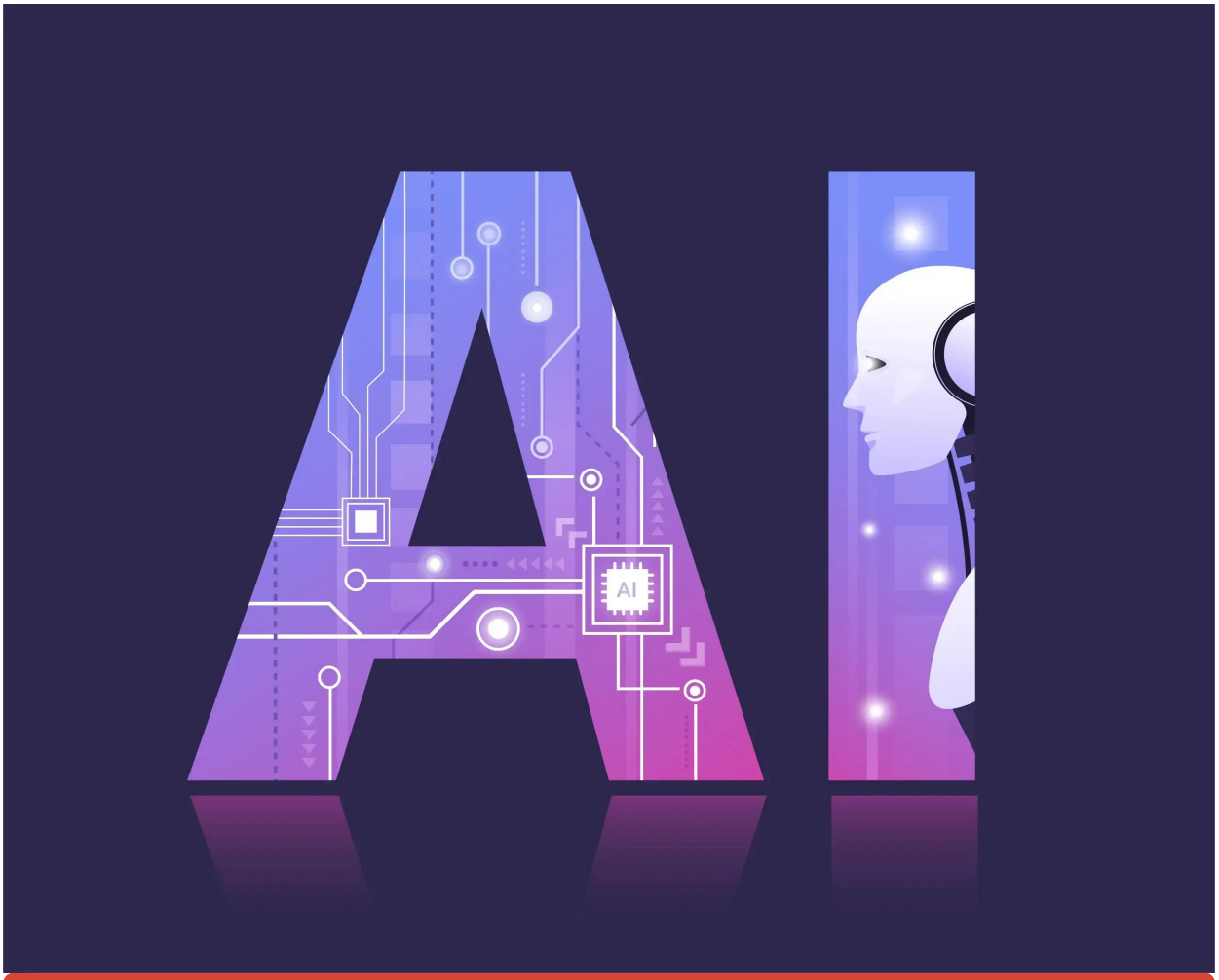


The AI Revolution

Duration: 5 Days

Language: en

Course Code: IND02-110

Objective

Upon completion of this course, participants will be able to:

- Understand the importance of artificial intelligence in the modern world.
- Assess how artificial intelligence can be effectively optimised to maximise business potential.
- Identify the various types of artificial intelligence and machine learning systems, and their ideal tasks and functions.

