Industry Day on

Intelligent Decision Support Systems
10th May, 2025 at IIT Bombay

Hosted by
Office of Dean Research & Development (R&D)
Technocraft Center for Applied Artificial Intelligence (TCA2I)

Defence Innovation

Medical Informatics

Smart XR

Lab Showcases

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Session 1: Defence Innovation

Improving the operational efficiency of various activities is one of the important issues in the defense sector. A decision support system that can evaluate various strategies before they are implemented can help in reducing the cost, time, and better utilize the available resources. Such a system involves the collection of all necessary inputs, and the ability to analyze all feasible options and identify the best possible strategy quickly. The system should be able to evaluate any change in scenarios and reevaluate the strategies. Additionally, the system should be intelligent enough to suggest necessary modifications in strategies so that they become feasible and executable. We will discuss various decision supports that can be built to enhance operational efficiency using the latest technologies.

Session 2: Medical Informatics

Can an AI based anomaly detection technique understand a MRI or CT scan and identify the anomalous regions and assist Doctors, Clinicians and Medical Professionals in making swift decisions? Can an AI based natural language processing tool be helpful in precise retrieval of relevant information from the vast literature on clinical trials, crucial for medical professionals? Can an AI based vision system help in effective detection of defects in medicines and medical devices? These are some of the questions that we tackle in TCA2I Digital Informatics Lab, where we collaborate with Medical Practitioners on such problems to propose novel methodologies and create helpful tools.

Session 3: Smart XR

The Smart XR Lab focuses on advancing the application of AR, VR, AI, and IoT in complex, real-world systems. The work spans across domains such as healthcare systems engineering, smart logistics, smart cities, and other emerging fields, with an emphasis on immersive, data-driven models that support enhanced decision-making. Through digital twin technologies, projects are focused on creating models that enable real-time monitoring, predictive analytics, and system optimization. The lab serves as a collaborative space for interdisciplinary research, addressing critical challenges across both academic and industrial sectors.

Session 4: Lab Showcases

LC-001 Lecture Hall Complex, Landmark: Near KReSIT Building
IIT Bombay