

# LangChain

## An Introduction

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[https://github.com/lharikumar/langchain\\_intro](https://github.com/lharikumar/langchain_intro)

# LangChain



# LangChain

A framework for developing applications powered by language models. With LangChain you can bring the power of external data and applications into LLM.

- There is a release almost everyday. So be sure to get the latest!
- LangChain available in Python and JavaScript.
- Examples used in this video will use OpenAI models

Models

Prompts

Memory

Indexes

Chains

Agents

Callbacks

LangChain – <https://docs.langchain.com/docs/>

Python Documentation – <https://python.langchain.com/en/latest/>

Javascript Documentation - <https://js.langchain.com/docs/>

# A quick look at the modules

- **Models:** different types of AI models that can be used
  - LLMs, Chat Models, Text Embeddings
- **Prompts:** what we pass to the model. This input is rarely hard coded, but rather is often constructed from multiple components.
  - LLM Prompt Templates, Chat Prompt Templates, Example Selectors, Output Parsers
- **Memory:** concept of storing and retrieving data in the process of a conversation.
- **Indexes:** ways to structure documents so that LLMs can best interact with them
  - Document Loaders, Text Splitters, Vector Stores, Retrievers
- **Chains:** a sequence of modular components (or other chains) combined in a particular way to accomplish a common use case. Sequence of calling the components is predetermined
- **Agents:** When the chain of calls cannot be pre-determined and is dependent on user inputs
- **Callbacks:** Useful for logging, monitoring etc. where user needs to “hook into” the various stages of LLM application

# OpenAI API Key

- Get the key at <https://platform.openai.com/account/api-keys>
- Track the usage at <https://platform.openai.com/account/usage>

