



# AI-3019: Build AI Apps with Azure Database for PostgreSQL

Course ID #: 7000-1063-ZZ-Z

Hours: 7

## Course Content

### Description:

This learning path explores how the Azure AI and Azure Machine Learning Services integrations provided by the Azure AI extension for Azure Database for PostgreSQL - Flexible Server can enable you to build AI-powered apps.

### Prerequisites:

Before starting this module, you should have experience working with PostgreSQL databases, writing SQL queries, and a general understanding of AI and ML concepts.

### Target Audience:

Developer

### Topics:

#### Lesson 1: Get started with generative AI in Azure Database for PostgreSQL

- Introduction
- Understand generative AI language models
- Describe the Azure AI extension
- Explore the Azure OpenAI schema
- Review the Azure Cognitive schema
- Examine the Azure Machine Learning schema
- Exercise-Explore the Azure AI extension
- Module assessment
- Summary

#### Lesson 2: Enable semantic search in Azure Database for PostgreSQL

- Introduction
- Understand semantic search
- Store vectors in Azure Database for PostgreSQL
- Create embeddings with the Azure AI extension
- Exercise - Generate vector embeddings with Azure OpenAI
- Explore semantic search use cases
- Exercise - Create a search function for a recommendation system
- Module assessment
- Summary



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## Lesson 3: Summarize data with Azure AI Services and Azure database for PostgreSQL

- Introduction
- Explain extractive summarization
- Explore abstractive summarization
- Exercise - Perform extractive and abstractive summarization
- Module assessment
- Summary

## Lesson 4: Perform sentiment analysis and opinion mining with Azure Database for PostgreSQL

- Introduction
- Explore sentiment analysis
- Describe opinion mining
- Exercise-Analyze sentiment
- Module assessment
- Summary

## Lesson 5: Extract insights using Azure AI Language and Azure Database for PostgreSQL

- Introduction
- Extract key phrases
- Recognize entities
- Recognize personally identifiable information (PII) entities
- Exercise-Extract insights using the Azure AI Language service
- Module assessment
- Summary

## Lesson 6: Translate Text with Azure AI Translator and Azure Database for PostgreSQL

- Introduction
- Explore the Azure AI Translator Service
- Translate data in Azure Database for PostgreSQL
- Exercise-Translate text
- Module assessment
- Summary

## Lesson 7: Use Azure Machine Learning for inferencing from Azure Database for PostgreSQL

- Introduction
- Explore Azure Machine Learning
- Invoke Azure Machine Learning models
- Exercise-Perform inference using Azure Machine Learning
- Module assessment
- Summary

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## NASBA Information

**Attendance Requirement:** To be awarded the full credit hours, you must sign in and attend the entire course.

**Recommended Field(s) of Study:**

**Recommended CPEs:** 7.80

### **Policies: Course Registration, Cancellation, Refund, and Complaint Resolution**

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