Microsoft Azure AI-102 Syllabus

1 Introduction

- Welcome to AI-102
- Exam Requirements For AI-102

2 Select the Apporopriate Azure AI Service

- Computer vision solution
- Natural language processing (NLP) solution
- Speech solution
- Generative AI solution
- Document intelligence solution
- Knowledge mining solution

3 Plan, Create and Deploy an Azure AI Service

- Responsible AI principles
- Create an Azure AI resource
- Default endpoint for an Azure AI service
- Azure AI Services Continuous integration and continuous delivery (CI/CD)
- Azure AI Services container deployment

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4 Manage, Monitor and Secure an Azure AI Service

- Configure diagnostic logging
- Monitor an Azure AI resource
- Manage costs for Azure AI services
- Manage account keys
- Protect account keys by using Azure Key Vault
- Manage private communications

5 Create Solutions For Content Delivery

- Text moderation with Azure AI Content Safety
- Image moderation with Azure AI Content Safety

6 Analyze Images

- Azure AI Vision Services Overview
- Select visual features to meet image processing requirements
- Detect objects in images and generate image tags
- AI Vision Services Pricing
- Interpret image processing responses
- Extract text from images using Azure AI Vision

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7 Implement Custom Computer Vision Models

- Choose between image classification and object detection models
- Label images
- Train a custom image model
- Create and label a test dataset in Azure ML
- Evaluate custom vision model metrics
- Publish a custom vision model
- Consume a custom vision model

8 Analyze Videos

- Use Azure AI Video Indexer to extract insights
- Use Azure AI Vision Spatial Analysis to detect presence and movement

9 Analyze text by using Azure AI Language

- Extract key phrases
- Extract entities
- Determine sentiment of text
- Detect the language used in text
- Detect personally identifiable information (PII) in text

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10 Process Speech by Using Azure Speech

- Implement text-to-speech
- Implement speech-to-text
- Speech Synthesis Markup Language (SSML)
- Implement intent recognition
- Implement keyword recognition

11 Translate Language

- Translate speech-to-speech by using the Azure AI Speech service
- Translate speech-to-text by using the Azure AI Speech service
- Translate to multiple languages simultaneously

12 Language Understanding Model Using Azure AI Language

- Create intents and add utterances
- Create entities
- Use ChatGPT to Create Sample Utterances
- Train and evaluate a conversation language understanding model
- Deploy and test a conversation language understanding model
- Backup and recover language understanding models

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13 Question Answering Solution by Using Azure AI Language

- Overview of Custom Question Answering in Azure AI
- Add question-and-answer pairs manually
- Import sources
- Train and test a knowledge base
- Publish a knowledge base
- Create a multi-turn conversation
- Add alternate phrasing
- Add chit-chat to a knowledge base
- Export a knowledge base
- Create a multi-language question answering solution

14 Implement an Azure AI Search Solution

- Overview of Azure AI Search
- Provision an Azure AI Search resource
- Create data sources
- Azure AI Search Indexes
- Create an index
- Define a skillset
- Implement custom skills
- Create and Run an indexer
- Query an index, including syntax, sorting, filtering, and wildcards

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15 Implement an Azure AI Document Intelligence Solution

- Overview of AI Document Intelligence
- Provision a Document Intelligence resource
- Use prebuilt models to extract data from documents

16 Implement an Azure AI Search Solution

- Overview of Azure OpenAI Services
- Provision an Azure OpenAI Service resource
- Select and deploy an Azure OpenAI model
- Submit prompts to generate natural language
- Submit prompts to generate code
- Use the DALL-E model to generate images