# Langflow

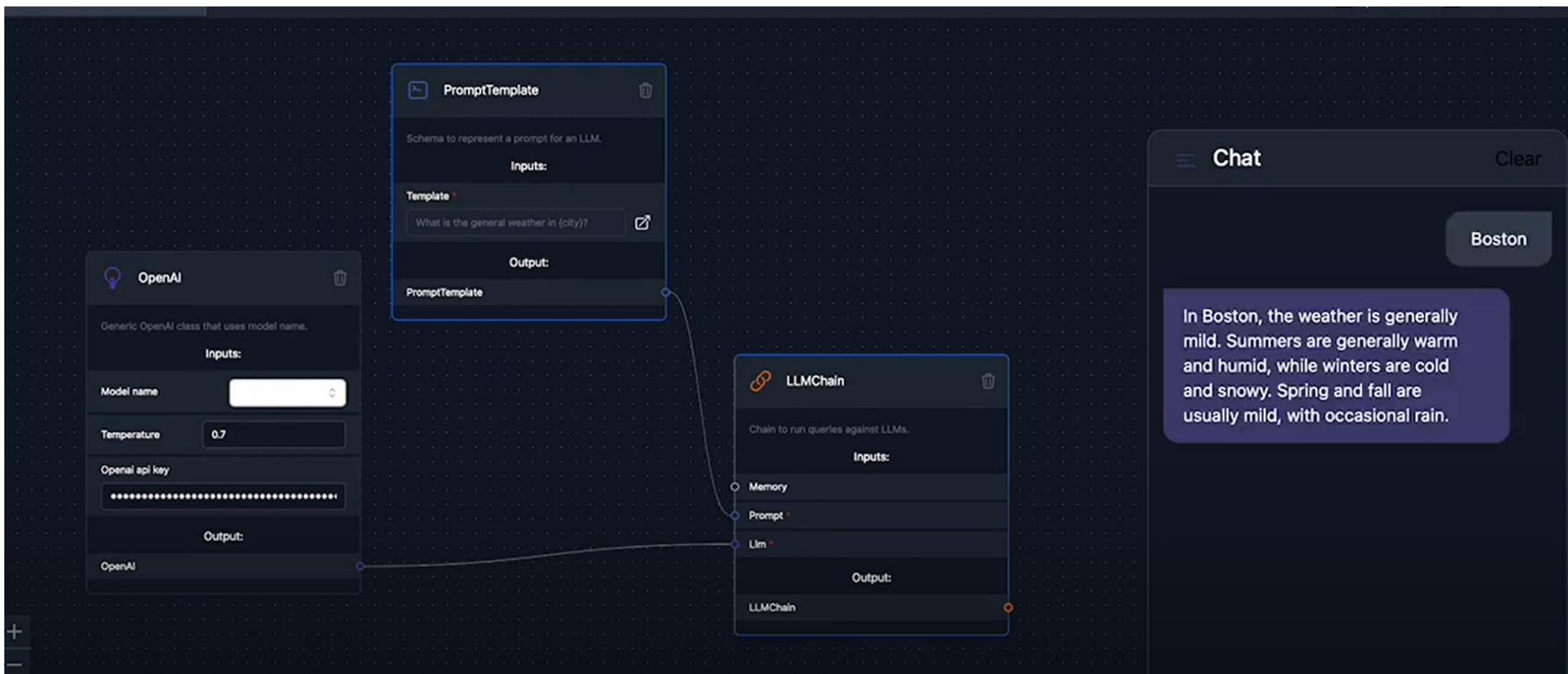


Image from <https://www.youtube.com/watch?v=EvYTjNXG2PE>

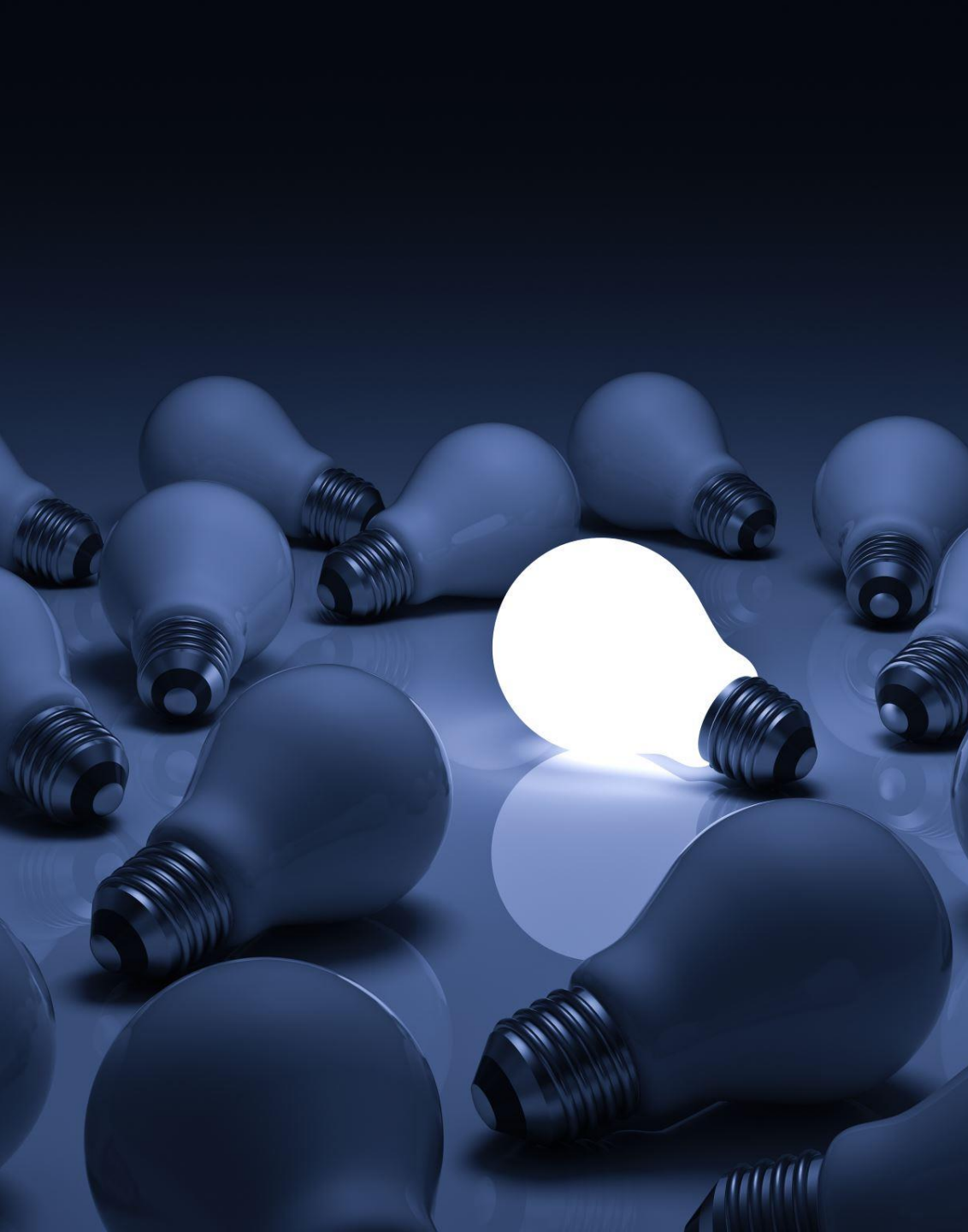
Also try out ..

- Check out the usecase section in the LangChain documentation
- While designing Chatbots for your own documents, explore
  - Open source embeddings instead of OpenAI – *Instructor* is an example `langchain.embeddings` -> `HuggingFaceInstructEmbeddings`
  - Open-source models instead of OpenAI
  - Alternatives to FAISS Vector Store – *Weaviate, PineCone*
- LangChain hub - <https://github.com/hwchase17/langchain-hub>

# References/Learning Resources

- Langchain Discord Channel
  - <https://discord.com/invite/6adMQxSpJS>
- LangChain
  - Data Independent <https://www.youtube.com/@DataIndependent>
  - LangChain series by James Briggs - <https://www.youtube.com/@jamesbriggs>
  - Prompt Engineering - <https://www.youtube.com/@engineerprompt>
- LangFlow
  - <https://www.youtube.com/watch?v=UG9UKLfyu7k>
  - <https://cobusgreyling.medium.com/langflow-46563a8af323>
  - <https://github.com/logspace-ai/langflow>





“You can do anything based on your creativity but keep a check on your enthusiasm; GenAI can overwhelm you very fast”

- Nitin Aggarwal, Head of Cloud AI Services (India), Google

Good luck with the Hackathon!