

**A Report on Two-Days Workshop on  
"Empowering Real-time Solutions through IOT, AI, and Cloud Computing"  
Organized by Department of Computer Science & Engineering  
in association with ISTE Student Chapter  
on 15.11.2024 & 18.11.2024**



**Report Submitted by: Dr. G. Arunkumar, Associate Professor, Department of Computer Science & Engineering.**  
**Resource Persons Details:** Mrs. A. Priyadarasani, Team Lead, CIC Private Limited, Tharamani, Chennai; Dr. G. Arun Kumar, Associate Professor, Department of Computer Science & Engineering; Dr. K. Sudhakar., Senior Assistant Professor, Department of Computer Science & Engineering, MITS.  
**Attended: Third year CSE Students from MITS. (Total Count: 63)**  
**Venue : Seminar Hall – A, MITS**  
**Mode of Conduct: Offline**  
**Report Received on 25.11.2024.**  
**Inauguration**

The Department of Computer Science & Engineering at MITS, in association with the ISTE Student Chapter, organized an offline workshop titled *"Empowering Real-Time Solutions through IoT, Artificial Intelligence, and Cloud Computing"* for III-year CSE students on November 15 and 18, 2024. A total of 63 enthusiastic students participated in the event.

The inaugural session began at 9:18 AM with an introduction to the workshop, highlighting its focus on cutting-edge technologies. Dr. K. Sudhakar, Senior Assistant Professor, welcomed the audience, emphasizing the significance of IoT and AI in shaping future innovations. The HOD-CSE, Dr. M. SreeDevi, delivered opening remarks, urging students to build skills in emerging technologies such as AI, Machine Learning, and IoT.

The Vice Principal of Academics, Dr. Ramanathan, encouraged students to engage with professional bodies and utilize departmental and institutional workshops. Dr. G. Arunkumar, Associate professor introduced the chief guest, and he delivered the important of attending this workshop. The chief guest, Mrs. A. Priyadarasani, Team Lead at CIC Private Limited, Chennai, delivered the inaugural address, inspiring attendees to overcome challenges in developing AI-based applications.

**Event Schedule:**

| S.No | Date                | Topics to be Discussed<br>FN (9.00 AM – 12.30 PM)  | Topics to be Discussed<br>AN (1.30 PM – 4.30 PM)  | No of Session |
|------|---------------------|--|---|---------------|
| 1    | 15-11 -24<br>Friday | <b>Inaugural function</b><br>&<br>Introduction to IOT, Arduino UNO, Raspberry Pi boards, Actuators, different Sensors for solving real time problems<br><br>Introduction to Cloud Computing, Various Cloud Deployment Model, Various Cloud Service Model, Cloud Security | <b>Hands on Session on IOT</b><br>Implementation of real-world problem solving through online platform tools using Arduino and Raspberry pi<br><br><b>Hands on Session on Cloud Computing</b><br>Create Login – Microsoft Azure, Azure Virtual Machines, Azure Virtual Desktop. | 3             |

|   |                    |  |   |   |
|---|--------------------|--|---|---|
| 2 | 18-11-24<br>Monday | Introduction to Artificial Intelligence, Exploration on CODEIUM AI Tools | <b>Hands on Session</b><br>CODEIUM Tools Dashboard, Components and Configuration. Real-time Data Analysis using CODEIUM<br><br><b>Valedictory function &amp; Certificate distribution</b> | 3 |
|---|--------------------|--|---|---|

### DAY 1- SESSION: 1

The Day 1 Session 1 is handled by Dr. G. Arunkumar, Associate Professor, Department of Computer Science & Science, MITS, discussed about "Real-Time Solutions through IoT" and he covered the following topics.

- Introduction to IoT
- Hardware for IoT
- Realtime Communication in IoT
- Security and Privacy
- IoT Applications

### DAY 1- SESSION: 2

The Day 1 Session 2 is handled by Dr. K. Sudhakar, Senior Assistant Professor, Department of Computer Science & Science, MITS, discussed about "Cutting Edge Technology on Cloud Computing" and he covered the following topics.

- Introduction to Cloud Computing
- Cloud Computing Architecture
- Various Deployment Model
- Various Service Model
- Cloud Computing Latest Tools

### DAY 1- SESSION: 3

Day 1 Session 3 provided hands-on training on Internet of Things which includes the IoT environment settings, various sensor configurations and implemented few realtime applications. The cloud computing hands-on training also provided which includes the setting up the cloud computing environment, creating virtual server and cloud live migration.

### DAY 2- SESSION: 1 & 2

The Day 1 Session 1 and 2 is handled by Mrs. A. Priyadarasani, Team Lead, CIC Private Limited, Tharamani, Chennai, discussed about "Real-Time Solutions through Artificial Intelligence" and he covered the following topics.

- Introduction to AI
- Human Vs AI
- Artificial Intelligence Vs Machine Learning Vs Deep Learning
- Real time challenges with AI
- Latest AI Tools used in Industry

### DAY 2- SESSION: 3

- Day 2 Session 3 provided hands-on training on "AI Tools and Their Real-Time Use through CODEIUM tool which includes CODEIUM Tool installation, settings and configurations, working with CODEIUM tool, implementing real time application using CODEIUM AI tool.

### Vote of Thanks:

The **Workshop Coordinator, Dr. G. Arunkumar, Associate Professor, Dept. of CSE**, concluded the session. He proposed the vote of thanks by appreciating the Management, Principal, Vice Principal, Head of the Department/CSE, Resource Persons, faculty members for wonderfully organized this workshop. And he also thanked to all participants.

## Outcome:

The outcomes of this workshop are

### 1. Understanding IoT, AI, and Cloud Computing

- Student received the comprehensive knowledge of IoT components, AI concepts, and cloud platforms.
- Integration of these technologies for real-time problem-solving.

### 2. Hands-On Experience

- Practical implementation of IoT devices (sensors, actuators, microcontrollers).
- Real-time data collection, processing, and visualization on cloud platforms.
- Application of AI models to analyze and predict outcomes from IoT data.

### 3. Cloud Integration

- Uploading and managing IoT data on cloud platforms like AWS IoT, Google Cloud IoT.
- Creating real-time dashboards for data visualization and decision-making.

### 4. AI in Real-Time Solutions

- Understanding and applying AI techniques like machine learning, predictive analytics, and computer vision.
- Edge AI concepts for low-latency processing.

### 5. IoT Secure System Development

- Basics of IoT security: encryption, authentication, and data integrity.
- Using blockchain or secure cloud practices to ensure data privacy.
- Overall, the outcomes of this workshop are students got real time exposure with hands on training in emerging area such as Artificial Intelligence, IoT and Cloud computing.

