



Last date for registration 12 November 2024

## INTRODUCTION

Welcome to the **3-Day Training Session on Artificial Intelligence for Kaizen**. This intensive program is designed to empower professionals with the knowledge and practical skills necessary to integrate AI into Kaizen processes. Over the next three days, you will delve into the applications of AI across various aspects of operational excellence, including process optimization, quality control, maintenance, fault diagnosis, and Overall Equipment Effectiveness (OEE) prediction.

This training will combine theoretical insights with hands-on experience, allowing participants to work on real-world case studies that demonstrate the transformative impact of AI in driving continuous improvement and operational efficiency.

## FOCUS AREAS

- **Process Optimization:**
  - *Case Study:* Application of AI to optimize a multi-step production process in a manufacturing plant.
  - *Objective:* Identify inefficiencies and recommend changes to improve throughput.
  - *Outcome:* Increased production efficiency through AI-driven process reconfiguration.
- **Quality Control:**
  - *Case Study:* Implementation of AI-based image recognition for real-time defect detection in automotive parts.
  - *Objective:* Reduce defects and enhance quality assurance.
  - *Outcome:* Reduction in defect rates, with a corresponding decrease in rework and scrap.
- **Predictive Maintenance:**
  - *Case Study:* AI-driven predictive maintenance system for industrial machinery.
  - *Objective:* Predict equipment failures and schedule maintenance activities to minimize downtime.
  - *Outcome:* Reduced unplanned downtime and extended equipment life .
- **Fault Diagnosis:**
  - *Case Study:* AI-based fault diagnosis in a complex assembly line.
  - *Objective:* Quickly identify and resolve faults to minimize production disruptions.
  - *Outcome:* Fault identification time reduced , with faster resolution and minimized impact on production.
- **OEE Prediction:**
  - *Case Study:* Use of AI to predict and improve OEE in a high-volume production environment.
  - *Objective:* Provide actionable insights to optimize production schedules and equipment usage.
  - *Outcome:* Increased OEE , resulting in significant gains in overall productivity and efficiency.

## KEY TAKE AWAYS

- **Understanding AI in Kaizen:** Gain a comprehensive understanding of how AI technologies can enhance Kaizen methodologies, improving efficiency, reducing waste, and driving continuous improvement.
- **Process Optimization:** Learn how AI can streamline manufacturing processes, identify bottlenecks, and suggest optimal workflows to enhance productivity.
- **Quality Control:** Explore AI-driven techniques for real-time quality monitoring, defect detection, and predictive quality management, leading to higher product standards and reduced rework.
- **Predictive Maintenance:** Understand how AI models can predict equipment failures before they occur, allowing for proactive maintenance and reducing downtime.
- **Fault Diagnosis:** Develop skills in using AI for identifying and diagnosing faults in complex systems, improving troubleshooting efficiency, and reducing operational disruptions.
- **OEE Prediction:** Discover how AI can be utilized to predict and optimize Overall Equipment Effectiveness, providing actionable insights to maximize operational performance.

## PARTICIPATION FEE

**Rs. 13750/-**

+18% GST

**IMTMA Members/ Micro Companies/ Individuals/  
Educational Institutions / Students/ IMTMA Non  
Members/ Others**

**USD 550/-**

**Overseas Participants**

**Group Concession : 10% for 3 to 5 and 20% for 6 and more delegates being nominated from the same company**

## FACULTY

This programme will be conducted by **Dr.J.B.Simha**.

**Dr.J.B.Simha**, AI implementation advisor at Numentrix Consulting. He is a Post Graduate in Maintenance Engineering and his PhD is in building Decision Support systems for Manufacturing. He is recognized as one of the top 10 experts in Data Science by Analytics Magazine, India. He has more than 25 years of experience in the development of AI based systems for manufacturing, telecom, health care and Process industries.

### For Registration Contact

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**REGISTRATION** : Prior registration for participation is necessary. Number of participants is limited and will be accepted on 'First Come First Serve' basis. A Certificate of participation will be issued to participants.

**Important Information** : Participation fee includes, course material, working lunch and tea / coffee. Interested companies are requested to register online by clicking on 'REGISTER' button and by filling up the nomination authority and participant's details in specified form.