

LangChain Complete Guide - Detailed Notes

Based on LangChain Tutorial Video

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Introduction (00:00)

LangChain has revolutionized how developers build applications with Large Language Models (LLMs). This comprehensive guide covers the essential concepts, practical implementations, and real-world applications of LangChain.

What is LangChain? (00:22)

LangChain is an **open-source framework** designed to simplify the development of applications powered by large language models.

Key Features

- **Modular Architecture:** Components can be mixed and matched
- **Provider Agnostic:** Works with multiple LLM providers
- **Production Ready:** Built with scalability in mind

Code Example

```
from langchain.llms import OpenAI
from langchain.prompts import PromptTemplate

# Initialize LLM
llm = OpenAI(temperature=0.7)

# Create prompt template
template = "Tell me about {topic}"
```

```
prompt = PromptTemplate(
    input_variables=["topic"],
    template=template
)

# Generate response
response = llm(prompt.format(topic="artificial intelligence"))
print(response)
```

Comparison Table

Feature	LangChain	Traditional
Setup	Easy	Complex
Flexibility	High	Low
Community	Large	Small

Note: LangChain provides a standardized interface for working with different LLM providers.

For more information, visit the [official documentation](#).

This is a sample document demonstrating various Markdown features.