



# LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING (AUTONOMOUS)

Accredited by NAAC with 'A' Grade, ISO 9001:2015 Certified Institution

Approved by AICTE, New Delhi and Affiliated to JNTUK, Kakinada

L.B. REDDY NAGAR, MYLAVARAM, NTR DIST., A.P.-521 230.

[hodads@lbrce.ac.in](mailto:hodads@lbrce.ac.in) , [ads@lbrce.ac.in](mailto:ads@lbrce.ac.in), Phone: 08659-222933, Fax: 08659-222931

**DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND DATA SCIENCE**

Report on

## **5 Day workshop on Internet of Things(IoT) during 7-11 August 2023**

The Department of Artificial Intelligence & Data Science had organized a 5-day workshop on “**Internet of Things(IoT)**” for III Year B. Tech Students. The session was inaugurated by Dr. O Rama Devi, HoD, Dept. of AI & DS and the resource person Mr.S. Pradeep Kumar CEO of Smart Home & Industrial Solutions, Vijayawada.

**Resource Person:** Mr.S.Pradeep Kumar, CEO Smart Home & Industrial Solutions.

**Name of Convener:** Dr. O. Rama Devi, Professor & HoD, Dept. of AI & DS

**Name of Coordinators:** Mr.K.Sudhakar, Sr.Asst.Professor,

Mr.P.Narendra Babu, Senior Assistant Professor,

Mr.M.Kishore Kumar, Assistant Professor

**Target Audience:** III Year B.Tech. Students

**Total no of Participants:** 141

**Objective:** - Providing students the technology beyond the curriculum, which is Internet of Things with hands-on sessions for 5 days.

### **Resource Person Spot light on the topics and implementation:**

- Enabled students with IoT Concepts with proper syllabus according to the programme schedule
- Kits per batch will provide technical insight while doing hands-on session
- Provided 18 projects for both A&B Sections
- All projects to be executed during the stipulated time for both sections.



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## Program Schedule for the workshop

<b>Timings: 9:00AM to 4:00PM</b>	
<b>Day 1</b>	<p><b>Session 1:</b> <b>Introduction &amp; Getting Started with IoT, Arduino IDE and Node MCU</b></p> <ul style="list-style-type: none"> <li>• Introduction to IoT and its Applications</li> <li>• Arduino IDE: Introduction and its working with digital and Analog pins</li> <li>• Node MCU: Introduction and its working</li> </ul> <p><b>Session 2(Hands-on):</b> <b>Configuration of NodeMCU</b></p> <ul style="list-style-type: none"> <li>• Configuration of Node MCU on Arduino IDE and IoT Cloud.</li> <li>• IoT Cloud: Creation of Dashboard and Data streams</li> <li>• IoT App: Configuration on Smart Phone</li> </ul>
<b>Day 2</b>	<p><b>Session 3:</b> <b>Communication of Node MCU with Sensors and Actuators</b></p> <ul style="list-style-type: none"> <li>• Introduction to Sensors and Actuators</li> <li>• Communication of Node MCU with Sensors and Actuators(RGB Led, Temperature &amp; Humidity Sensor, Relay etc.)</li> </ul> <p><b>Session 4(Hands-on):</b> <b>Programming of Node MCU</b></p> <ul style="list-style-type: none"> <li>• Program to read and update sensors data over cloud</li> <li>• Program to continuously monitor sensor readings through internet</li> <li>• IoT App configuration to get notification on smart phone</li> </ul>
<b>Day 3</b>	<p><b>Session 5:</b> <b>Introduction to IoT Cloud Platforms:</b></p> <ul style="list-style-type: none"> <li>• Introduction to different IoT Cloud Platforms</li> <li>• Setting up a Google Firebase Environment for IoT Applications</li> <li>• Introduction to Python Libraries for IoT Clouds</li> </ul> <p><b>Session 6(Hands-on):</b> <b>Communication</b></p> <ul style="list-style-type: none"> <li>• Communication of IoT applications with Google firebase cloud</li> <li>• Communication and data visualization using Python</li> </ul>



