MERCURY

Artificial Intelligence (AI) and Machine Learning (ML)

5 – 9 September 2027
Online



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Ref: 15651_319006 **Date:** 5 – 9 September 2027 **Location:** Online **Fees:** 2900 Euro

Introduction:

This Artificial Intelligence AI and Machine Learning ML training course delves into advanced concepts, techniques, and applications, providing participants with a comprehensive understanding. Participants will gain insights into the benefits of AI and machine learning and how these technologies can be applied to solve real-world problems.

Designed for experienced professionals in the field, it will cover state-of-the-art developments, research trends, and practical implementations in AI and ML. The Artificial Intelligence AI and Machine Learning ML course will equip participants with the artificial intelligence and machine learning skills needed to become specialists in the current market.

This Artificial Intelligence AI and Machine Learning ML training provides participants with knowledge of the AI and ML tools to design sophisticated predictive models. They will learn artificial intelligence and machine learning in the context of processing and understanding human language, leveraging the latest advancements in NLP.

This course introduces the fundamentals of artificial intelligence and machine learning in accounting and finance, outlining current applications and future trends. Participants will explore the various artificial intelligence and machine learning solutions designed for deploying models in a production environment.

Discusses the ethical considerations and legal aspects integral to AI and ML and projects the future trends in artificial intelligence and machine learning that specialists should anticipate. For those interested, there are internships and further information on obtaining a certificate course in artificial intelligence and machine learning master's.

Targeted Groups:

- Data Scientists.
- AI and ML Engineers.
- Researchers in AI and ML.
- IT Professionals are seeking advanced knowledge in AI and ML.
- Advanced Computer Science Students.
- Industry Professionals are aiming to implement AI/ML solutions.

Course Objectives:

At the end of this Artificial Intelligence AI and Machine Learning ML course, the participants will be able to:

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- Understand and apply advanced AI and ML algorithms.
- Implement and optimize complex models and architectures.
- Analyze and interpret large datasets using AI and ML techniques.
- Integrate AI and ML solutions into existing systems.
- Stay updated with the latest trends and research in AI and ML.

Targeted Competencies:

Participants' competencies in this Artificial Intelligence AI and Machine Learning ML training will:

- Advanced algorithm design and implementation.
- Data analysis and visualization.
- Model optimization and performance tuning.
- AI/ML integration and deployment.
- Research and development in AI/ML.

Course Content:

Unit 1: Advanced Machine Learning Algorithms:

- Deep Learning Architectures.
- Convolutional Neural Networks CNNs.
- Recurrent Neural Networks RNNs.
- Generative Adversarial Networks GANs.
- Ensemble Methods.
- Bagging and Boosting.
- Random Forests.
- Gradient Boosting Machines.
- Reinforcement Learning.
- Q-Learning.
- Policy Gradients.
- Deep Reinforcement Learning.

Unit 2: Natural Language Processing NLP:

- Text Preprocessing Techniques.
- Tokenization.
- Lemmatization and Stemming.
- Advanced NLP Models.
- Transformers e.g., BERT, GPT.
- Seq2Seq Models.
- Applications of NLP.
- Sentiment Analysis.
- Machine Translation.
- Text Summarization.

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Unit 3: AI in Accounting and Finance:

- Overview of AI and its evolution in accounting and finance.
- Key concepts and terminologies in AI.
- Importance of AI in modern financial practices.
- Benefits and challenges of AI adoption in finance.
- Current trends and future outlook of AI in the industry.

Unit 4: Model Deployment and Production:

- Model Serving and Monitoring.
- Deploying Models with TensorFlow Serving.
- Monitoring Model Performance.
- Scalability and Performance.
- Distributed Computing with Spark.
- Parallel Processing Techniques.
- AI/ML in the Cloud.
- AWS SageMaker.
- Google AI Platform.

Unit 5: Ethics and Future Trends in AI/ML:

- Ethical AI and Bias Mitigation.
- Fairness in AI.
- Bias Detection and Correction.
- Legal and Societal Impacts.
- AI Regulations.
- Societal Implications of AI.
- Future Directions and Research.
- Quantum Computing in AI.
- Neuromorphic Computing.