Artificial Intelligence Foundation: Understanding the Basics of AI - IABAC

Date and duration
Training code : IA014EN Duration : 2 days Nombre d'heures : 14 heures

Training with certification
Artificial Intelligence Foundation (AIF-AI3010)

Body
Artificial Intelligence Foundation is a professional certification from IABAC that validates your understanding of the fundamental concepts of Artificial Intelligence, Machine Learning, and Deep Learning. It also demonstrates your ability to apply this knowledge to real-world problems. By earning this certification, you join a global community of AI professionals recognized for their expertise, opening **new career opportunities and strengthening your credibility** with employers and clients. **This 2-day training** prepares you for the IABAC Artificial Intelligence Foundation certification by providing the knowledge and skills required to succeed in the exam. You will explore the **foundations of AI, Deep Learning, and Machine Learning**, learn how to use tools such as TensorFlow, and practice solving real-world problems in areas such as computer vision and natural language processing. The AI Foundation course modules—covering topics such as **neural networks, learning algorithms**, and AI ethics—emphasize a practical approach with hands-on labs and real case studies. You will also benefit from full exam **preparation for the AIF–AI3010 exam**, including review sessions, a mock exam, and personalized guidance. *For more details on the certification and the AIF–AI3010 exam, please refer to the Certification section.*

Objectifs

*By completing the **AI Foundation training**, you will be able to:*

- Understand the fundamentals of AI and Deep Learning, including neural network architectures and how they work
- Develop practical skills in using TensorFlow to implement, train, and optimize AI models
- Apply AI to real-world problems, including computer vision (CNNs) and natural language processing (BERT)
- Analyze and interpret the performance of machine learning models, applying methodologies to reduce bias and ensure ethical and responsible AI
- Effectively prepare for the Artificial Intelligence Foundation (AIF–AI3010) certification exam

As a Gold Authorized Training Partner (ATP) accredited by IABAC under registration number 100476, Oo2 delivers certifying programs that meet the association's rigorous quality standards.

Points forts

- **IABAC-Accredited Expert Trainer**: Learn from an IABAC-certified instructor, an AI expert specifically trained to guide you toward certification success.
- **Practical, Real-World Approach**: Apply your knowledge through hands-on labs and real-life case studies designed to prepare you for real-world AI challenges.
- **Master Key Skills**: The training content is aligned with the competency areas assessed in the IABAC AIF-AI3010 certification exam, providing you with the tools needed to succeed.
- **Comprehensive Exam Preparation**: Benefit from full exam preparation, including review sessions, a mock exam, and personalized guidance to maximize your chances of success.
- **Exam Included with Free Retake**: The Artificial Intelligence Foundation exam is included in our program, and in case of failure, you will have the opportunity to retake it at no additional cost.

Certification

This training prepares you for the Artificial Intelligence Foundation professional certification exam. At the end of the course, you will receive a voucher code to schedule your exam online via the IABAC website.

AI Foundation (AI3010) Exam Details:

- Format: Multiple-choice questions with scenarios and code-based questions
- Duration: 1 hour
- Delivery: Online
- Language: English
- Passing score: 60%

After completing the exam, if successful, IABAC will send you the official AIF–AI3010 certification confirmation by email within 7 days.
Important to know: *The Artificial Intelligence Foundation certification is valid for 1 year. To keep your certification current and maintain its recognition, you must earn 30 CPD (Continuing Professional Development) credits each year. Certification renewal is free of charge.*

Learn more about the renewal process in the Certification section

Modalités d'évaluation

Practical Work
Case study

Pré-requis

Prerequisites for Attending this Training:

- **Basic programming knowledge,** ideally in Python, the reference language for AI. This will help you apply concepts and build your own models
- **Foundations in applied mathematics** (linear algebra, probability, and statistics). These skills are essential to understand how algorithms work and to analyze data
- **Experience in data handling**, while not mandatory, can make learning easier
- **Ability to read and understand English**, as the AI Foundation exam (AI3010) is delivered in English

Public

This training is intended for the following audiences:

- **Developers and software engineers** who want to acquire AI skills to integrate this technology into their applications and develop new products
- **Data scientists and analysts** seeking to deepen their knowledge of AI, particularly in Deep Learning, and master tools such as TensorFlow to build and train models
- **IT project managers and managers** who want to understand AI challenges in order to lead projects, allocate resources, and make informed decisions about adopting AI solutions
- **Decision-makers and entrepreneurs** aiming to leverage AI to drive innovation, transform their businesses, and seize new market opportunities

Programme

Module 1: Exploring the Foundations of Artificial Intelligence

- The concept of intelligence, from human to machine
- History and evolution of artificial intelligence
- Reasons behind the current rise of AI
- Different application domains of AI
- Distinction between AI, Data Science, and Machine Learning

Module 2: Discovering Deep Learning

- How deep neural networks work
- The difference between Machine Learning and Deep Learning
- Feature learning in deep networks
- Real-world applications of Deep Learning networks

Module 3: Understanding the Basics of TensorFlow

- Overview of the open-source tool TensorFlow
- TensorFlow structure and modules
- Tensors, operations, graphs, variables, and functions
- Building and training simple models

Hands-on Lab:

- Building and training a machine learning model with TensorFlow

Module 4: Applying AI to Computer Vision

- Fundamentals of image processing
- How Convolutional Neural Networks (CNNs) work
- Image classification with CNNs

Hands-on Lab:

- Image classification (cats vs. dogs) using a CNN model

Module 5: Developing Natural Language Processing (NLP) Models

- Introduction to NLP and its applications
- Bag of Words (BoW) models and their limitations
- Word embeddings and vector representations of words

Hands-on Lab:

- Implementing and using an advanced algorithm such as BERT

Module 6: Addressing AI Ethics

- General issues related to AI
- Specific ethical concerns in AI (bias, discrimination, etc.)
- The importance of ethics, bias reduction, and trust in AI

Module 7: Preparing for the AI Foundation Exam (AI3010)

- Review of key course points
- Exam simulation with corrections and explanations
- Tips and strategies for exam success (time management, question reading techniques, and stress management)