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<b>Day 4</b>	<b>Session 7:</b> <b>Creating IoT System using Thingspeak Platform</b> <ul style="list-style-type: none"><li>• Introduction to Thingspeak Cloud</li><li>• Creating dashboard with indicators and real time data streaming plots</li><li>• Enabling data visualization</li></ul> <b>Session 8(Hands-on):</b> <b>Accessing Sensors data with Thingspeak Cloud</b> <ul style="list-style-type: none"><li>• Download and export collected sensor data</li><li>• Collaborate and share your data with others</li><li>• Accessing your IoT system using mobile phone</li></ul>
<b>Day 5</b>	<b>Project Ideas Discussion and Implementation</b>

We provide kit for each batch while conducting workshop (each batch carries 4 members)

Workshop requirements: Individual PC



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## IMAGE GALLERY





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**Resource Person S Pradeep Kumar,  
Principal Dr K Appa Rao, HoD Dr O Rama Devi**



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GPS Map Camera

Mylavaram, Andhra Pradesh, India

LBR College Building, Bhadrachalam Road, Mylavaram, Andhra Pradesh

521230, India

Lat 16.749302°

Long 80.634722°

07/08/23 10:29 AM GMT +05:30



**Dr O Rama Devi addressing the students**



# LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING (AUTONOMOUS)

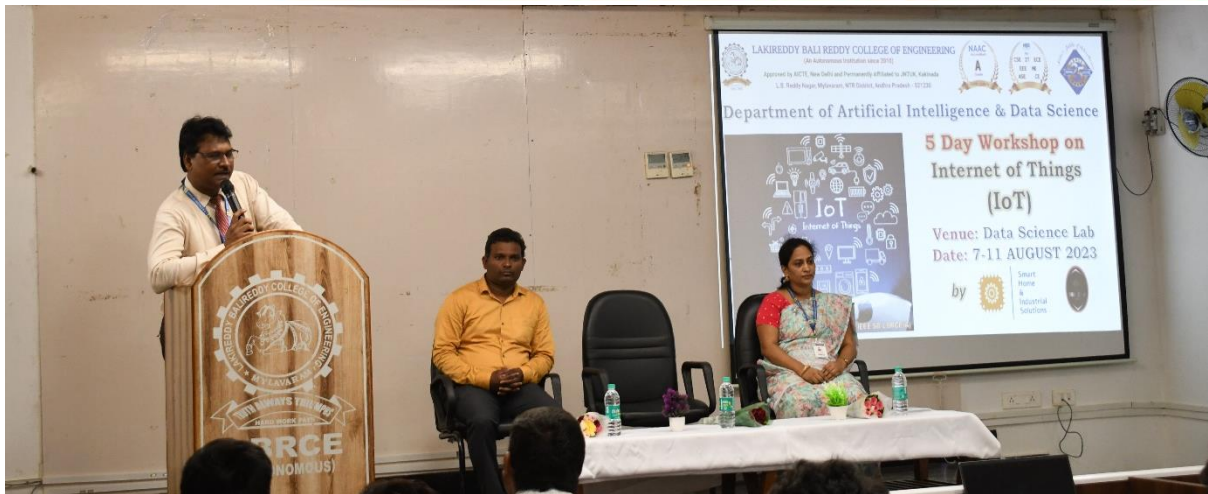
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Principal Dr K Appa Rao addressing the students





