MS-AI3004: BUILD AN AZURE AI VISION SOLUTION WITH AZURE AI SERVICES

DURATION	LEVEL	TECHNOLOGY	DELIVERY METHOD	TRAINING CREDITS
1 Day	Intermediate	Azure AI	Instructor-led	NA

INTRODUCTION

Computer vision is an area of artificial intelligence that deals with visual perception. Azure AI Vision includes multiple services that support common computer vision scenarios.

AUDIENCE PROFILE

This course is designed for professionals such as software developers, data scientists, and IT specialists.

PREREQUISITES

Before attending this course, delegates must have:

− Familiarity with Azure and the Azure portal.
− Experience programming with C# or Python. If you have no previous programming experience, we recommend you complete the Take your first steps with C# or Take your first steps with Python learning path before starting this one.

COURSE OBJECTIVES

After attending this course, delegates will be able to:

− Use Azure AI Vision services to analyse images and extract insights.
− Create custom models for classifying images.
− Implement technologies to detect, analyse, and recognize faces.
− Read text from images and documents using Azure AI tools.
− Use Azure Video Indexer to extract insights from video content.

COURSE CONTENT

Module 1: Analyse images
With the Azure AI Vision service, you can use pre-trained models to analyse images and extract insights and information from them.
Lessons

− Introduction.
− Provision an Azure AI Vision resource.
− Analyse an image.
− Generate a smart-cropped thumbnail and remove background.
− Exercise - Analyse images with Azure AI Vision.
− Knowledge check.
− Summary.

By the end of this module, you'll be able to:

− Provision an Azure AI Vision resource.
− Analyse an image.
− Generate a smart-cropped thumbnail.

Module 2: Image classification with custom Azure AI Vision models
The question answering capability of the Azure AI Language service makes it easy to build applications in which users ask questions using natural language and receive appropriate answers.
Lessons

− Introduction.
− Understand custom model types.
− Create a custom project.
− Label and train a custom model.
− Exercise - Classify images with an Azure AI Vision custom model.
− Knowledge check.
− Summary.

By the end of this module, you'll be able to:

− Create a custom Azure AI Vision classification model.

− Understand image classification.
− Understand object detection.
− Train an image classifier in Vision Studio.

Module 3: Detect, analyse, and recognize faces
The ability for applications to detect human faces, analyse facial features and emotions, and identify individuals is a key artificial intelligence capability.
Lessons

− Introduction.
− Identify options for face detection analysis and identification.
− Understand considerations for face analysis.
− Detect faces with the Azure AI Vision service.
− Understand capabilities of the face service.
− Compare and match detected faces.

- Implement facial recognition.
- Exercise - Detect, analyse, and identify faces.
- Knowledge check.
- Summary.

By the end of this module, you'll be able to:

- Identify options for face detection, analysis, and identification.
- Understand considerations for face analysis.
- Detect faces with the Azure AI Vision service.
- Understand capabilities of the Face service
- Compare and match detected faces.
- Implement facial recognition.

Module 4: Read Text in images and documents with the Azure AI Vision Service
Azure's AI Vision service uses algorithms to process images and return information. This module teaches you how to use the Image Analysis API for optical character recognition (OCR).
Lessons

- Introduction.
- Explore Azure AI Vision options for reading text.
- Use the Read API.
- Exercise - Read text in images.
- Knowledge check.
- Summary.

By the end of this module, you'll be able to:

- Read text from images using OCR
- Use the Azure AI Vision service Image Analysis with SDKs and the REST API
- Develop an application that can read printed and handwritten text

Module 5: Analyse video
Azure Video Indexer is a service to extract insights from video, including face identification, text recognition, object labels, scene segmentations, and more.
Lessons

- Introduction.
- Understand Azure Video Indexer capabilities.
- Extract custom insights.
- Use Video Analyzer widgets and APIs.
- Exercise - Analyse video.
- Knowledge check.
- Summary.

In this module, you'll practice how to:

- Describe Azure Video Indexer capabilities.
- Extract custom insights.
- Use Azure Video Indexer widgets and APIs.

ASSOCIATED CERTIFICATIONS & EXAM

There is no Associated Certification or Exam for this course, however, there is an assessment to achieve your Applied Skills credential. (Assessment Link)