Lesson 05: LangChain and Workflow Design

Overview:

In this activity, you will engage in a hands-on demonstration using the LangChain and HuggingFace tools. By following the provided instructions, you will gain practical experience with these tools, enhancing your proficiency in leveraging LangChain and HuggingFace.

Instructions:

1. Use **Demo 01: Building a Text Generation Pipeline with LangChain and Hugging Face's Flan T5 XXL Model.ipynb** for this activity.
2. Tweak **Step 6: Test and Run the Chain on a Few Questions** to generate text for the questions given below.
3. Check your answers with the key answers provided at the end of the activity.

Tasks:

Task 1: Generate text for the questions provided below:

1. Explain Generative AI and its distinctions from other AI branches.
2. Explain key principles in generative models and their data generation process.
3. Explain the role of transfer learning in enhancing generative model performance.
4. Explain ethical considerations and measures addressing bias in deploying Generative AI systems.
5. Explain examples of popular frameworks or libraries used for building generative models.

Discussion Questions (Optional)

If time permits, discuss the below questions:

1. How does Langchain integrate with Hugging Face models for improved text generation?
2. What benefits arise from using Langchain and Hugging Face for response generation tasks?

Answer Key

Step 6: Test and Run the Chain on a Few Questions

#Question 1
question = " Explain Generative AI and its distinctions from other AI branches."

llm_chain.run(question)

#Question 2
question = " Explain key principles in generative models and their data generation process."

llm_chain.run(question)

#Question 3
question = " Explain the role of transfer learning in enhancing generative model performance."

llm_chain.run(question)

#Question 4
question = " Explain ethical considerations and measures addressing bias in deploying Generative AI systems."

llm_chain.run(question)

#Question 5
question = " Explain examples of popular frameworks or libraries used for building generative models."

llm_chain.run(question)