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Workshop on SA × AI: Building Intelligence in First Principles

The department of **Computer Science and Design in collaboration with the Department of AIML and the Department of Computer Science and Engineering-Data Science** organised a **Workshop** titled **DSA × AI: Building Intelligence in First Principles** on **22-09-2025** at **10:30 a.m.**, in **M. V. Jayaraman Auditorium**.

Objectives of the Event

The objectives of the event were as follows:

- To explore the intersection of Data Structures and Algorithms (DSA) and Artificial Intelligence (AI), and how they can be combined to build intelligent systems.
- To learn how to design and develop intelligent systems that can solve complex problems using DSA and AI techniques.
- To understand how to apply first principles thinking to build intelligent systems that are robust, scalable, and efficient.
- To develop problem-solving skills using DSA and AI techniques, and to learn how to approach complex problems in a structured and methodical way.
- To provide hands-on experience with implementing DSA and AI algorithms, and to learn how to use popular AI frameworks and libraries to build intelligent systems.

Event Overview

The event commenced at 10:30 a.m. with a welcome address, followed by an engaging session by Rohan Singh Poona, SDE-2 @ Microsoft. The presentation covered key areas, including the application of Data Structures and Algorithms (DSA) in Artificial Intelligence, with a focus on building intelligence. To illustrate the practical relevance of DSA, Rohan took the example of the Swiggy application, demonstrating how efficient data structures and algorithms can enhance user experience, optimise delivery routes, and improve overall system performance. With 422 participants

Day	Time	Session Details
Monday, September 22 2025	10.30 am-10.35 am 10.35am - 12.30 pm	Welcome Address Introduction to DSA
Monday, September 22 2025	1.30 pm-3.30 pm	Demonstration of DSA with AI

Table 1: Schedule of the Event

showing keen interest, the session sparked active participation during interactive segments and QA rounds, providing valuable insights into the subject matter.

Figure 1: Honouring the Guest

(a) Guest addressing the audience

(b) Student Interaction

Outcomes and Impact

The session on "DSA × AI: Building Intelligence from First Principles" yielded significant outcomes and impact, empowering students with a deeper understanding of the intersection of Data Structures and Algorithms (DSA) and Artificial Intelligence (AI). Participants developed practical skills in designing and implementing efficient algorithms and data structures for AI applications, while learning to think critically about building intelligent systems that are reliable, scalable, and fair. The session enhanced their problem-solving abilities, increased their confidence in building intelligent systems, and prepared them for future career opportunities in AI and related fields. Overall, the session had a profound impact on students' technical skills, critical thinking, and understanding of responsible AI development.

Conclusions

The session proved to be highly informative and thought-provoking, giving students a deeper appreciation of the role of evaluation in Data structures Application with

Artificial Intelligence of building intelligence. Rohan Singh Poonam's expertise and practical insights helped participants connect theoretical concepts with real-world applications. The interactive discussions and live demonstrations created an engaging learning environment that encouraged students to think beyond textbooks. Overall, the programme was a meaningful experience that broadened perspectives and inspired participants to explore data structures in AI with greater curiosity and responsibility.

Report by: Prof. K. Veena

Affiliation: Department of Computer Science and Design,

MVJ College of Engineering