Designing and Implementing a Microsoft Azure AI Solution

Description

This course is intended for software developers wanting to build AI infused applications that leverage Azure Cognitive Services, Azure Cognitive Search, and Microsoft Bot Framework. The course will use C# or Python as the programming language.

Classroom Registration Price (CHF)
3200
Virtual Classroom Registration Price (CHF)
3000
Course Content
Module 1: Introduction to AI on Azure

- Lesson 1: Introduction to Artificial Intelligence
- Lesson 2: Artificial Intelligence in Azure

Module 2: Developing AI Apps with Cognitive Services

- Lesson 1: Getting Started with Cognitive Services
- Lesson 2: Using Cognitive Services for Enterprise Applications

Module 3: Getting Started with Natural Language Processing

- Lesson 1: Analyzing Text
- Lesson 2: Translating Text

Module 4: Building Speech-Enabled Applications

- Lesson 1: Speech Recognition and Synthesis
- Lesson 2: Speech Translation

Module 5: Creating Language Understanding Solutions

- Lesson 1: Creating a Language Understanding App
- Lesson 2: Publishing and Using a Language Understanding App
- Lesson 3: Using Language Understanding with Speech

Module 6: Building a QnA Solution

- Lesson 1: Creating a QnA Knowledge Base
- Lesson 2: Publishing and Using a QnA Knowledge Base

Module 7: Conversational AI and the Azure Bot Service

- Lesson 1: Bot Basics
- Lesson 2: Implementing a Conversational Bot

Module 8: Getting Started with Computer Vision

- Lesson 1: Analyzing Images
- Lesson 2: Analyzing Videos

Module 9: Developing Custom Vision Solutions

- Lesson 1: Image Classification
- Lesson 2: Object Detection

Module 10: Detecting, Analyzing, and Recognizing Faces

- Lesson 1: Detecting Faces with the Computer Vision Service
- Lesson 2: Using the Face Service

Module 11: Reading Text in Images and Documents

- Lesson 1: Reading text with the Computer Vision Service
- Lesson 2: Extracting Information from Forms with the Form Recognizer service

Module 12: Creating a Knowledge Mining Solution

- Lesson 1: Implementing an Intelligent Search Solution
- Lesson 2: Developing Custom Skills for an Enrichment Pipeline
- Lesson 3: Creating a Knowledge Store

Lab / Exercises
Official Microsoft Labs

- Lab 1: Get Started with Cognitive Services
- Lab 2: Manage Cognitive Services Security
- Lab 3: Monitor Cognitive Services
- Lab 4: Use a Cognitive Services Container
- Lab 5: Analyze Text
- Lab 6: Translate Text
- Lab 7: Recognize and Synthesize Speech
- Lab 8: Translate Speech
- Lab 9: Create a Language Understanding App
- Lab 10: Create a Language Understanding Client Application
- Lab 11: Use the Speech and Language Understanding Services
- Lab 12: Create a QnA Solution
- Lab 13: Create a Bot with the Bot Framework SDK
- Lab 14: Create a Bot with Bot Framework Composer
- Lab 15: Analyze Images with Computer Vision
- Lab 16: Analyze Video with Video Indexer
- Lab 17: Classify Images with Custom Vision
- Lab 18: Detect Objects in Images with Custom Vision
- Lab 19: Detect, Analyze, and Recognize Faces
- Lab 20: Read Text in Images
- Lab 21: Extract Data from Forms
- Lab 22: Create an Azure Cognitive Search solution
- Lab 23: Create a Custom Skill for Azure Cognitive Search
- Lab 24: Create a Knowledge Store with Azure Cognitive Search

Documentation

- Access to Microsoft Learn (online learning content)

Exam

- This course prepares you to the AI-102: Designing and Implementing a Microsoft Azure AI Solution exam. If you wish to take this exam, please contact our secretariat who will let you know the cost of the exam and will take care of all the necessary administrative procedures for you.

Participant profiles

- Software engineers concerned with building, managing and deploying AI solutions that leverage Azure Cognitive Services, Azure Cognitive Search, and Microsoft Bot Framework. They are familiar with C# or Python and have knowledge on using REST-based APIs to build computer vision, language analysis, knowledge mining, intelligent search, and conversational AI solutions on Azure

Prerequisites

- Knowledge of Microsoft Azure and ability to navigate the Azure portal
- Knowledge of either C# or Python
- Familiarity with JSON and REST programming semantics
- If you are new to artificial intelligence, and want an overview of AI capabilities on Azure, consider completing the Azure AI Fundamentals certification before taking this one

Objectives

- Describe considerations for AI-enabled application development
- Create, configure, deploy, and secure Azure Cognitive Services
- Develop applications that analyze text
- Develop speech-enabled applications
- Create applications with natural language understanding capabilities
- Create QnA applications
- Create conversational solutions with bots
- Use computer vision services to analyze images and videos
- Create custom computer vision models
- Develop applications that detect, analyze, and recognize faces
- Develop applications that read and process text in images and documents
- Create intelligent search solutions for knowledge mining

Niveau
Intermédiaire
Duration (in Days)
4
Reference
AI-102T00