- Effectively plan, design, implement and monitor an artificial intelligence system.
- Utilise a system to gather, analyse and present desired data.
- Explain the benefits and limitations of different artificial intelligence systems.
- Obtain various techniques relating to artificial intelligence system design.
- Describe the statistical and decision-theoretic modelling paradigm.

Audience

This course is designed for anyone who wishes to learn about artificial intelligence and how it can improve an organisation. It would be most beneficial for:

- Operations Managers
- Business Owners
- Senior Executives
- IT Professionals
- Project Managers
- Sales and Marketing Managers
- Data Analysts
- Artificial Intelligence Engineers
- Machine Learning Engineers

Training Methodology

This course uses a variety of adult learning styles to aid full understanding and comprehension. Participants will investigate existing artificial intelligence systems to identify key features and structures and how they may be best utilised.
They will be provided with all the necessary tools to effectively participate in the variety of learning exercises. Combined with seminars, discussions, and individual and group activities, participants will have ample opportunities to fully develop their understanding of the taught content and all related practical skills.

Summary

Technology is constantly advancing, and in recent years, the interest in artificial intelligence has peaked. Artificial intelligence has attracted the attention of world leaders and successful

business and organisation leaders due to its advantages. Artificial intelligence has the opportunity to completely revolutionise many industries and push the world of technology into a new era.
Artificial intelligence is a computer system tasked to gather, organise, and analyse data automatically. These systems are incredibly efficient at these processes, due to their internal structures, processes, and algorithms. Incorporating an artificial intelligence system into typical business functions can greatly increase productivity, reduce costs, and optimise resource usage.
To effectively plan and design an artificial intelligence system, it is essential to be competent in the various system types, different methods of learning, and problem-solving. Each algorithm has a specialty and unique process of filtering and organizing data. They can be tasked with simple and complex goals to automate different functions completely.

Course Content & Outline

Section 1: Introduction to Artificial Intelligence

- Defining artificial intelligence and machine learning.
- Reviewing the concepts, principles, and purpose of artificial intelligence.
- Problem-solving with state-space search.
- The different states within the state space search algorithm – initial state to goal state.
- Assessing the benefits and limitations of artificial intelligence.

Section 2: Problem-Solving Algorithms

- Explaining the importance of problem-solving algorithms within an AI system.
- Identifying the various types of algorithms – DFS, BFS, recursive, exhaustive and graph search.
- Comparing the advantages and disadvantages of each algorithm and identifying what types of AI systems they are best suited for.
- Merging simple hill and minimax algorithm with heuristic search.

Section 3: Logic and Reasoning

- Describing what logical reasoning is within AI.
- Expanding upon propositional logic with first-order logic.
- Basic logical constructions with modus ponens and modus tollens.
- Understanding the process of unification and deduction.
- The role of machine learning within AI.
- Analysing the three main types of machine learning – supervised, reinforced and unsupervised.
- Clustering, classification, and regression for machine learning datasets.

Section 4: Decision Making

- Utilising different types of intelligent agents – goal-based, utility-based, model-based, simple reflex and learning.
- Exploring the 4 rules an intelligent agent must adhere to.
- Explaining the concepts of decision theory and networks within utility agents.
- Analysing and implementing the Markov decision process into an AI system.
- Comparing the purpose and standard usage of probabilistic planning and reinforcement learning.

Section 5: Genetic Algorithm and Fuzzy Logic

- Achieving system optimization through genetic algorithms.
- How genetic algorithms function through a natural selection process.
- Incorporating chromosome differentiation into the genetic algorithm evolutionary process.
- Deep learning and neural networks.
- Defining fuzzy logic.
- Calculating fuzziness vs probability.
- Fuzzy set, membership, and controller.

Certificate Description

Upon successful completion of this training course, delegates will be awarded a Holistique Training Certificate of Completion. For those who attend and complete the online training course, a Holistique Training e-Certificate will be provided.

Holistique Training Certificates are accredited by the British Assessment Council (BAC) and The CPD Certification Service (CPD), and are certified under ISO 9001, ISO 21001, and ISO 29993 standards.

CPD credits for this course are granted by our Certificates and will be reflected on the Holistique Training Certificate of Completion. In accordance with the standards of The CPD Certification Service, one CPD credit is awarded per hour of course attendance. A maximum of 50 CPD credits can be claimed for any single course we currently offer.

Categories

IT & Computer Application, Technology, AI, Data and Visualisation

Tags

IT, technology, Computer Application

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