Two Days Workshop on "Designing IoT Applications"

August 2nd and 3rd, 2023

A Report

Organized by
Department of Information Technology
&
Department of Mechanical Engineering

In Association with

IoBIT solutions Pvt Limited.

Sri Venkateswara College of Engineering(Autonomous)
Department of Information Technology
Pennalur, Sriperumbudur Taluk,
Tamilnadu- 602 117

Submitted to the principal

[signature] 22/11/23

[signature] 24/11/23

SRI VENKATESWARA COLLEGE OF ENGINEERING

Two Days Workshop on "Designing IoT Applications"

Organized by

Department of Information Technology
&
Department of Mechanical Engineering

In association with IoBIT Solutions India Pvt Ltd,Bengaluru

A Report

The Department of Information Technology and Mechanical Engineering organized **Two days workshop on "Designing IoT applications" on 2/8/2023 and 3/08/2023.** The Programme was inaugurated by Mr. Dr.S.Ramesh Babu, Professor and Head, Department of mechanical Engineering, Sri Venkateswara College Of Engineering in the presence of Dr.V.Vidhya HOD/IT. Ms.R.Saktheeswari, Assistant professor, IT and Mr.Arul, Assistant professor, ME welcomed all participants and guest and delivered welcome address.

The workshop titled "Designing IoT Applications" was conducted with the aim of providing faculty members with a comprehensive understanding of the Internet of Things (IoT) landscape and equipping them with the knowledge and skills required to design and develop IoT applications. The workshop was organized as part of interdisciplinary research programmes and brought together faculty members from various backgrounds of engineering.
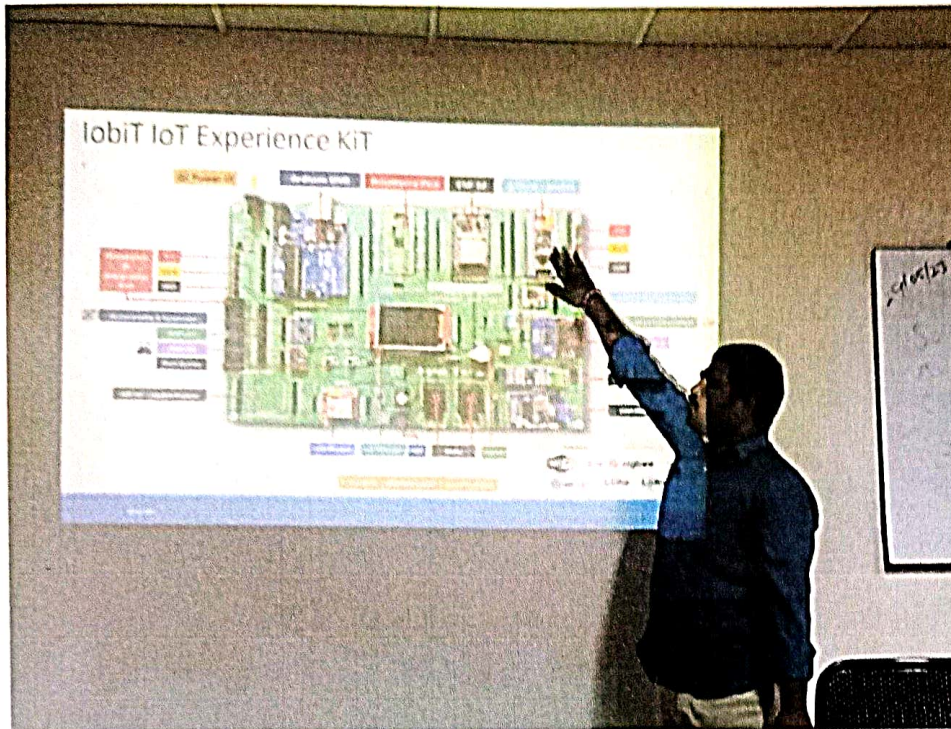
The workshop's primary objectives were as follows:

- To introduce participants to the fundamental concepts of IoT and its applications.
- To provide hands-on experience in designing and developing IoT applications.
- To explore various IoT platforms, tools, and technologies.
- To foster networking and knowledge exchange among participants.

