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Machine Learning & AI Fundamentals

Course No. 516

The Machine Learning & AI Fundamentals course introduces participants to the essential concepts, tools, and techniques that power modern AI solutions.

Course Benefits

Designed for beginners and professionals seeking to strengthen their technical skills, this program covers data fundamentals, machine learning models, AI applications, and ethical considerations. By the end of the course, participants will be able to understand, implement, and evaluate AI-driven solutions across different domains.

Prerequisites

Basic knowledge of programming (preferably Python).

Duration

Four Days (28 hours)

Learning Objectives

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

1. Understand the core principles of Artificial Intelligence and Machine Learning
2. Differentiate between supervised, unsupervised, and reinforcement learning
3. Apply Python libraries for data analysis and model building
4. Preprocess and visualize data for effective machine learning workflows
5. Train, test, and evaluate machine learning models
6. Explore practical applications of AI in business, healthcare, finance, and more.
7. Identify risks, limitations, and ethical implications of AI systems.

Topics Covered:

- Introduction to Artificial Intelligence & Machine Learning
- Data Fundamentals: Collection, Cleaning & Preprocessing
- Exploratory Data Analysis & Visualization
- Supervised learning: regression & classification models
- Unsupervised learning: clustering & Dimensionality reduction
- Neural networks & introduction to deep learning
- Model evaluation & performance metrics
- Practical AI applications in Real-world industries
- AI tools & Frameworks (Python, Scikit-learn, TensorFlow)
- Responsible AI: Bias, Fairness, and Ethical AI Practices



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Who Should Attend?

This course is ideal for data analysts, software developers, and IT professionals expanding their skills, business professionals interested in leveraging AI for decision-making, or beginners looking to enter the field of AI & ML.

Instructor

The instructor is a professional with 10+ years of AI experience in various industries.

For More Information:

Contact Training administrator: Training@qpsinc.com , Telephone: (508) 786-0777