

KOENIG SOLUTIONS • COURSE OUTLINE

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

Learn to build generative AI applications with Azure Database for PostgreSQL, from semantic search to sentiment analysis and translation.

1 Day

8 HOURS

6

MODULES

18

TOPICS

COURSE OVERVIEW

This course covers building generative AI applications using Azure Database for PostgreSQL - Flexible Server, starting with enabling semantic search through vector embeddings and the pgvector and azure_ai extensions. It then addresses summarizing data with Azure AI services, performing sentiment analysis and opinion mining, and extracting insights through key phrase extraction, named entity recognition, and PII detection using Azure AI Language. It concludes with translating text using Azure AI Translator, including automatic translation during record insertion.

WHO THIS COURSE IS FOR

AI Developers

Database Developers

Data Engineers

Application Developers

Machine Learning Practitioners

PREREQUISITES

- Familiarity with Azure AI Services and the Azure portal.

LEARNING OBJECTIVES

After completing this course, students will be able to:

- Develop powerful Generative AI applications using Azure Database for PostgreSQL - Flexible Server
- Implement semantic search and use embedding vectors for vector similarity
- Summarize complex data using Generative AI summarization techniques
- Perform sentiment analysis and opinion mining to extract insights from textual data
- Utilize Azure AI Language tools for key phrase extraction, entity recognition, and redaction
- Translate textual data into multiple languages using Azure AI Translator
- Train and deploy machine learning models using Azure Machine Learning and integrate them with Azure Database for PostgreSQL

6 Modules, 18 Topics

01

Get Started with Generative AI in Azure Database for PostgreSQL

TOPICS

- Making AI easy to use in Azure Database for PostgreSQL
- Using Azure AI and Machine Learning with your data
- Introduction to creating smarter applications

02

Enable Semantic Search in Azure Database for PostgreSQL

TOPICS

Creating vector columns to store embeddings · Enabling the pgvector and azure_ai extensions · Generating and storing embeddings · Querying the database using a query vector

03

Summarize Data with Azure AI Services and Azure Database for PostgreSQL

TOPICS

- Describe and explain the differences between the various summarization techniques accessible through the azure_ai extension and Azure AI services
- Apply generative AI summarization techniques to data in a PostgreSQL database using the azure_ai extension

04

Perform Sentiment Analysis and Opinion Mining with Azure Database for PostgreSQL

TOPICS

- Explore the fundamentals of sentiment analysis and how it can be used to gain insights into user sentiments and emotions
- Learn opinion mining techniques to identify sentiments related to specific attributes
- Apply generative AI summarization techniques to data in a PostgreSQL database using the azure_ai extension

05

Extract Insights Using Azure AI Language and Azure Database for PostgreSQL

TOPICS

- **Key phrase extraction:** Pulling out the most important phrases to quickly grasp the main ideas
- **Named entity recognition:** Identifying and categorizing important entities in text
- **PII detection:** Safeguarding sensitive information by identifying and redacting personal data

06

Translate Text with Azure AI Translator and Azure Database for PostgreSQL

TOPICS

- Learn how to translate documents using the Azure AI Translator
- Learn how the Azure AI extension enables seamless interaction between Azure Database for PostgreSQL - Flexible Server and Azure AI Translator
- Understand one way to translate documents automatically as part of record insertion

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Hands-on exercises throughout the course
- Delivery by certified instructors and subject matter experts
- Course completion certificate from Koenig

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

FLEXIBLE DELIVERY

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Live Online Classes (ILO)

Fly-Me-A-Trainer (FMAT)

Flexi (Self-Paced)

1-on-1 Training

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✉ info@koenig-solutions.com