

Artificial Intelligence Basics

Duration: 12 hours

Overview

This course is an introductory program that provides learners with a foundational understanding of artificial intelligence (AI) concepts and associated Microsoft Azure services. This comprehensive course is designed to guide students through the basics of AI, machine learning, Computer Vision, Natural Language Processing, Conversational AI, and more, with a strong emphasis on practical exercises using Azure's AI tools. Learners will gain knowledge on the fundamentals of artificial intelligence, including how AI is integrated within Azure and the importance of Responsible AI practices.

Audience Profile

- IT professionals interested in AI technologies
- Data Analysts seeking to understand AI applications
- Software Developers looking to integrate AI into their solutions
- Cloud Solution Architects exploring Azure AI capabilities
- Data Scientists beginning with Azure AI tools and services
- AI hobbyists and enthusiasts aiming to formalize their knowledge
- Technical Managers overseeing AI-driven projects
- Students studying computer science or related fields
- Non-technical roles seeking to comprehend the impact of AI in their industry (e.g., Business Analysts, Project Managers)
- Professionals working in industries where AI is increasingly relevant, such as healthcare, finance, and retail
- Educators and trainers preparing to teach AI fundamentals

Course Syllabus

Module 1: AI Overview

- Fundamental AI Concepts
- Fundamentals of machine learning
- Fundamentals of Azure AI services
- AI in various industries
- AI in Business processes
- Exercise - Explore Automated Machine Learning in Azure Machine Learning
- Exercise - Explore Azure AI Services

Module 2: Computer Vision

- Fundamentals of Computer Vision
- Fundamentals of Facial Recognition
- Fundamentals of optical character recognition
- Exercise - Analyze images in Vision Studio
- Exercise - Detect faces in Vision Studio
- Exercise - Read text in Vision Studio

Module 3: Natural Language Processing

- Fundamentals of Text Analysis with the Language Service
- Fundamentals of question answering with the Language Service
- Fundamentals of conversational language understanding
- Fundamentals of Azure AI Speech
- Exercise - Analyze text with Language Studio
- Exercise - Use question answering with Language Studio
- Exercise - Use Conversational Language Understanding with Language Studio
- Exercise - Explore Speech Studio

Module 4: Document Intelligence and Knowledge Mining

- Fundamentals of Azure AI Document Intelligence
- Fundamentals of Knowledge Mining and Azure AI Search
- Exercise - Extract from data in Document Intelligence Studio

- Exercise - Explore an Azure AI Search index (UI)

Module 5: Generative AI

- Fundamentals of Generative AI
- Fundamentals of Azure Open AI Service
- Fundamentals of Responsible Generative AI
- Exercise - Explore generative AI with Bing Copilot
- Exercise - Explore Azure Open AI Service
- Exercise - Explore content filters in Azure Open AI

Module 6: Build a Chatbot on Organization Data using Copilot Studio

- Introduction to Copilot Studio
- Different types of Data connectors
- Build a Simple Chatbot