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Workshop on Data Driven AI: Structures and Algorithms

The Department of **Artificial Intelligence and Machine Learning** organised a **Workshop** titled **Data Driven AI: Structures and Algorithms** on **11-11-2025** at **11 AM**, in **MVJCE, Bangalore**.

The following faculty members from the Department of AI & ML were present during the lecture:

- Prof. Susmitha M.N. – Head of Department
- Prof. Sanjivani Tipe – Assistant Professor
- Prof. Amit Kumar – Assistant Professor
- Prof. Ankita Mishra – Assistant Professor
- Prof. Suruthi S. – Assistant Professor
- Prof. Sreethu S. – Assistant Professor

Objectives of the Event

- Strengthen Data Structure and Algorithm Concept in the ML context.
- Connect classroom learning with real industry needs through practical AIML applications.
- Provide clarity on AIML applications
- Create collaborative learning environments to help students move from theory to real-world application.

Day	Time	Session Details
Tuesday, November 11 2025	10 - 11 am 1 - 3 pm	Welcome Address and Introduction to the Tool Hands-on Session

Table 1: Schedule of the Event

Event Overview

Session 1

The event, including all students of AIML, CG, DS, began at 11 AM with a formal greeting and introduction of the speaker, **Mr. Nahar Singh (Continental, Head of Data and Machine Learning Engineering)**. The session started with basic concepts of machine learning, such as:

Machine Learning History and Introduction to ML

- The need to study Data Structure
- The relationship between Data Structure and ML
- Types of ML and its classification in detail
- Pillars/Jars Of Data Science
- The working of ML
- Application of ML
- Hands-on using Python

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Figure 1: Lecture session

Figure 2: Lecture session

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Figure 3: Lecture session

Figure 4: Lecture session

Session 2

The practical session included:

- Importing and manipulating datasets using NumPy and Pandas
- Data visualization using Matplotlib
- Training and evaluating machine learning models using scikit-learn
- Understanding model accuracy and generalization

Outcomes and Impact

- Understand how data is structured and processed in AI systems.
- Apply machine learning algorithms in real-time on datasets.
- Build and evaluate models using Python.
- Recognize the importance of clean data and efficient algorithms.
- Gain confidence in working with Jupyter Notebook for AI tasks

Conclusions

The session was attended by 150 students of AIML, CG, and DS. The workshop successfully enhanced students' understanding of the practical connection between data structures, algorithms, and AI model performance. The session was informative, interactive, and helpful in strengthening both conceptual clarity and hands-on skills. Students expressed that such workshops help prepare them for future research and industry-level AI projects.

Report by: Prof Sanjivani Tipe

Affiliation: Assistant Professor in the Department of AIML Engineering,

MVJ College of Engineering