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#1 Online Certification Guide

MICROSOFT AI-102

Microsoft Designing and Implementing a Microsoft Azure AI Solution Certification Questions & Answers

Exam Summary – Syllabus –Questions

AI-102

Microsoft Certified - Azure AI Engineer Associate

40-60 Questions Exam – 700 / 1000 Cut Score – Duration of 130 minutes

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Know Your AI-102 Certification Well:

The AI-102 is best suitable for candidates who want to gain knowledge in the Microsoft Azure. Before you start your AI-102 preparation you may struggle to get all the crucial Designing and Implementing a Microsoft Azure AI Solution materials like AI-102 syllabus, sample questions, study guide.

But don't worry the AI-102 PDF is here to help you prepare in a stress free manner. The PDF is a combination of all your queries like-

- What is in the AI-102 syllabus?
- How many questions are there in the AI-102 exam?
- Which Practice test would help me to pass the AI-102 exam at the first attempt?

Passing the AI-102 exam makes you Microsoft Certified - Azure AI Engineer Associate. Having the Designing and Implementing a Microsoft Azure AI Solution certification opens multiple opportunities for you. You can grab a new job, get a higher salary or simply get recognition within your current organization.

Microsoft AI-102 Designing and Implementing a Microsoft Azure AI Solution Certification Details:

Exam Name	Microsoft Certified - Azure AI Engineer Associate
Exam Code	AI-102
Exam Price	$165 (USD)
Duration	130 mins
Number of Questions	40-60
Passing Score	700 / 1000
Books / Training	**Course AI-102T00: Designing and Implementing a Microsoft Azure AI Solution**
Schedule Exam	**Pearson VUE**
Sample Questions	**Designing and Implementing a Microsoft Azure AI Solution Sample Questions**
Practice Exam	**Microsoft AI-102 Certification Practice Exam**

AI-102 Syllabus:

Topic	Details
Plan and Manage an Azure Cognitive Services Solution (15-20%)	
Select the appropriate Cognitive Services resource	- select the appropriate cognitive service for a vision solution - select the appropriate cognitive service for a language analysis solution - select the appropriate cognitive Service for a decision support solution - select the appropriate cognitive service for a speech solution
Plan and configure security for a Cognitive Services solution	- manage Cognitive Services account keys - manage authentication for a resource - secure Cognitive Services by using Azure Virtual Network - plan for a solution that meets responsible AI principles
Create a Cognitive Services resource	- create a Cognitive Services resource - configure diagnostic logging for a Cognitive Services resource - manage Cognitive Services costs - monitor a cognitive service - implement a privacy policy in Cognitive Services
Plan and implement Cognitive Services containers	- identify when to deploy to a container - containerize Cognitive Services (including Computer Vision API, Face API, Text Analytics, Speech, Form Recognizer) - deploy Cognitive Services Containers in Microsoft Azure
Implement Computer Vision Solutions (20-25%)	
Analyze images by using the Computer Vision API	- retrieve image descriptions and tags by using the Computer Vision API - identify landmarks and celebrities by using the Computer Vision API - detect brands in images by using the Computer Vision API - moderate content in images by using the Computer Vision

Topic	Details
	API - generate thumbnails by using the Computer Vision API
Extract text from images	- extract text from images or PDFs by using the Computer Vision service - extract information using pre-built models in Form Recognizer - build and optimize a custom model for Form Recognizer
Extract facial information from images	- detect faces in an image by using the Face API - recognize faces in an image by using the Face API - analyze facial attributes by using the Face API - match similar faces by using the Face API
Implement image classification by using the Custom Vision service	- label images by using the Computer Vision Portal - train a custom image classification model in the Custom Vision Portal - train a custom image classification model by using the SDK - manage model iterations - evaluate classification model metrics - publish a trained iteration of a model - export a model in an appropriate format for a specific target - consume a classification model from a client application - deploy image classification custom models to containers
Implement an object detection solution by using the Custom Vision service	- label images with bounding boxes by using the Computer Vision Portal - train a custom object detection model by using the Custom Vision Portal - train a custom object detection model by using the SDK - manage model iterations - evaluate object detection model metrics - publish a trained iteration of a model - consume an object detection model from a client application - deploy custom object detection models to containers