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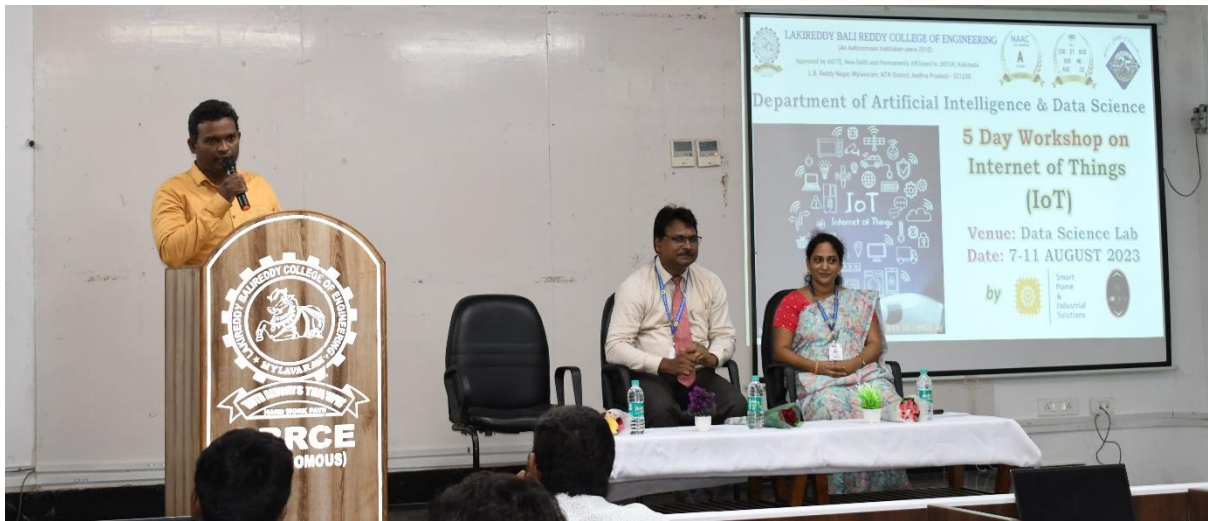
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Resource Person S Pradeep Kumar Addressing the students







