BTS
Training & Consultancy

Artificial Intelligence (AI): Transforming Business with New Technologies

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Artificial Intelligence (AI): Transforming Business with New Technologies

Course Summary:

Artificial Intelligence revolution is the development of computer systems that can perform tasks normally requiring human intelligence. When you encounter awe-inspiring technology, it can be challenging to see how you can apply it to your own business. You need a framework and language to ask deeper, sharper questions and find the right strategy.

This five-day Artificial Intelligence training course has been designed to develop the insight of the participants on Data Science. Participants on this BTS training course will learn how to build Artificial Intelligence, and to optimize the Artificial Intelligence to reach its maximum potential. BTS training modules will enable the participants to understand the theory of Artificial Intelligence and help them to understand how to solve real-world problems with Artificial Intelligence.

Participants attending the Artificial Intelligence training course will develop the following competencies:

- Understanding of the value of Artificial Intelligence and different algorithms
- Knowledge on how to analyze daily business problems and create Artificial Intelligence solutions
- A deeper understanding of the latest innovative technologies and apply them to business

Who Should Attend?

The target audience for this Artificial Intelligence training course includes business decision-makers, marketing staff, and professionals who are interested in learning robotics, biometrics, and other competing technologies. This BTS training course is also designed for people who are very keen about learning Artificial Intelligence and applying its awesome result and implementation.

Pre Request

The topics included in this BTS training course are related to Probability Theorem and Linear Algebra. Therefore, a basic knowledge of statistics and mathematics will be an added advantage for participants wanting to take this course.

Course Objectives:

By completing this BTS training course, the candidates will:

- Learn how Artificial Intelligence can be optimized so that maximum potential could be obtained
- Learn how the codes are generated and combined and what these code lines mean
- Understand the procedure of building the Artificial Intelligence
- Learn how to build Artificial Intelligence that is adaptable to any environment in real life
- Be able to identify potential areas of applications of Artificial Intelligence
- Obtain basic ideas and techniques in the design of intelligent computer systems

- Learn statistical and decision-theoretic modeling paradigm
- Know how to build agents that exhibit reasoning and learning
- Be able to apply regression, classification, clustering, retrieval, recommender systems, and deep learning

Course Outline:

Day 1: Overview of Artificial Intelligence

- Introduction to Artificial Intelligence
- Representation and Search: State Space Search
- State Space Search
- Graph theory and information of state-space search
- Problem-Solving through state-space search
- DFS and BFS algorithms
- Backtracking algorithms
- Workshop 1: Building a state space of some problems

Day 2: Representation and Search: Heuristic Search

- Heuristic search overview
- Pure Heuristic Search
- A* Algorithm
- Iterative- Deepening A*
- Heuristic Path Algorithm
- Simple hill climbing
- Min Max algorithm
- Alpha-beta pruning
- Workshop 2: Building an intelligent X-O gamer

Day 3: Logics and Reasoning

- Logic reasoning overview
- First Order Predicate (FOP)
- Modus ponens and Modus tollens
- Unification and deduction process
- Resolution
- Machine Learning
- Machine learning overview
- Clustering and classification algorithms
- Workshop 3: Building Search Intelligent Agents

Day 4: Decision Making

- Intelligent agent
- Generic agent
- Autonomous agent
- Reflex agent
- Goal-based agent
- Utility-based agent
- Decision theory
- Decision network
- Reinforcement learning
- Markov Decision Processes (MDP)
- Dynamic Decision Networks (DDN)
- Workshop 4: Building Search Intelligent Agents

Day 5: GAS, ANN and Fuzzy Logic

- Genetic Algorithms
- GAS and optimization

- Chromosome and problem coding
- Which problems are more suitable for Gas
- Why GAS has a success story
- ANN
- NN background
- Why the NN model is good
- When to use ANN
- Examples for ANN
- OCR as ANN
- Fuzzy Logic
- Fuzziness vs Probability
- Fuzzy set and membership
- Fuzzy controller
- Fuzzy speed control example
- Workshop 5: Building a fuzzy logic application