Exam AI-100: Designing and Implementing an Azure AI Solution – Skills Measured

**Analyze solution requirements (25-30%)**

Recommend 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

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

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 Cognitive Services output

**Design AI solutions (40-45%)**

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

Design solutions that uses Cognitive Services
• design solutions that use vision, speech, language, knowledge, search, and anomaly detection APIs

**Design solutions that implement the 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

**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

**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 (25-30%)**

**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

**Integrate AI services with solution components**

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