Week 3: Understand Orchestration and Agenting Frameworks

Day 1-2: Langchain

Resources:

● Get introduced to the overall ecosystem of services offered by following this link: *https://python.langchain.com/v0.2/docs/introduction/*.

● Follow along this Langchain | Tutorial Link: *https://www.deeplearning.ai/short-courses/langchain-for-llm-application-development/*

● Install langchain locally and in a jupyter notebook follow the Build a Simple LLM Application with LCEL Link: [*https://python.langchain.com/v0.2/docs/tutorials/llm\_chain/*](https://python.langchain.com/v0.2/docs/tutorials/llm_chain/),

Build a Chatbot Link:

[*https://python.langchain.com/v0.2/docs/tutorials/chatbot/*](https://python.langchain.com/v0.2/docs/tutorials/chatbot/)

and Build an Agent link: *https://python.langchain.com/v0.2/docs/tutorials/agents/* tutorials.

○ You can ignore the part on LangSmith for the time being.

○ You can preferably use Ollama to locally run llama3 (some parts may still require you to have an OpenAI key). You can find instructions on using Ollama here Link: https://python.langchain.com/v0.1/docs/get\_started/quickstart/ in the “LLM Chain” section.

● Optionally, follow this video for a quick introduction

LangChain Explained in 13 Minutes | QuickStart Tutorial for Beginners  
Link: https://www.youtube.com/watch?v=aywZrzNaKjs

Hands-on assignment:

Set up a basic prompting chain that involves at least two different types of tasks (e,g., data extraction followed by summarization, QnA etc). Be creative and do not directly use any tutorials available. Focus on how data is passed between layers.