At a Glance

Develop a question-answering agent using the IBM WatsonX Granite Gen 3 LLM and LangChain. Set up watsonx, and create a retrieval-augmented generation (RAG) pipeline for enhanced response accuracy. This hands-on project is perfect for data scientists, AI enthusiasts, and developers, and provides practical AI skills for real-world applications in just 30 minutes.

In this guided project, you develop a question-answering agent. By leveraging an IBM watsonx Granite 3 large language model (LLM) and LangChain, you learn how to set up and configure these powerful tools to create a highly accurate retrieval augmented generation (RAG) pipeline. This hands-on project is perfect for data scientists, AI enthusiasts, and developers who want to acquire practical AI skills that can be applied in real-world scenarios. In just 30 minutes, you will gain valuable experience that will enhance your portfolio and open up new possibilities in the field of artificial intelligence.

What is watsonx Granite

<u>Watsonx Granite</u> is a family of AI models that are built for business and engineered from scratch to help ensure trust and scalability in AI-driven applications.

Benefits of watsonx Granite

- **Open**: With a principled approach to data transparency, model alignment, and security red teaming, IBM has been delivering truly open source Granite models under an Apache 2.0 license to empower developers to bring trusted, safe generative AI into mission-critical applications and workflows.
- **Performant**: IBM Granite models deliver best-in-class performance in coding, and above-par performance in targeted language tasks and use cases at lower latencies, with continuous, iterative improvements by using pioneering techniques from IBM Research and contributions from open source.
- **Efficient**: With a fraction of the compute capacity, inferencing costs, and energy consumption demanded by general-purpose models, Granite models enable developers to experiment, build, and scale more generative AI applications while staying well within the budgetary limits of their departments.

What you'll learn

After you complete this project, you will be able to:

- Understand the fundamentals of the IBM watsonx Granite 3 LLM and its applications in AI-driven solutions.
- Learn how to configure and integrate LangChain with watsonx Granite to enhance response accuracy.
- Develop the skills to create a retrieval augmented generation (RAG) pipeline.
- Gain practical experience in developing a question-answering agent that can be used in various real-world applications.

What you'll need

Before you start this guided project, ensure that you have the following:
- A basic understanding of Python programming
- Familiarity with API usage and basic concepts of machine learning
- A current version of a web browser like Chrome, Edge, Firefox, Internet Explorer, or Safari