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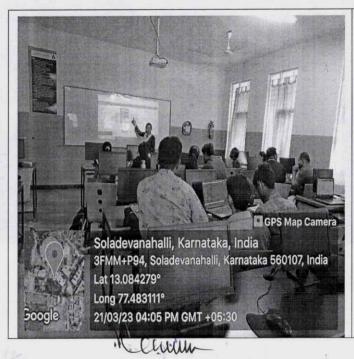
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Photograph of Sessions on Tinkercad



Photograph of Sessions on NodeMCU





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Photograph of Project presentation







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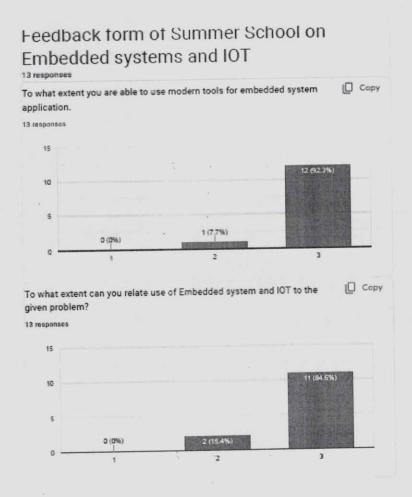
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Summer School feedback



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	Program Outcomes											
Outcomes	Engineering knowledge	Problem analysis	Design/development of solutions	Conduct investigations of complex problems	Modern tool usage	The engineer and society	Environment and sustainability	Ethics:	Individual and teamwork	Communication	Project management and finance	Life-long learning
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
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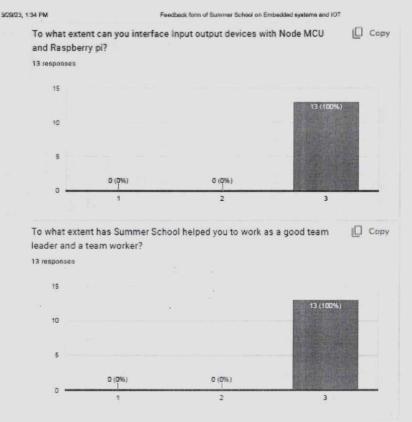
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Acharya Institute of Technology

Department of Electronics and Communication Engg.

in association with

Fasal (Wolkus Technology Solutions Private Limited), SiyaCon Technologies and IEEE







Cordially invites you to the Inaugural function of

"Summer Schools on Embedded Systems and IoT & Digital IC Design using Cadence"

14th March 2023, 10.00 AM, MBA Seminar Hall, AIT

PRESIDENT

Dr. Rajath Hegde M M Principal, Acharya Institute of Technology

GUEST OF HONOR

Prof. Marigowda C K

Vice-Principal, Acharya Institute of Technology

CONVENOR Dr. RAJESWARI

Professor & Head, Dept. of ECE, AIT

RESOURCE PERSONS / COORDINATORS

Prof. Sandeep Kumar K Prof. Pranita N Palsapure

Prof. Mohan N Prof. Raghunath B H

Prof. Suma C Prof. Shadakshari Dr. Jayalaxmi H

Dr. Asha CN

Prof. Nagapushpa K P Prof. Veena S K

Prof. Kumbhar Trupti

Prof. Sumangala S J

www.acharya.ac.in

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PROGRAM FLOW

Event	Time
Registration	9.30 AM
Welcome&Overviewof Summer School	10.00AM
Address by Guest of honor Prof. Marigowda C K	10.05AM
Presidential Address Dr. Rajath Hegde M M	10.10 AM
Address by HOD Dr.Rajeswari	10.15AM
Vote of Thanks	10.25 AM
Group Photo Assembly	10:30AM
First Session of Summer School	10.45 AM

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Acharya Dr. Sarvepalli Radhakrishnan Road, Soladevanahalli, Hesaraghatta Main Road, Bengaluru- 560107



SUMMER SCHOOL ON "EMBEDDED SYSTEM AND IOT"

Target Audience: 6th Sem students

Date: March 14th To 21st & 24th To 25th, 2023 | Time: 10:30 AM - 04:30 PM

Venue: ECF Labs

If online: Meeting link to be provided

If offline: Location to be given along with google maps link to location

ABOUT THE PROGRAM:

Objectives of the Program:

- Interface I/O devices with NodeMCU. RaspberryPi in developing Embedded System Applications.
- Enhanced learning of embedded system applications through simulation using TinkerCad, Labview and Python programming.
- Team building and Communication skills through project-based learning and presentations.

Expected Outcome of the Program:

Hands on exposure on embedded system and IoT

Apply intermediate and advance practices in Python, ThinkerCad, NodeMCU and Responsery Pi

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Acharya Dr. Sarvepalli Radhakrishnan Road, Soldevanahalli, Bengaluru-560 107.

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING



has attended the summer school on "Embedded system and IOT" organized by Department of ECE, Acharya Institute of Technology, Bengaluru in association with Fasal (Wolkus Technology Solutions Private Limited) and AIT- IEEE student branch, from 14/03/2023 to 25/03/2023 with a consolidated score of ...85%....

Dr. Rajeswari H.O.D , Dept .of. ECE Prof. Marigowda C K

Dr. Rajath Hegde M M Principal, AIT







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Dr. Rajeswari H.O.D , Dept .of. ECE Prof. Marigowda C K

Dr. Rajath Hegde M M Principal, AIT







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with Fasal (Wolkus Technology Solutions Private Limited) and AIT- IEEE student

branch, from 14/03/2023 to 25/03/2023 with a consolidated score of ...70%....

Dr. Rajeswari H.O.D , Dept .of. ECE Prof. Marigowda C K

Dr. Rajath Hegde M M Principal, AIT







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branch, from 14/03/2023 to 25/03/2023 with a consolidated score of ...88%....

Dr. Rajeswari H.O.D , Dept .of. ECE Prof. Marigowda C K

Dr. Rajath Hegde M M Principal, AIT







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Dr. Rajeswari H.O.D , Dept .of. ECE Prof. Marigowda C K Vice-Principal, AIT

Dr. Rajath Hegde M M Principal, AIT







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Dr. Rajeswari H.O.D , Dept .of. ECE Prof. Marigowda C K

Dr. Rajath Hegde M M Principal, AIT







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Dr. Rajath Hegde M M Principal, AIT







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Dr. Rajeswari H.O.D , Dept .of. ECE Prof. Marigowda C K

Vice-Principal, AIT

Dr. Rajath Hegde M M Principal, AIT







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Dr. Rajeswari H.O.D , Dept .of. ECE Prof. Marigowda C K

Dr. Rajath Hegde M M Principal, AIT







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Dr. Rajeswari H.O.D , Dept .of. ECE Prof. Marigowda C K Vice-Principal, AIT Dr. Rajath Hegde M M Principal, AIT







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Dr. Rajeswari H.O.D , Dept .of. ECE Prof. Marigowda C K

Dr. Rajath Hegde M M Principal, AIT







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