

Microsoft Azure Al Fundamentals

Exam Ref Al-900



Exam Ref AI-900 Microsoft Azure Al Fundamentals

Julian Sharp

Exam Ref Al-900 Microsoft Azure Al Fundamentals

Table of Contents

1	`	$\overline{}$	٠,	_	,
l		()	\	e	ı

Title

Copyright

Dedication

Contents at a glance

Contents

Introduction

Organization of this book

Preparing for the exam

Microsoft certifications

Quick access to online references

Errata, updates, & book support

Stay in touch

Chapter 1 Describe Artificial Intelligence workloads and considerations

Skill 1.1: Identify features of common AI workloads

Describe Azure services for AI and ML

Understand Azure Machine Learning

Understand Azure Cognitive Services

Describe the Azure Bot Service

Identify common AI workloads



Skill 1.2: Identify guiding principles for Responsible Al

Describe the Fairness principle

Describe the Reliability & Safety principle

Describe the Privacy & Security principle

Describe the Inclusiveness principle

Describe the Transparency principle

Describe the Accountability principle

Understand Responsible AI for Bots

Understand Microsoft's AI for Good program

Chapter summary

Thought experiment

Thought experiment answers

Chapter 2 Describe fundamental principles of machine learning on Azure

Skill 2.1: Identify common machine learning types

Understand machine learning model types

Describe regression models

Describe classification models

Describe clustering models

Skill 2.2: Describe core machine learning concepts

Understand the machine learning workflow

Identify the features and labels in a dataset for machine learning

Describe how training and validation datasets are used in machine learning

Describe how machine learning algorithms are used for model training

Select and interpret model evaluation metrics

Skill 2.3: Identify core tasks in creating a machine learning solution

Understand machine learning on Azure

Understand Azure Machine Learning studio



Describe data ingestion and preparation

Describe feature selection and engineering

Describe model training and evaluation

Describe model deployment and management

Skill 2.4: Describe capabilities of no-code machine learning with Azure Machine Learning

Describe Azure Automated Machine Learning

Describe Azure Machine Learning designer

Chapter summary

Thought experiment

Thought experiment answers

Chapter 3 Describe features of computer vision workloads on Azure

Skill 3.1: Identify common types of computer vision solution

Introduce Cognitive Services

Understand computer vision

Describe image classification

Describe object detection

Describe optical character recognition

Describe facial detection, recognition, and analysis

Skill 3.2: Identify Azure tools and services for computer vision tasks

Understand the capabilities of the Computer Vision service

Understand the Custom Vision service

Understand the Face service

Understand the Form Recognizer service

Chapter summary

Thought experiment

Thought experiment answers

Chapter 4 Describe features of Natural Language Processing



(NLP) workloads on Azure

Skill 4.1: Identify features of common NLP workload scenarios

Describe Natural Language Processing

Describe language modeling

Describe key phrase extraction

Describe named entity recognition

Describe sentiment analysis

Describe speech recognition and synthesis

Describe translation

Skill 4.2: Identify Azure tools and services for NLP workloads

Identify the capabilities of the Text Analytics service

Identify the capabilities of the Language Understanding service (LUIS)

Identify the capabilities of the Speech service

Identify the capabilities of the Translator service

Chapter summary

Thought experiment

Thought experiment answers

Chapter 5 Describe features of conversational AI workloads on Azure

Skill 5.1: Identify common use cases for conversational AI

Identify features and uses for webchat bots

Identify common characteristics of conversational AI solutions

Skill 5.2: Identify Azure services for conversational AI

Identify capabilities of the QnA Maker service

Identify capabilities of the Azure Bot Service

Chapter summary

Thought experiment

Thought experiment answers

Index



