

## MS-AI3022: IMPLEMENT KNOWLEDGE MINING WITH AZURE AI SEARCH



DURATION	LEVEL	TECHNOLOGY	DELIVERY METHOD	TRAINING CREDITS
1 Day	Intermediate	Azure AI	Instructor-led	NA

### INTRODUCTION

Do you have information locked up in structured and unstructured data sources? Using Azure AI Search, you can extract key insights from this data and enable applications to search and analyse them.

### AUDIENCE PROFILE

This course is designed for professionals who want to build and manage intelligent search solutions using Azure AI. The primary audience includes:

- AI Engineers
- Solution Architects
- Developers

### PREREQUISITES

Before attending this course, delegates must have:

- Familiarity with Microsoft Azure
- Application development experience with C# or Python

### COURSE OBJECTIVES

After completing this course, students will be able to:

- Understand the fundamentals of Azure AI Search.
- Implement AI-driven search capabilities in applications using Azure.
- Gain hands-on experience with intelligent search, indexing, and natural language processing (NLP).
- Apply best practices for optimizing search functionality and managing search services

### COURSE CONTENT

#### Module 1: Create an Azure AI Search solution

Unlock the hidden insights in your data with Azure AI Search.

Lessons

- Introduction
- Manage capacity
- Understand search components
- Understand the indexing process
- Search an index
- Apply filtering and sorting
- Enhance the index
- Exercise - Create a search solution
- Knowledge check
- Summary

By the end of this module, you'll be able to:

- Create an Azure AI Search solution
- Develop a search application

#### Module 2: Create a custom skill for Azure AI SearchService

Use the power of artificial intelligence to enrich your data and find new insights with custom skills in Azure AI Search.

Lessons

- Introduction
- Define the custom skill schema
- Add a custom skill
- Custom text classification skill
- Machine learning custom skill
- Exercise - Create a Custom Skill for Azure AI Search
- Knowledge check
- Summary

By the end of this module, you'll be able to:

- Implement a custom skill for Azure AI Search
- Create a custom text classification skill
- Create a machine learning custom skill

#### Module 3: Create a knowledge store with Azure AI Search

Persist the output from an Azure AI Search enrichment pipeline for independent analysis or downstream processing.

Lessons

- Introduction
- Define projections
- Define a knowledge store
- Exercise - Create a knowledge store
- Knowledge check
- Summary

By the end of this module, you'll be able to:

- Create a knowledge store from an Azure AI Search pipeline
- View data in projections in a knowledge store

#### Module 4: Implement advanced search features in Azure AI Search

Use more advanced features of Azure AI Search to improve your existing search solutions. Learn

how to change the ranking on documents, boost terms, and allow searching in multiple languages.

Lessons

- Introduction
- Improve the ranking of a document with term boosting
- Improve the relevance of results by adding scoring profiles
- Improve an index with analyzers and tokenized terms
- Enhance an index to include multiple languages
- Improve search experience by ordering results by distance from a given reference point
- Exercise: Implement enhancements to search results
- Knowledge check
- Summary

In this module you'll learn how to:

- Improve the ranking of a document with term boosting
- Improve the relevance of results by adding scoring profiles
- Improve an index with analyzers and tokenized terms
- Enhance an index to include multiple languages
- Improve search experience by ordering results by distance from a given reference point

## Module 5: Search data outside the Azure platform in Azure AI Search using Azure Data Factory

Use Azure Data Factory to add data that resides inside or outside the Azure platform into your search indexes.

Lessons

- Introduction

- Index data from external data sources using Azure Data Factory
- Index any data using the Azure AI Search push API
- Exercise: Add to an index using the push API
- Knowledge check
- Summary

In this module you'll learn how to:

- Use Azure Data Factory to copy data into an Azure AI Search Index
- Use the Azure AI Search push API to add to an index from any external data source

## Module 6: Maintain an Azure AI Search solution

Maintain the performance, cost, and reliability of your Azure AI Search solutions.

Lessons

- Introduction
- Manage security of an Azure AI Search solution
- Optimize performance of an Azure AI Search solution
- Manage costs of an Azure AI Search solution
- Improve reliability of an Azure AI Search solution
- Monitor an Azure AI Search solution
- Debug search issues using the Azure portal
- Exercise - Debug search issues
- Knowledge check
- Summary

In this module you'll learn how to:

- Use Language Studio to enrich Azure AI Search indexes

- Enrich an AI Search index with custom classes

## Module 7: Perform search reranking with semantic ranking in Azure AI Search

Learn how to perform L2 ranking with semantic ranker in Azure AI Search.

Lessons

- Introduction
- What is semantic ranking?
- Set up semantic ranking
- Exercise - Use semantic ranking on an index
- Knowledge check
- Summary

In this module you'll learn how to:

- Describe semantic ranking
- Set up semantic ranking
- Perform semantic ranking on an index

## Module 8: Perform vector search and retrieval in Azure AI Search

Learn how to perform vector search and retrieval in Azure AI Search.

Lessons

- Introduction
- What is vector search?
- Prepare your search
- Understand embedding
- Exercise - Use the REST API to run vector search queries
- Knowledge check
- Summary

In this module you'll learn how to:

- Describe vector search
- Describe embeddings
- Run vector search queries using the REST API

## ASSOCIATED CERTIFICATIONS & EXAM

There is no Associated Certification or Exam for this course, however, there is an assessment to achieve your Applied Skills credential. (Assessment Link)