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Azure AI Solution

(AZ AI - 100)

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Azure Designing and Implementing an Azure AI Solution (AZ AI - 100)

Course Overview:

This learning path is designed to help you prepare for the AI-100 Designing and Implementing an Azure AI Solution exam. Even if you don't plan to take the exam, these courses and hands-on labs will help you get started on your way to becoming an Azure AI engineer.

This exam is part of Microsoft's role-based certification program. Candidates who pass the AI-100 exam will earn the Microsoft Certified: Azure AI Engineer Associate certification.

The AI-100 exam tests your knowledge of three subject areas: analyzing solution requirements, designing AI solutions, and implementing and monitoring AI solutions. This learning path starts by giving you an overview of Azure services. Once you have that foundation, we'll dig into how to use the various Cognitive Services. They're divided into five categories: decision, language, speech, vision, and web search. Next, we'll show you how to build a chatbot using the Azure Bot Service. Finally, we'll show you how to tie all of the components together into pipelines and data flows using services like Azure Data Factory.

Course Outline:

Analyze solution requirements

1. Recommend Azure Cognitive Services APIs to meet business requirements

- select the processing architecture for a solution
- select the appropriate data processing technologies
- select the appropriate AI models and services
- identify components and technologies required to connect service endpoints
- identify automation requirements

2. Map security requirements to tools, technologies, and processes

- identify processes and regulations needed to conform with data privacy, protection, and regulatory requirements
- identify which users and groups have access to information and interfaces
- identify appropriate tools for a solution
- identify auditing requirements

3. Select the software, services, and storage required to support a solution

- identify appropriate services and tools for a solution
- identify integration points with other Microsoft services
- identify storage required to store logging, bot state data, and Azure Cognitive Services output

Design AI solutions

1. Design solutions that include one or more pipelines

- define an AI application workflow process
- design a strategy for ingest and egress data
- design the integration point between multiple workflows and pipelines
- design pipelines that use AI apps
- design pipelines that call Azure Machine Learning models
- select an AI solution that meet cost constraints

2. Design solutions that uses Cognitive Services

- design solutions that use vision, speech, language, knowledge, search, and anomaly detection APIs

3. Design solutions that implement the Microsoft Bot Framework

- integrate bots and AI solutions
- design bot services that use Language Understanding (LUIS)
- design bots that integrate with channels
- integrate bots with Azure app services and Azure Application Insights

4. Design the compute infrastructure to support a solution

- identify whether to create a GPU, FPGA, or CPU-based solution
- identify whether to use a cloud-based, on-premises, or hybrid compute infrastructure
- select a compute solution that meets cost constraints

5. Design for data governance, compliance, integrity, and security

- define how users and applications will authenticate to AI services
- design a content moderation strategy for data usage within an AI solution
- ensure that data adheres to compliance requirements defined by your organization

- ensure appropriate governance of data
- design strategies to ensure that the solution meets data privacy regulations and industry standards

Implement and monitor AI solutions

1. Implement an AI workflow

- develop AI pipelines
- manage the flow of data through the solution components
- implement data logging processes
- define and construct interfaces for custom AI services
- create solution endpoints
- develop streaming solutions

2. Integrate AI services and solution components

- configure prerequisite components and input datasets to allow the consumption of Azure Cognitive Services APIs
- configure integration with Azure Cognitive Services
- configure prerequisite components to allow connectivity to the Microsoft Bot Framework
- implement Azure Cognitive Search in a solution

3. Monitor and evaluate the AI environment

- identify the differences between KPIs, reported metrics, and root causes of the differences
- identify the differences between expected and actual workflow throughput
- maintain an AI solution for continuous improvement
- monitor AI components for availability
- recommend changes to an AI solution based on performance data

Prerequisites:

Before attending this course, students must have knowledge of:

- Microsoft Azure Administrator Associate.
- General knowledge of IT architecture
- Software development experience, especially using REST APIs

Who Should Attend:

- Students should have at least one year of hands-on experience securing Azure workloads and experience with security controls for workloads on Azure.

- Software developers who want to build artificial intelligence solutions on Azure

Number of Hours: 40hrs

Certification: AI-100

Key Features:

- One to One Training
- Online Training
- Fastrack & Normal Track
- Resume Modification
- Mock Interviews
- Video Tutorials
- Materials
- Real Time Projects
- Virtual Live Experience
- Preparing for Certification