Topic	Details
Analyze video by using Azure Video Analyzer for Media (formerly Video Indexer)	- process a video - extract insights from a video - moderate content in a video - customize the Brands model used by Video Indexer - customize the Language model used by Video Indexer by using the Custom Speech service - customize the Person model used by Video Indexer - extract insights from a live stream of video data
Implement Natural Language Processing Solutions (20-25%)	
Analyze text by using the Text Analytics service	- retrieve and process key phrases - retrieve and process entity information (people, places, urls, etc.) - retrieve and process sentiment - detect the language used in text
Manage speech by using the Speech service	- implement text-to-speech - customize text-to-speech - implement speech-to-text - improve speech-to-text accuracy - improve text-to-speech accuracy - implement intent recognition
Translate language	- translate text by using the Translator service - translate speech-to-speech by using the Speech service - translate speech-to-text by using the Speech service
Build an initial language model by using Language Understanding Service (LUIS)	- create intents and entities based on a schema, and then add utterances - create complex hierarchical entities • use this instead of roles - train and deploy a model
Iterate on and optimize a language model by using LUIS	- implement phrase lists - implement a model as a feature (i.e. prebuilt entities) - manage punctuation and diacritics - implement active learning

Topic	Details
	- monitor and correct data imbalances - implement patterns
Manage a LUIS model	- manage collaborators - manage versioning - publish a model through the portal or in a container - export a LUIS package - deploy a LUIS package to a container - integrate Bot Framework (LUDown) to run outside of the LUIS portal
Implement Knowledge Mining Solutions (15-20%)	
Implement a Cognitive Search solution	- create data sources - define an index - create and run an indexer - query an index - configure an index to support autocomplete and autosuggest - boost results based on relevance - implement synonyms
Implement an enrichment pipeline	- attach a Cognitive Services account to a skillset - select and include built-in skills for documents - implement custom skills and include them in a skillset
Implement a knowledge store	- define file projections - define object projections - define table projections - query projections
Manage a Cognitive Search solution	- provision Cognitive Search - configure security for Cognitive Search - configure scalability for Cognitive Search
Manage indexing	- manage re-indexing - rebuild indexes - schedule indexing - monitor indexing - implement incremental indexing - manage concurrency

Topic	Details
	- push data to an index - troubleshoot indexing for a pipeline
Implement Conversational AI Solutions (15-20%)	
Create a knowledge base by using QnA Maker	- create a QnA Maker service - create a knowledge base - import a knowledge base - 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 - add active learning to a knowledge base - manage collaborators
Design and implement conversation flow	- design conversation logic for a bot - create and evaluate *.chat file conversations by using the Bot Framework Emulator - choose an appropriate conversational model for a bot, including activity handlers and dialogs
Create a bot by using the Bot Framework SDK	- use the Bot Framework SDK to create a bot from a template - implement activity handlers and dialogs - use Turn Context - test a bot using the Bot Framework Emulator - deploy a bot to Azure
Create a bot by using the Bot Framework Composer	- implement dialogs - maintain state - implement logging for a bot conversation - implement prompts for user input - troubleshoot a conversational bot - test a bot - publish a bot - add language generation for a response - design and implement adaptive cards

Topic	Details
Integrate Cognitive Services into a bot	- integrate a QnA Maker service - integrate a LUIS service - integrate a Speech service - integrate Orchestrator for multiple language models - manage keys in app settings file

Microsoft AI-102 Sample Questions:

Question: 1

Your company hosts its sensitive analytical solution on an Azure virtual machine (VM) in an Azure virtual network (VNet). You want to integrate your solution with Azure Cognitive Search. You need to ensure that the traffic between your analytical solution and the Cognitive Search resource traverses over the Microsoft backbone network without exposure to the public internet.

What should you do?

a) Use the Cognitive Search private endpoint.
b) Deploy Azure Bastion in your solution's VNet.
c) Use the Cognitive Search public endpoint.
d) Add the IP address of the VM to the firewall settings of the Cognitive Search resource.

