



MIT

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE
(Deemed to be University under section 3 of UGC Act, 1956)

Madanapalle-517325, Andhra Pradesh, India.



A Report on

**“ A 2-Day Workshop on Data Engineering
and Gen AI “**

Organized by

Department of Data Science in collaboration with
“ISTE” on 10th & 11th August 2026

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ISTE
(Indian Society for Technical Education)

In Association with

A 2-Day Workshop on
DATA ENGINEERING
AND
GEN AI

DATES
10 & 11
AUGUST 2026

VENUE
SRB 117
(Smart Class Room), MITS

DURATION
2 DAYS

RESOURCE PERSON
G. ANJANI KUMAR
Sr. Software Engineer,
Careerschool HR solutions Pvt. Ltd.

Organized by
DEPARTMENT OF
CSE - DATA SCIENCE

Faculty Coordinators:
Mrs Roopa, B Bhaskar
Asistant professors, Dept. of CSE- DS

Learn • Build • Innovate • Transform

Report Submitted by: Mrs Roopa R, Assistant Professor, Department of Data Science

Resource Persons:

- Mr. G. Anjani Kumar, Sr. Software Engineer, Careerschool HR solutions Pvt. Ltd..

Participants: B. Tech III Year CSD students

Total No of Students: 80

Venue: SRB-117

Mode Of Conduct: Offline

Objective

- To introduce students to the fundamentals and practical applications of data engineering.
- To provide an overview of data science concepts and their role in extracting meaningful insights from data.
- To strengthen students' understanding of SQL queries and their application in data handling and analysis.
- To provide practical exposure to Kafka as a tool for handling real-time data streams.
- To enable students to apply the concepts learned through a hands-on mini project on a live chat application.

Introduction

Madanapalle Institute of Technology & Science (MITS), through the Department of CSE – Data Science in association with ISTE, organized a two-day workshop titled “Data Engineering and Gen AI” on 10 and 11 August 2026. The workshop was conducted at SRB 117 (Smart Class Room), MITS, with G. Anjani Kumar, Sr. Software Engineer, Careerschool HR solutions Pvt. Ltd., serving as the resource person.

The workshop was designed to provide students with practical exposure to important technologies and concepts used in modern data-driven applications. Across the two days, the sessions covered Data Engineering, Data Science, SQL queries, and real-time data processing using Kafka. The workshop emphasized learning through practical examples and hands-on implementation.

A key component of the workshop was a mini project titled “Live Chat”, developed using Kafka. The project provided students with an opportunity to understand how a real-time messaging

application can be implemented using a streaming-oriented tool and helped connect the concepts discussed during the sessions with a practical application.



Program Overview and Execution

The workshop commenced with an introductory session on the relevance of data engineering and data science in contemporary software and data-driven systems. The resource person explained the major concepts in a practical and application-oriented manner, enabling students to relate theoretical foundations to real-world use cases.

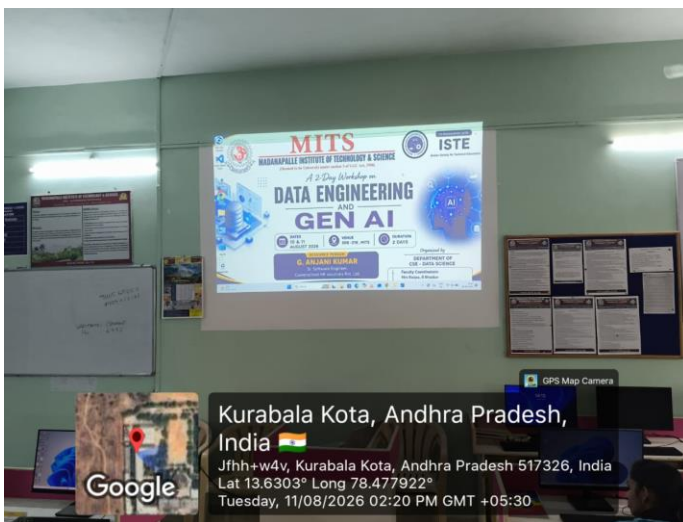
Special attention was given to SQL queries and their importance in working with structured data. Students were exposed to query-based data retrieval and manipulation concepts through examples and practical exercises. The sessions then progressed towards real-time data processing, where Kafka was introduced as the tool used for the hands-on mini project.

Day 1 – Data Engineering, Data Science and SQL

- Introduction to Data Engineering and its role in modern data-driven systems.
- Overview of Data Science and the process of deriving useful information and insights from data.
- Understanding the relationship between data engineering and data science workflows.
- Introduction to SQL and the importance of queries in accessing and working with structured data.
- Hands-on practice with SQL queries and application-oriented examples.