Agenda and Sessions

The workshop spanned two days and included a diverse range of sessions, including both theoretical presentations and practical hands-on exercises. The sessions were structured as follows:

1. **Introduction to IoT:** The workshop began with an overview of IoT, its significance in various industries, and the potential it offers for innovation. The session focused on the core components of IoT systems and the challenges associated with designing and implementing IoT applications.
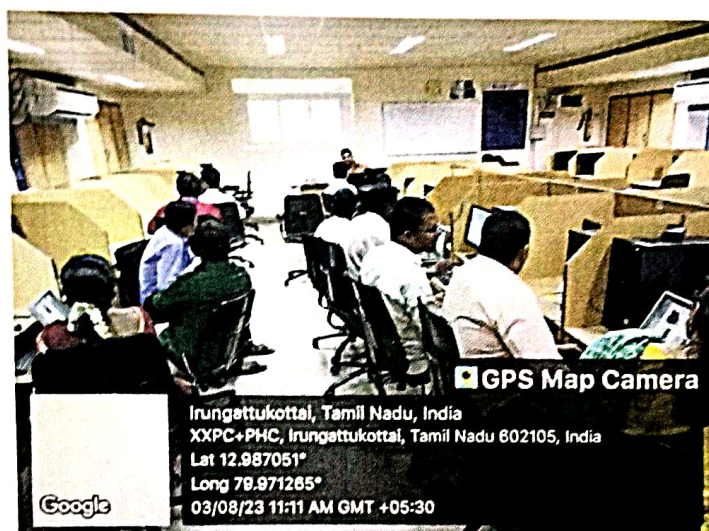

IoBiT IoT Kit introduction

2. **IoT Architecture and Communication Protocols:** Participants learned about the architecture of IoT systems, including edge devices, communication protocols (such as MQTT and HTTP), and cloud platforms. The session emphasized the importance of efficient data communication and security in IoT applications.

Exploring IoT Communication Protocols.

3. **Sensors and Actuators:** This session delved into the types of sensors and actuators commonly used in IoT applications. Participants gained insights into how these components gather data and trigger actions in real-world scenarios.

4. **Hands-on Workshop: Building a Simple IoT System:** In this practical session, participants worked on designing and implementing a basic IoT application using a microcontroller, sensors, and a cloud platform. This exercise provided hands-on experience in setting up a simple IoT system.

5. **IoT Platforms and Tools:** Participants explored different IoT platforms and tools available for application development, data visualization, and analytics. The session covered both open-source and commercial solutions.

Faculty practicing Data Visualization in Cloud

6. **Advanced IoT Applications: Case Studies:** This session showcased real-world examples of advanced IoT applications, such as smart cities, healthcare monitoring, and industrial automation. Participants gained insights into the diverse applications of IoT technology.

Outcomes:

The "Designing IoT Applications" workshop successfully achieved its objectives by providing participants with a comprehensive understanding of IoT concepts, hands-on experience in application development, and exposure to a variety of IoT tools and platforms. Participants appreciated the interactive nature of the workshop, the practical exercises, and the opportunity to network with professionals from diverse fields.

The workshop not only enriched participants' knowledge of IoT but also inspired them to explore innovative solutions in their respective domains using IoT technology. As a result of the workshop, participants gained the confidence to embark on their own IoT projects and contribute to the growing field of IoT applications.

The success of the workshop encourages the departments to continue organizing similar events that empower participants with cutting-edge skills and knowledge in emerging technologies. We extend our gratitude to Mr.Karthikeyan, Technical Head, IoBit solutions who shared his expertise and insights, making the workshop both informative and engaging.

The purpose of this workshop was to offer faculty members and research scholars a chance to enhance their understanding in the field of IoT. The participants responded positively to the program. They found both the lecture sessions and the practical sessions to be highly valuable. In closing, we extend our sincere gratitude to our management and Principal for their unwavering support, including financial assistance, which facilitated the successful execution of the program.

R.Saktheeswari,AP/INT
Mr.M.ArulKumar AP/MEC
Dr.K.Suresh Assoc.Prof/INT
Coordinators

Dr. V.Vidhya
HOD / INT

Dr.S.RameshBabu
HOD / MEC

Dr. S. RAMESH BABU, M.E., Ph.D
Professor & Head
Department of Mechanical Engineering
Sri Venkateswara College of Engineering
Pennalur, Sriperumbudur (TK) - 602117.
Tamilnadu, INDIA.

