

Guru Nanak Dev Engineering College

Training Diary - TR-102 Report

Name: Dilnaz Kaur Grewal

URN: 2302510

CRN: 2315054

Day 13

Training Summary

On Day 13, we explored **LangFlow**, a powerful visual framework built on top of LangChain that allows users to create and manage AI workflows through a drag-and-drop interface. It simplifies the development of LLM-based applications without requiring complex coding.

What is LangFlow?

LangFlow is a **low-code/no-code UI** for LangChain that enables developers to:

- Design chains and agents visually
- Integrate tools and components like prompts, retrievers, and memory modules
- Test and debug pipelines in real-time

It's an efficient solution for prototyping and deploying AI-driven applications rapidly.

Project Completed: YouTube URL Summarizer

We built a **YouTube Video Summarizer** that takes a **YouTube video URL** as input and returns a **text summary** of the video content. The flow involved:

Pipeline Overview:

1. **URL Input** - User provides a YouTube link.
2. **Transcription Component** - Extracts audio and transcribes it using Whisper.
3. **Summarization Component** - Uses Gemini to generate a clean, concise summary from the transcript.
4. **Text Output Node** - Displays the final summary to the user.

Use Case:

Helps users quickly grasp the essence of long YouTube videos without watching them entirely—ideal for lectures, tutorials, or interviews.

Tools s Technologies Used

- **LangFlow** - for visual chain building
- **LangChain** - core logic integration
- **Python** - for backend functions
- **Gemini API** - for summarization
- **Whisper** - for speech-to-text transcription

Learning Outcome

- Learned how to install and configure **LangFlow** for visual app building.
- Designed a complete **end-to-end pipeline** for processing and summarizing YouTube content.
- Strengthened understanding of chaining LLM tools visually and logically.