Day 2 – Kafka and Mini Project: “Live Chat”

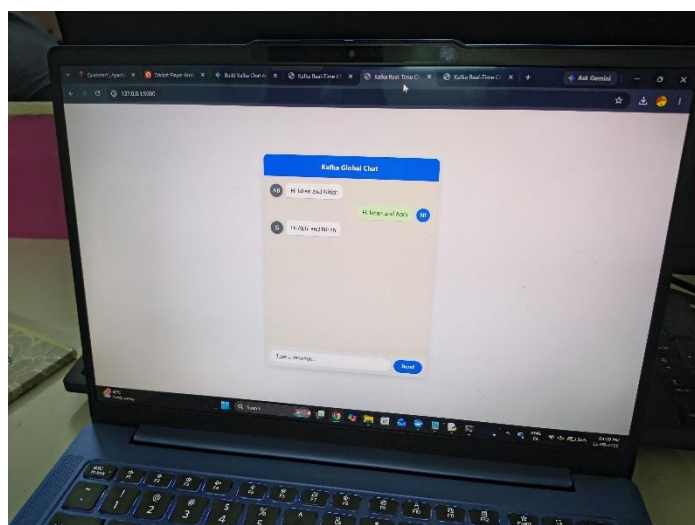
- Introduction to Kafka and its use in real-time data and message-streaming applications.
- Understanding the role of real-time message flow in application development.
- Hands-on implementation of a mini project titled “Live Chat” using Kafka.
- Connecting the concepts of data engineering and real-time processing through the mini project.
- Practical interaction, troubleshooting, and demonstration of the completed mini project.



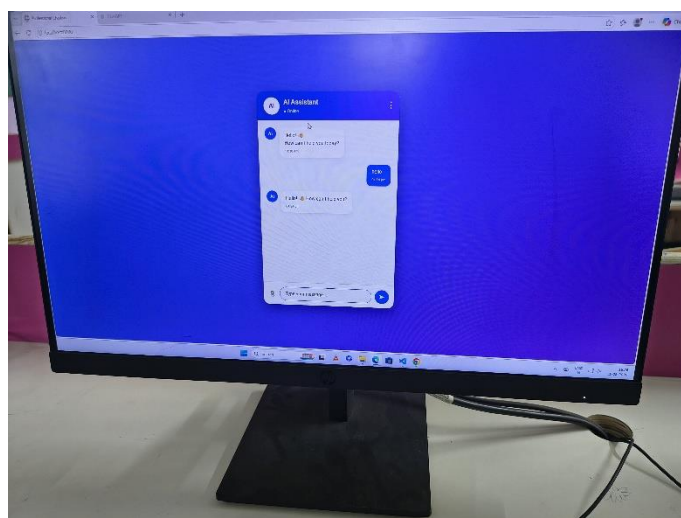
Mini Project: “Live Chat” Using Kafka

As part of the practical component, students developed a mini project called “Live Chat” using Kafka. The project demonstrated the use of Kafka for real-time message exchange. Through the implementation, students gained practical exposure to the flow of messages in a real-time application and understood how concepts from data engineering can be applied to build interactive data-driven systems.

The mini project served as an effective learning activity because it connected the workshop’s theoretical discussions with a practical implementation. Students were able to work with a real-time use case and observe the role of a streaming tool in supporting continuous communication.



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Key Outcomes

- Students gained a foundational understanding of Data Engineering and Data Science.
- Participants improved their ability to write and understand SQL queries for working with structured data.
- Students received practical exposure to Kafka and real-time data processing concepts.
- Participants successfully worked on a mini project, “Live Chat”, using Kafka.
- The hands-on sessions helped students connect theoretical concepts with a practical real-time application.
- The workshop enhanced students’ awareness of technologies and skills relevant to modern data-driven application development.

Interactive Learning and Student Participation

The workshop followed a practical and interactive approach, with students engaging with the resource person during the technical sessions and hands-on activities. The SQL exercises and Kafka-based mini project provided opportunities for students to apply the concepts being discussed. The implementation of the “Live Chat” project particularly encouraged students to understand real-time data flow through practical experimentation.

Acknowledgement

The Department of CSE (Data Science), expresses its sincere gratitude to the management and ISTE for their support in organizing the workshop. The department also thanks the resource person, G. Anjani Kumar, for sharing practical knowledge and guiding the students through the technical sessions and hands-on mini project.