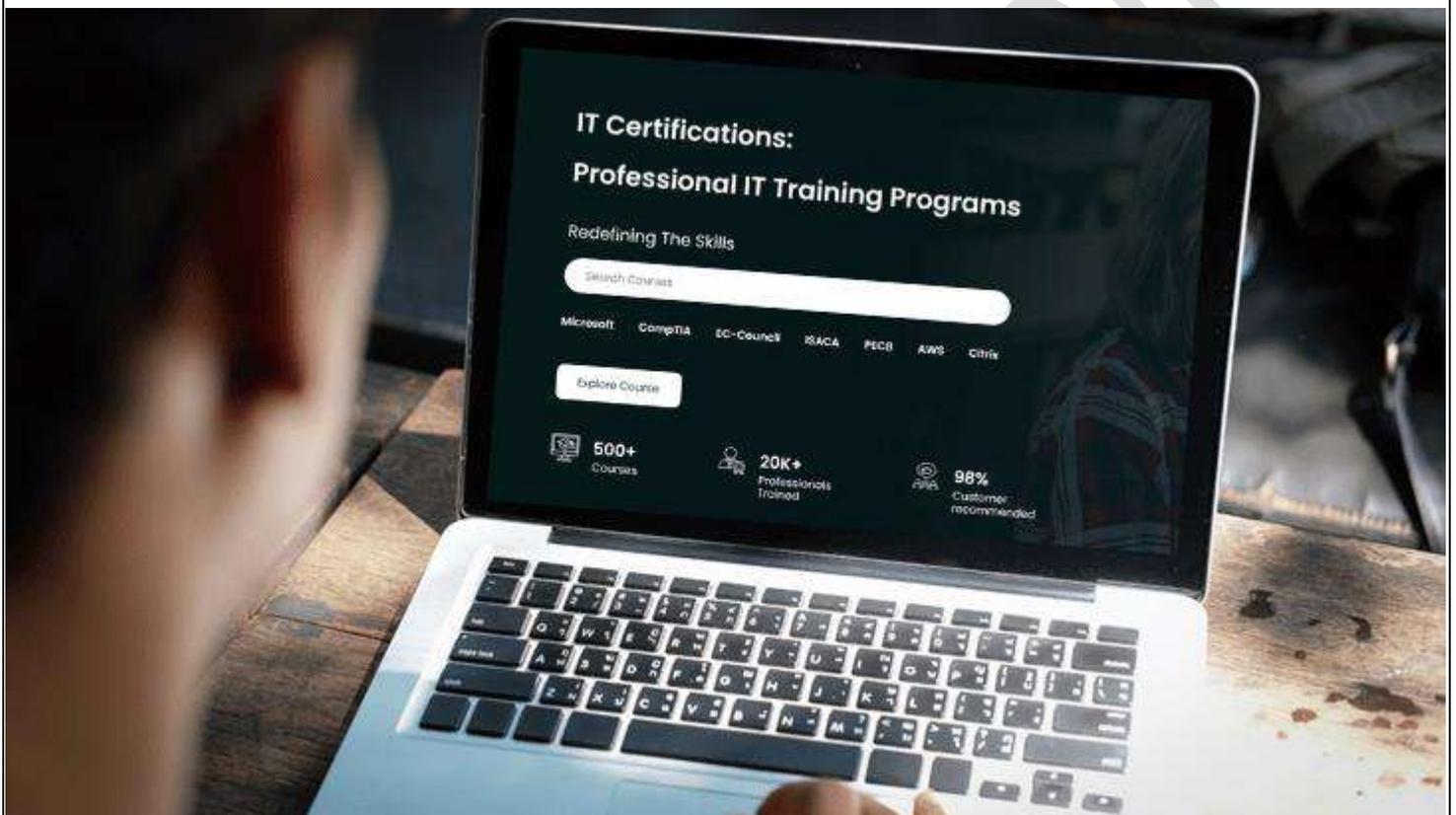# AI-3019: Build AI Apps with Azure Database for PostgreSQL Training

DURATION: 1 DAY

Course Description

AI-3019: Build AI Apps with Azure Database for PostgreSQL provides an in-depth exploration of generative AI and its applications within PostgreSQL. Participants will learn to use the azure_ai extension to develop AI-driven applications, including semantic search, summarization, and sentiment analysis. The course covers key techniques for extracting insights and performing text translation with Azure AI services. Hands-on labs allow participants to implement and test AI features directly within Azure Database for PostgreSQL, making this course essential for developers and data scientists seeking practical AI integration skills.

Who should attend this course?

- Database Developer
- Database Administrator
- IT Professional

What you will learn

- Get started with generative AI in Azure Database for PostgreSQL
- Enable semantic search in Azure Database for PostgreSQL
- Summarize data with Azure AI Services and Azure database for PostgreSQL
- Perform sentiment analysis and opinion mining with Azure Database for PostgreSQL
- Extract insights using Azure AI Language and Azure Database for PostgreSQL
- Translate Text with Azure AI Translator and Azure Database for PostgreSQL
- Use Azure Machine Learning for inferencing from Azure Database for PostgreSQL

Prerequisites

Required

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

Curriculum

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

- 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 2: Enable semantic search in Azure Database for PostgreSQL

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

- Explain extractive summarization
- Explore abstractive summarization
- Exercise - Perform extractive and abstractive summarization

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

- Explore sentiment analysis
- Describe opinion mining
- Exercise-Analyze sentiment

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

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

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

- Explore the Azure AI Translator Service
- Translate data in Azure Database for PostgreSQL
- Exercise-Translate text

Module 7: Use Azure Machine Learning for inferencing from Azure Database for PostgreSQL

- Explore Azure Machine Learning
- Invoke Azure Machine Learning models
- Exercise-Perform inference using Azure Machine Learning

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