Answer: a

Question: 2

A customer uses Azure Cognitive Search. The customer plans to enable a server-side encryption and use customer-managed keys (CMK) stored in Azure.
What are three implications of the planned change?

Each correct answer presents a complete solution. NOTE: Each correct selection is worth one point.

a) The index size will increase.
b) Query times will increase.
c) A self-signed X.509 certificate is required.
d) The index size will decrease.
e) Query times will decrease.
f) Azure Key Vault is required.

Answer: a, b, e

Question: 3

You use the Custom Vision service to build a classifier. After training is complete, you need to evaluate the classifier. Which two metrics are available for review?

(Choose two.)

a) recall
b) F-score
c) weighted accuracy
d) precision
e) area under the curve (AUC)

Answer: a, d

Question: 4

You build a conversational bot named bot1. You need to configure the bot to use a QnA Maker application. From the Azure Portal, where can you find the information required by bot1 to connect to the QnA Maker application?

a) Access control (IAM)
b) Properties
c) Keys and Endpoint
d) Identity

Answer: c

Question: 5

You plan to perform predictive maintenance. You collect IoT sensor data from 100 industrial machines for a year. Each machine has 50 different sensors that generate data at one-minute intervals. In total, you have 5,000 time series datasets.

You need to identify unusual values in each time series to help predict machinery failures. Which Azure Cognitive Services service should you use?

a) Anomaly Detector
b) Cognitive Search
c) Form Recognizer
d) Custom Vision

Answer: a

Question: 6

You are developing a new sales system that will process the video and text from a public-facing website. You plan to monitor the sales system to ensure that it provides equitable results regardless of the user's location or background.
Which two responsible AI principles provide guidance to meet the monitoring requirements?

(Choose two.)

a) transparency
b) fairness
c) inclusiveness
d) reliability and safety
e) privacy and security

Answer: b, d

Question: 7

Your company wants to reduce how long it takes for employees to log receipts in expense reports. All the receipts are in English.

You need to extract top-level information from the receipts, such as the vendor and the transaction total. The solution must minimize development effort.

Which Azure Cognitive Services service should you use?

a) Custom Vision
b) Personalizer
c) Form Recognizer
d) Computer Vision

Answer: c

Question: 8

You are building a natural language model. You need to enable active learning. What should you do?

a) Add show-all-intents=true to the prediction endpoint query.
b) Enable speech priming.
c) Add iog=true to the prediction endpoint query.
d) Enable sentiment analysis.

Answer: c

Question: 9

You are training a Language Understanding model for a user support system. You create the first intent named GetContactDetails and add 200 examples.

You need to decrease the likelihood of a false positive. What should you do?

a) Enable active learning.
b) Add a machine learned entity.
c) Add additional examples to the GetContactDetails intent.
d) Add examples to the None intent.

Answer: a

Question: 10

You are building a bot on a local computer by using the Microsoft Bot Framework. The bot will use an existing Language Understanding model.

You need to translate the Language Understanding model locally by using the Bot Framework CU. What should you do first?

a) From the Language Understanding portal, clone the model.
b) Export the model as an .lu file.
c) Create a new Speech service.
d) Create a new Language Understanding service.

Answer: b

Study Guide to Crack Microsoft Designing and Implementing a Microsoft Azure AI Solution AI-102 Exam:

- Getting details of the AI-102 syllabus, is the first step of a study plan. This pdf is going to be of ultimate help. Completion of the syllabus is must to pass the AI-102 exam.
- Making a schedule is vital. A structured method of preparation leads to success. A candidate must plan his schedule and follow it rigorously to attain success.
- Joining the Microsoft provided training for AI-102 exam could be of much help. If there is specific training for the exam, you can discover it from the link above.
- Read from the AI-102 sample questions to gain your idea about the actual exam questions. In this PDF useful sample questions are provided to make your exam preparation easy.
- Practicing on AI-102 practice tests is must. Continuous practice will make you an expert in all syllabus areas.