

Data Analytics & Machine Learning Applications

COURSE OVERVIEW

This course introduces computer engineers to the fundamentals and practical applications of data analytics and machine learning, focusing on extracting insights from complex datasets, building predictive models, and deploying intelligent systems. The curriculum emphasizes hands-on experience with Python, R, and popular ML frameworks, covering end-to-end workflows from data collection and preprocessing to model evaluation, deployment, and integration into engineering solutions. Participants will gain hands-on experience with real-world data, leveraging Python, R, and popular ML frameworks to solve engineering and technology challenges.

WHO SHOULD ATTEND?

This course is ideal for computer engineers, software developers, data scientists, system architects, and IT professionals seeking to apply data analytics and machine learning in engineering projects. It also suits other professionals who are responsible for building AI-powered applications, predictive systems, or data-driven solutions.

COURSE OUTCOMES

Delegates will gain the skills and knowledge to:

- Understand key concepts in data preprocessing, exploration, and visualization.
- Develop predictive and classification models using machine learning algorithms.
- Apply model evaluation metrics and validation techniques for accurate predictions.
- Deploy ML models in practical engineering applications.
- Integrate data-driven insights into system design and optimization.
- Gain hands-on experience with Python, R, and ML frameworks.

KEY COURSE HIGHLIGHTS

At the end of the course, you will understand;

- Techniques for cleaning, processing, and exploring structured and unstructured data.
- Methods to build and evaluate regression, classification, and clustering models.
- Approaches for feature selection, dimensionality reduction, and model optimization.
- Best practices for deploying machine learning models into engineering systems.
- Strategies for interpreting results and deriving actionable insights from data.
- Tools and frameworks commonly used in data analytics and machine learning applications.

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