€TRAINING

Advanced Artificial Intelligence and Big Data

20 - 31 May 2024
Barcelona (Spain)

Advanced Artificial Intelligence and Big Data

REF: W1654 DATE: 20 - 31 May 2024 Venue: Barcelona (Spain) - Fee: 10450 Euro

Introduction:

The Advanced Artificial Intelligence and Big Data training program delves into cutting-edge techniques in AI and big data analytics. Participants explore advanced topics like machine learning algorithms and big data processing frameworks. Through theory and hands-on exercises, individuals develop expertise to derive insights and innovate across domains.

Program Objectives:

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

- Develop a deeper understanding of what big data means to your organization.

- Understand how to plan and analyze using logic to design Machine Learning-based applications.

- Explain how to imitate human in clustering and classification for AI applications.

- Identify the key products in the big data platforms and describe their functional role.

- Describe the role of Hadoop and its use in the Big Data platform, along with the concepts of big data.

- Walk away with more knowledge about the role of the platform and its components, including NoSQL Database, Hadoop Distributed File System, Data Mining, and Big Data Connectors.

Targeted Audience:

- Database management system.

- Data structures, Systems architects, and Marketing managers.

- Chief Information Officer CIO / Chief Technology Officer CTO.

- Finance, budget planners, decision-makers, and policymakers.

- Quality, safety, reliability, and security officers.

- Application-based programming with Python.

- Object-oriented programming using Java.

- Project managers and executive managers.

- Instrumentation, process, systems, electrical, and mechanical engineers.

- Programming for problem-solving.

Program Outlines:

Unit 1:

An Overview of Artificial Intelligence:

- Introduction to AI and Success Stories.

- Human Intelligence vs Artificial Intelligence.

- History of AI, Intelligent Agents and Their Roles.

- Limits of Artificial Intelligence.

- Intelligent Decision Making .

Unit 2:

Intelligent Agents:

- Introduction to Agents.

- Different Types of Agents.

- Knowledge-base and Database.

- Logic Reasoning.

- Unification.

- Deduction Processes.

Unit 3:

Machine Learning:

- Supervised and Unsupervised Learning.

- Classification and Clustering.

- Artificial Neural Networks.

- Learn by Examples.

- Object Recognition.

- Features and Classes.

Unit 4:

Fuzzy Logic:

- Introduction to Fuzzy Thinking.

- Fuzziness vs Probability.

- Fuzzy set and Fuzzy Rules.

- Importance of Fuzzy logic and A real example of Fuzzy Controllers.

- Building a Tiny Machine Learning Application.

Unit 5:

Genetic Algorithm:

- Overview of Genetic Algorithms.

- The Need for Optimization, Maximization, and Minimization.

- How GA Work and Evolve.

- Genetic Algorithm Chromosomes, Genes, Selection, Mutation, and Crossover.

- Dimension to Use Genetic Algorithm.

- Real Genetic Algorithm Examples to Optimize Business Processes.

Unit 6:

Big Data at Work:

- What is Big Data?

- Business Challenges and Getting Fast Answers to New Questions.

- Industry Examples.

- Building Your Big Data Strategy.

Unit 7:

Building a Big Data System:

- A General Look at Big Data Systems.

- Big Data Solution.

- NoSQL Database Hadoop.

- Distributed File System.

- In-Database Analytics Platform.

Unit 8:

Building a Big Data System Using NoSQL Database:

- What is a Key-Value Store?

- Why Would I Need a NoSQL Database?

- Using NoSQL Database to Run a Website.

Unit 9:

Using Hadoop and Hive to Store and Transform Data:

- What is Hadoop?

- Interacting with HDFS.

- MapReduce.

- Using Hive to Transform Data.

Unit 10:

Integrating Hadoop Data into:

- Big Data Connectors.

- Data Integrator Working on Hadoop Data and Transforming Data in ODI.

- Using Advanced Analytics to my Data.

- Mining Database Data with R Enterprise and Mining Hadoop Data with R Connector for Hadoop Creating.

- Real-Time Similarity Scores with Data Mining.