MS-A13004: CREATE COMPUTER VISION SOLUTIONS WITH AZURE AI VISION

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.

PREREQUISITES

Before attending this course, delegates must know:

− 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 CONTENT

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

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

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

− Provision an Azure AI Vision resource.
− Analyze 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.

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, analyze, and recognize faces
The ability for applications to detect human faces, analyze 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, analyze, and identify faces.
− Knowledge check.

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.

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: Create a custom named entity extraction solution
Build a custom entity recognition solution to extract entities from unstructured documents.

Lessons

- Introduction.
- Understand custom named entity recognition.
- Label your data.

- Train and evaluate your model.
- Exercise - Extract custom entities.
- Knowledge check.

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

- Understand custom named entities and how they're labeled.
- Build a Language service project.
- Label data, train, and deploy an entity extraction model.
- Submit extraction tasks from your own app.

Module 6: Analyze 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 - Analyze video.
- Knowledge check.

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 & Exam for this course, however, there is an assessment to achieve your Applied Skills credential. (Assessment Link)