



**KNOWLEDGE AND AWARENESS MAPPING PLATFORM** 

KNOWLEDGE SESSION 2023: EPISODE 35

ORGANIZED BY: KNOWLEDGE AND AWARENESS MAPPING PLATFORM

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**Topic:** Artificial Intelligence & Machine Learning **Date:** September 14, 2023

Category: Science, Technology & Innovations Organized for: Students from class 5-12

Speakers/Presenters: Dr. Suman Tewary, Sr. Scientist at the CSIR - NML

No. of Participants: 800+ students from different schools across India

## Overview:

On September 14th, 2023, KAMP conducted its 35th Fortnightly Knowledge Sharing Session with Dr. Suman Tewary, Senior Scientist at the CSIR's National Metallurgical Laboratory, Jamshedpur, for more than 800 students from classes 5th to 12th enrolled under the Knowledge and Awareness Mapping Platform's - National Assessment for Scientific Temperament and Aptitude (KAMP-NASTA).





# Introduction to AI and Machine Learning

Dr. Suman Tewary
Sr. Scientist
NDE Group, AMP

Artificial Intelligence (AI) and Machine Learning (ML) are two closely related fields that have gained significant attention and application in recent years. They are driving many technological advancements and are reshaping various aspects of our lives. In this exclusive KAMP's workshop we will delve into the realms of Artificial Intelligence and Machine Learning, unlock the mysteries behind AI and ML, and demystify these powerful technologies that are revolutionizing the way we

work, live, and innovate."



enlightening In this workshop, Dr. Suman Tewary delivered captivating presentation that delved into the fascinating world of artificial intelligence (AI) and Machine Learning

(ML). With his expertise and enthusiasm, he explored a wide spectrum of topics, providing attendees with valuable insights and knowledge.

Dr. Tewary initiated the session by unraveling the concept of AI, shedding light on its fundamental principles and the remarkable distinctions between the human brain and computer systems. This

comparison between "Brain Vs. Computer" ignited a thought-provoking discussion on the capabilities and limitations of both entities.

The discourse then evolved to encompass the concept of "Industry 5.0," a cutting-edge paradigm that harmonizes human and machine collaboration in the industrial landscape. Dr. Tewary's

# AI in Industry 5.0



explanation of this transformative trend left attendees with а profound understanding of the future of industry.

The workshop ventured into the realm of data, where Dr. Tewary elucidated the fundamental aspects of data, touching upon its various types and significance in the digital age. The discussion on "What is data?" paved the

way for a comprehensive exploration of "What is image?"—a key element in the realm of Al.

Dr. Tewary masterfully navigated through the diverse subfields and techniques within Al, providing attendees with a panoramic view of this expansive field. The depth of knowledge shared

during this segment grasp the intricacies of AI and its numerous applications.

As the workshop neared its culmination. Dr. Tewary unveiled the exciting and dynamic world of AI and machine learning (ML) applications. Attendees treated were to

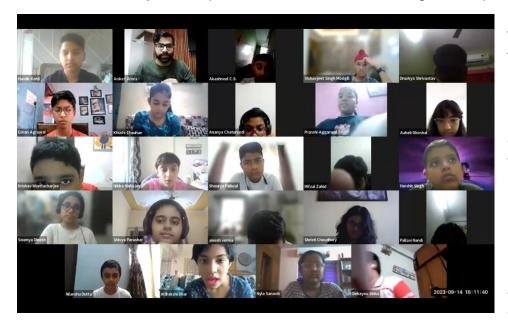
allowed participants to Relationship between AI, ML, DL and Data Scie Data Science integrates all the above terms - Al, ML and DL to extract insights from data (exploratory data analysis) and make predictions from large datasets (predictive analytics)

captivating journey into the present and potential future applications of AI and ML across various industries.

In closing, Dr. Suman Tewary's workshop not only equipped attendees with a comprehensive understanding of AI but also ignited their imaginations regarding the boundless possibilities that digital technologies hold for industries in the years to come. It was an illuminating and inspiring

session that left all participants eager to explore the ever-evolving landscape of Al and digital technologies.

The purpose of KAMP's fortnightly workshops is to help students develop creativity, meaningful learning, and critical reading and thinking skills that bring out their inherent abilities. The vision of KAMP is to identify and capture Scientific and Technological temperament in students to make



India a Global Leader in the fields of Science, technology, and the humanities.

Such workshops, conducted by KAMP, deal with various topics that fall under the categories of Science, technology, and innovation, Scientific and Life Skills, Career and Professional Development, Academic development, and training trainers and teachers.

KAMP believes that with exposure to such topics from experts within such specific fields, students will become aware of real-life situations and challenges, develop a helping, problem-solving nature wherever possible, understand their core values and personal interests, evaluate their skills within the given area, and achieve their best in their most desirable way.

### Organized By:

Knowledge and Awareness Mapping Platform (KAMP Operations and Coordination Office)

#### Moderated By:

Mr. Aniket Arora
(Outreach Coordinator)

#### **Team Credits:**

Ms. Arika Mathur (Member, KPMC)

**Ms Vishakha Gola** (Sr. Coordinator KAMP)