GTC Transforming Emerging Economies

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Industrial AI for Manufacturing and IoT

COURSE OVERVIEW

This course explores the integration of Artificial Intelligence (AI) with Industrial Internet of Things (IIoT) to drive innovation, efficiency, and automation in manufacturing environments. Participants will learn how to leverage AI techniques such as machine learning, predictive analytics, and computer vision to optimize production processes, monitor equipment health, detect anomalies, and enhance decision-making. The course combines practical tools, case studies, and hands-on projects to help learners build intelligent systems suited for smart factories and industrial operations.

WHO SHOULD ATTEND?

This course is designed for manufacturing engineers, plant managers, IoT specialists, data analysts, AI engineers, and professionals involved in industrial automation and digital transformation. It is also suitable for business leaders, consultants, and project managers seeking to implement AI-driven strategies in industrial operations.

COURSE OUTCOMES

Delegates will gain the knowledge and skills to:

- Comprehend the role of AI in modern manufacturing and IIoT ecosystems.
- Collect, process, and analyze industrial data using AI tools.
- Apply machine learning for predictive maintenance and process optimization.
- Use computer vision for quality control and real-time monitoring.
- Integrate AI models with IoT devices and edge computing platforms.
- Design and deploy intelligent systems for industrial automation.
- Address security, scalability, and ethical considerations in industrial AI.
- Evaluate the ROI and performance of AI solutions in manufacturing.

KEY COURSE HIGHLIGHTS

At the end of the course, you will understand;

- An overview of AI applications in smart manufacturing.
- Data acquisition from sensors, machines, and IoT devices.
- Predictive analytics and anomaly detection in equipment performance.
- Computer vision for defect detection and production line monitoring.
- Edge computing and real-time decision systems.
- Building machine learning models using industrial datasets.
- Integration with cloud platforms (Azure IoT, AWS Greengrass, etc.).
- Security and privacy in connected industrial systems.
- Case studies from automotive, energy, and consumer goods sectors.
- Hands-on labs for implementing industrial AI solutions.

All our courses are dual-certificate courses. At the end of the training, the delegates will receive two certificates.
1. A GTC end-of-course certificate
2. Continuing Professional Development (CPD) Certificate of completion with earned credits awarded