



**NITTTR
BHOPAL**

GUJ-30/2024-2025

**Applied AI in Instrumentation and Measurement : The
Deep Learning Revolution**

06-01-2025 to 10-01-2025

EC Ahmedabad



<https://erp.nitttrbpl.ac.in/poc2024/?id=regGUJ-30>

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Rationale

In the last few years, hardly a day goes by that we do not hear about the latest advancements and improvements that Artificial Intelligence (AI) has brought to a wide spectrum of domains: from technology and medicine to science and sociology, and many others. AI is one of the core enabling components of the fourth industrial revolution that we are currently witnessing, and the applications of AI are truly transforming our world and impacting all facets of society, economy, living, working, and technology. The field of Instrumentation and Measurement (I&M) is no exception and has already been impacted by Applied AI. In this article, we give an overview of Applied AI and its usage in I&M. We then take a deeper look at the I&M applications of one specific AI method: Deep Learning (DL), which has recently revolutionized the field of AI.

We can say that I&M as a research field is interested in contributions to “methods or instruments for measurement, detection, tracking, monitoring, characterization, identification, estimation, or diagnosis of a physical phenomenon;

Programme Outcomes

1. Explain the need Applied Artificial Intelligence (AI) Methods for Instrumentation and Measurement for better Automation Systems.
2. Explore and understand Applied Artificial Intelligence (AI) Methods.
3. Explain Machine Learning/Deep Learning based Automation concepts.
4. Interpret various Applied AI methods for Process control & Robotics Automation need and accuracy.
5. Explain the development process of new automation trends and list the startup opportunities.

Programme Content

Instrumentation and Measurement, Process Control, Applied Artificial Intelligence (AI), Machine Learning, Deep Learning, Robotics, Learning Applied AI methods for Various Automation Systems through Case Study, Presentation / Project Demonstration, Industrial Visit.

Target Group

Faculty of Engineering disciplines

Coordinator & Co-Faculty

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Expert



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