Two Days Workshop on "Designing IoT Applications"

Duration: August 2nd and 3rd, 2023

Participants List

S.No	Department	Faculty	Staff
1	Automobile Engineering	1	1
2	Civil Engineering	-	1
3.	Computer Science Engineering	1	5
4	Electrical And Electronics Engineering	2	1
5.	Electronics And Communication Engineering	2	-
6.	Information Technology	5	-
7.	Mechanical Engineering	3	6
8.	Marine Engineering	2	-
		16	14

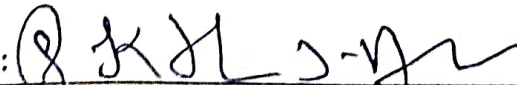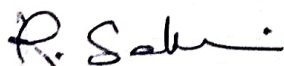| S.No	Participant Name	Designation	Department
1	Mr.Ranjith V	Assistant professor	Information Technology
2	Dr.A.Kala	Associate professor	Information Technology
3	Dr.Arulmozhi S	Assistant professor	Electrical And Electronics Engineering
4	Dr. D. Amudhavalli	Assistant professor	Electrical And Electronics Engineering
5	Mr.GURUSAMY V	Associate professor	Marine Engineering
6	Dr.U.Magarajan	Assistant professor	Mechanical Engineering
7	Dr.A.Saravanan	Assistant professor	Mechanical Engineering
8	Mr.J Senthil Kumar	Instructor	Computer Science Engineering
9	Mr.Rajkumar S	Instructor	Computer Science Engineering
10	Ms.Meenakshi K	Lab assistant	Computer Science Engineering
11	Ms.Shobana K	Lab assistant	Computer Science Engineering
12	Ms.Sowmiya S	Instructor	Computer Science Engineering
13.	Ms.Ramesh.B	Instructor	Electrical And Electronics Engineering
14.	Dr.P.Sharon Femi	Associate professor	Information Technology
15.	Mr.L.K.Balaji Vignesh	Assistant professor	Electronics And Communication Engineering
16.	Dr.Bindhu	Associate professor	Electronics And Communication Engineering
17.	Ms.Balurani. K	Junior assistant	Mechanical Engineering
18.	Mr.E Raman	Instructor	Mechanical Engineering
19.	Mr.V Seenu	Instructor	Mechanical Engineering
20.	Mr.A.Baskaran	Instructor	Mechanical Engineering
21.	Mr.R Ramesh	Mechanic	Automobile Engineering
22.	Mr.Praveenkumar V	Assistant professor	Information Technology
23.	Mr.J Baskaran	Instructor	Mechanical Engineering
24.	Mr.Siva Alagesh S	Assistant professor	Information Technology
25.	Dinesh Kumar K	Instructor	Mechanical Engineering
26.	Dr S RAJALAKSHMI	Associate professor	Computer Science Engineering
27.	Ms.S.Bhuvaneswari	Instructor	Civil Engineering
28.	Mr.Sakthivel R	Assistant professor	Automobile Engineering
29.	Dr.V.Sridharan	Associate professor	Mechanical Engineering
30.	Mr.G.Ramesh Kannan	Assistant professor	Marine Engineering

VALEDICTORY FUNCTION

Participants receiving certificate from Mr.Karthikeyan, Technical Head, IoBit solutions.
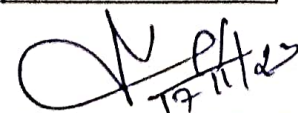
SRI VENKATESWARA COLLEGE OF ENGINEERING

FEEDBACK FROM THE SPEAKER - GUEST LECTURE

DEPARTMENT : Information Technology

Name of the Speaker	: S. KARTHIKEYAN
Designation	: TECHNICAL HEAD.
Institution/University/Organisation	: IoBIT SOLUTIONS
Mobile / E-mail	: 8608501021
Title of the Lecture	: IOT APPLICATIONS
Date	: 2/8/23 - 3/8/23
Time	:
Venue	:
Comments by the Speaker	: All ~~best~~ gino.
Suggestions for improvement	: Need to Extend the workshop days to cover more Usecases.
Signature of the Speaker	:

Signature of Coordinator

Signature of HOD