

Artificial Intelligence and Big Data





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Introduction:

This training program is designed to equip participants with advanced knowledge and skills in artificial intelligence AI and big data. It empowers them to leverage AI and big data to drive innovation and efficiency in their organizations.

Program Objectives:

At the end of this program, participants will be able to:

- Understand advanced concepts and applications of AI and big data.
- Develop and implement sophisticated machine learning models.
- Utilize big data analytics for strategic decision-making.
- Integrate AI and big data solutions into business processes.
- Ensure ethical and responsible use of AI and big data.

Targeted Audience:

- Data scientists and analysts.
- Al and machine learning engineers.
- IT professionals.
- Business analysts and strategists.

Program Outline:

Unit 1:

Advanced Concepts in Al and Big Data:

- Overview of AI and big data landscape.
- Key technologies and tools in Al and big data.
- Understanding deep learning and neural networks.
- Big data architectures and frameworks.



Case studies on successful AI and big data implementations.

Unit 2:

Machine Learning Models and Techniques:

- · Advanced machine learning algorithms.
- Building and training deep learning models.
- Natural language processing NLP techniques.
- Computer vision and image recognition.
- · Model evaluation and optimization.

Unit 3:

Big Data Analytics and Visualization:

- Big data analytics methodologies.
- Data mining and predictive analytics.
- Real-time data processing and stream analytics.
- Data visualization techniques and tools.
- Case studies on big data analytics in various industries.

Unit 4:

Integrating AI and Big Data Solutions:

- Strategies for integrating AI and big data into business processes.
- Cloud-based Al and big data solutions.
- Building Al-driven applications and services.
- Managing data pipelines and workflows.
- Best practices for deployment and scalability.

Unit 5:

Ethical and Responsible AI and Big Data Use:



- Ethical considerations in AI and big data.
- Data privacy and security issues.
- Bias and fairness in Al models.
- Regulatory and compliance requirements.
- Developing a framework for responsible AI and big data use.