Welcome to AI for Telco Part 3: Retrieval Augmented Generation (RAG)

ANI_110d | On-Demand | Automation and Insights | Express
Course Duration: 1 hour

This course explores Retrieval Augmented Generation (RAG) at a very high level. We cover the what, why and how of RAG along with key applications of RAG. This training also provides the benefits and limitations of RAG to provide a balanced view. The discussion on RAG includes its architecture, specific database considerations, and operations. An overview of the operations of RAG includes tokenization and effective search criteria. The webinar will conclude with a discussion of the practical applications of RAG with LLMs, including web grounding and advanced techniques like LangChain and prompt chaining. The course highlights telecom-specific use cases like network performance monitoring and outage diagnosis, providing a balanced view of RAG's role in network engineering and operations.

Intended Audience

This is an introductory course on RAG and is suitable for beginners to this area.

Objectives

After completing this course, the learner will be able to:

- Define Retrieval Augmented Generation (RAG)
- List RAG benefits and limitations
- Identify scenarios where RAG brings value in telecom networks
- Sketch RAG architecture and process
- List considerations for RAG
- Explain tokenization and retrieval criteria
- Apply LangChain and prompt chaining in RAG

Outline

1. Getting Started with RAG for Telecom
1.1 Introduction to RAG
1.2 Augmenting an LLM with New Data and Fine Tuning
1.3 Augmenting a Large Language Model Using RAG
1.4 Exploring RAG in Telecom Networks

2. Applying RAG to Telecom Networks
2.1 RAG Applications in the Telecom Space
2.2 The Power of RAG in Telecom
2.3 Use Case: Network Performance Monitoring

3. RAG Systems
3.1 RAG Architecture
3.2 RAG 2.0
3.3 Use Case: Network Outage Diagnosis with RAG 2.0

4. Intelligent Workflows with RAG
4.1 Vector Database Operations
4.2 LangChain and Prompt Chaining

5. Conclusion
5.1 Summary

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