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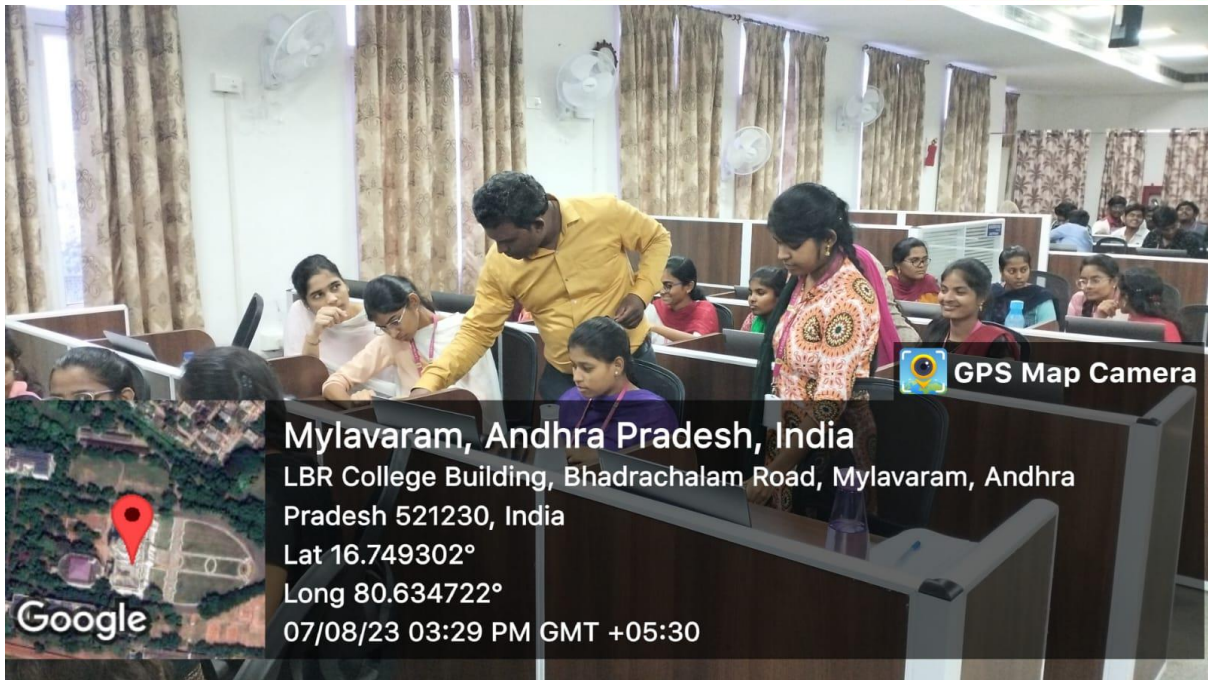
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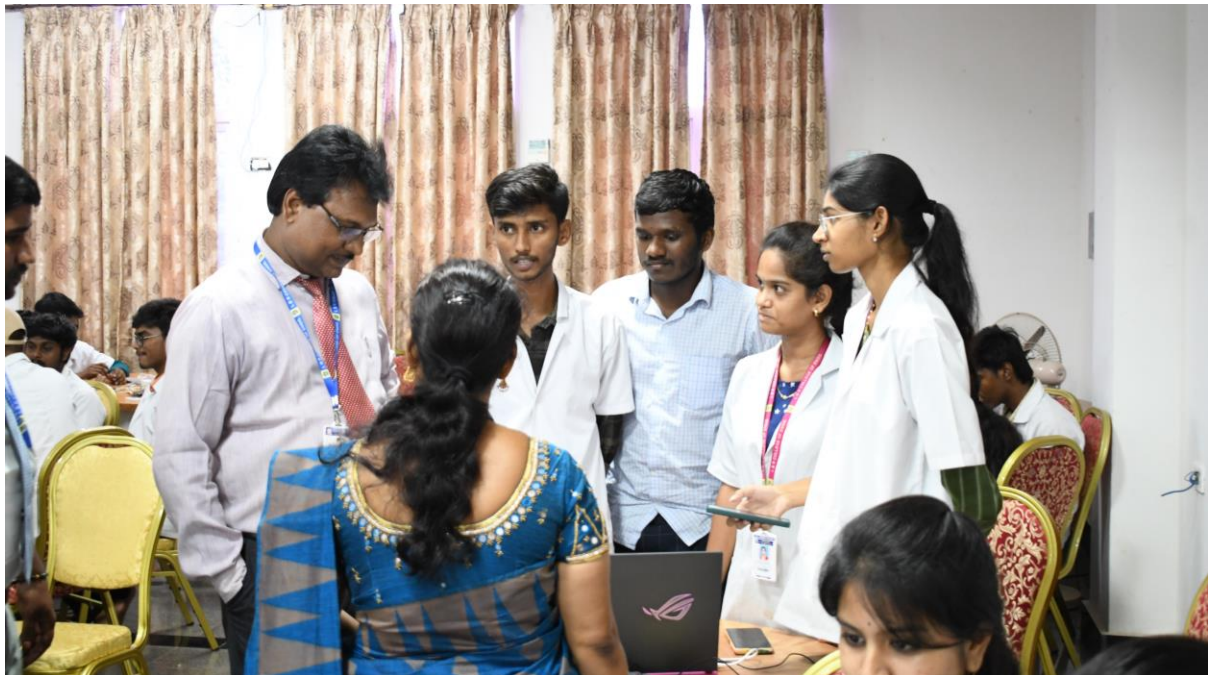
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**Resource Person S Pradeep Kumar explaining project to the students**



**Principal Dr K Appa Rao, Dr O Rama Devi, HoD listening to the students Projects**



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**Dr O Rama Devi addressing the students on valedictory function**



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**S Pradeep Kumar, Resource Person addressing the students on Valedictory function**



**Principal Dr K Appa Rao distributing the certificates to the students participated and completed projects in IoT.**



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**Principal Dr K Appa Rao distributing the certificates to the students participated and completed projects in IoT.**



**S Pradeep Kumar has been felicitated by Principal Dr K Appa Rao, HoD Dr O Rama Devi.**

**Dr.O.Rama Devi**  
Head of the Department