

Curso de LangChain

¿Cómo crear aplicaciones con LLM?



LangChain

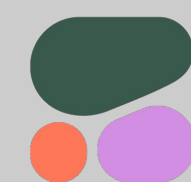
LLM y modelos de chat



Meta



OpenAI



cohere

Indexar documentos



Memorias y cadenas

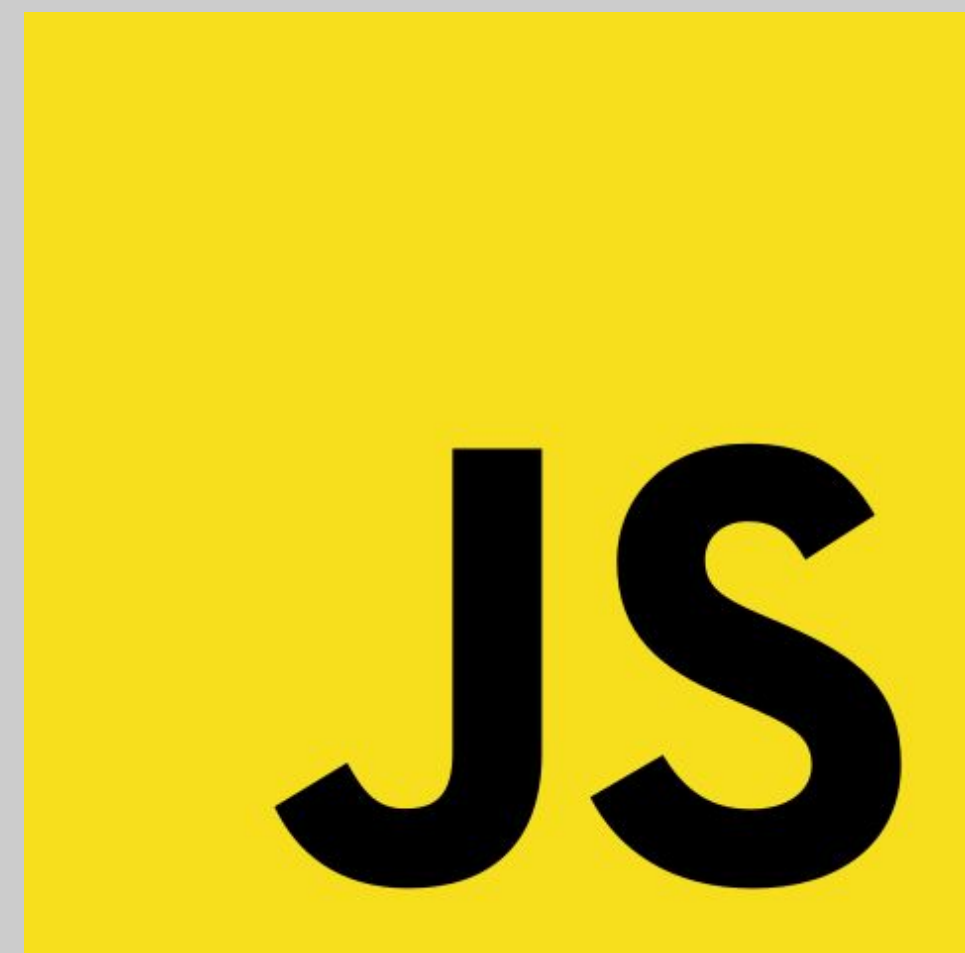


Unir modelos



Estructura de Langchain

Disponible en

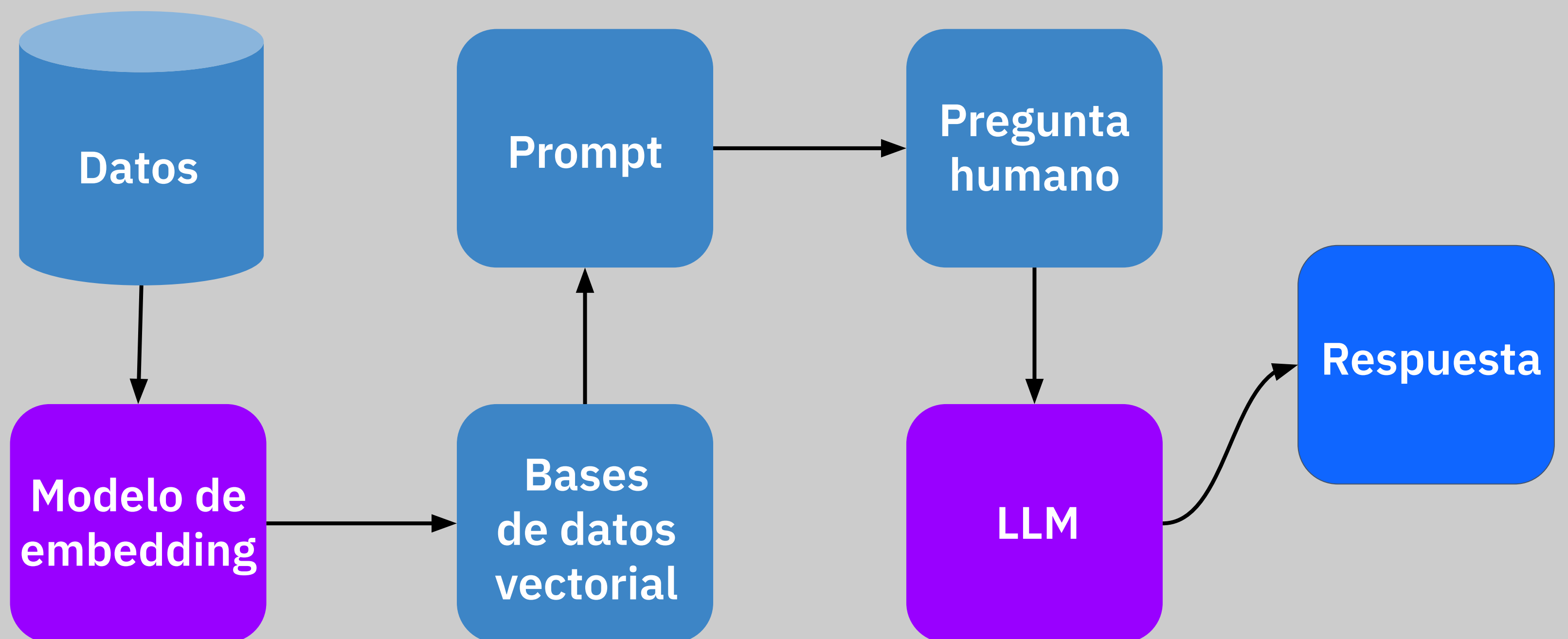


Estructura

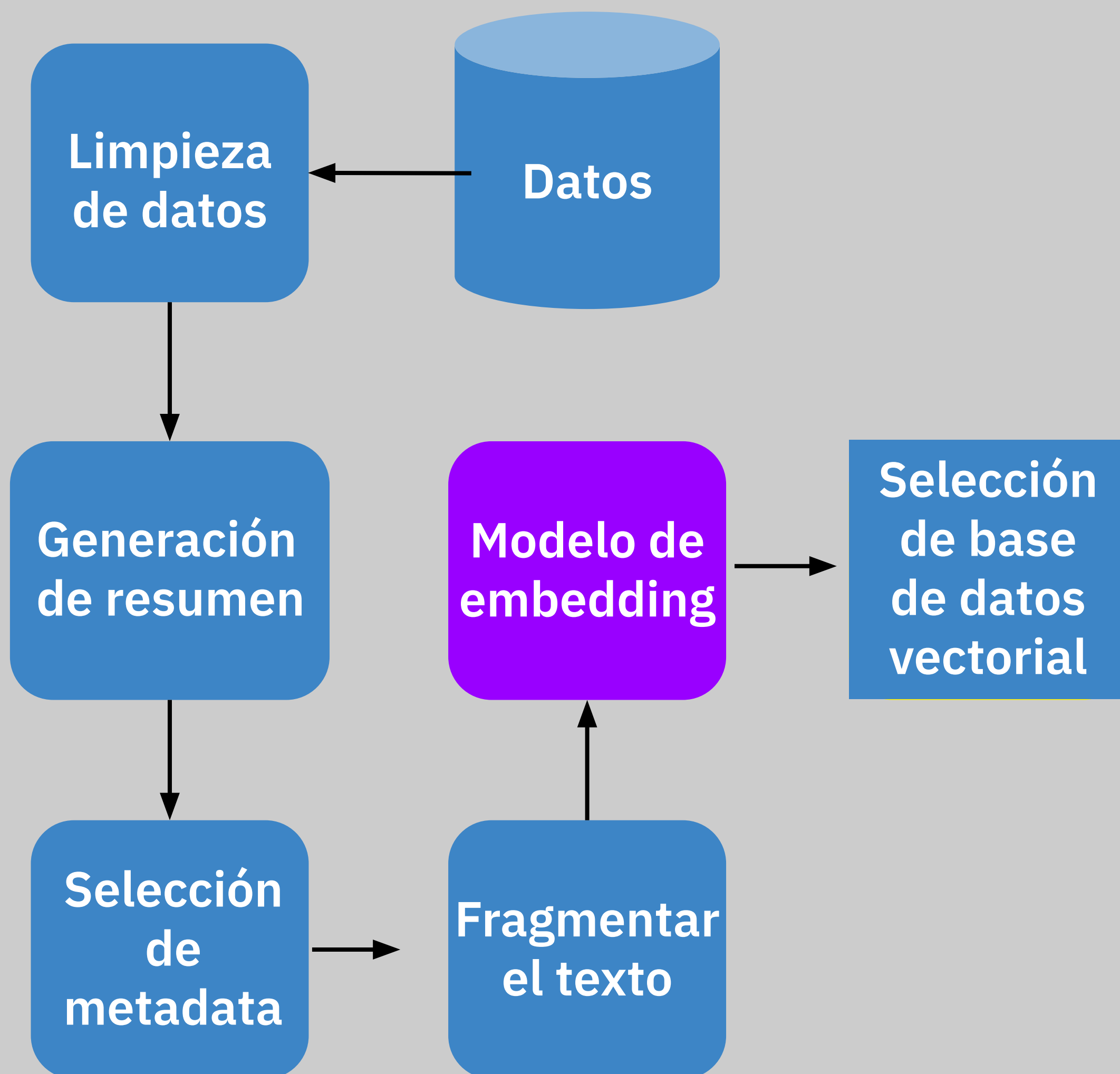
Claves:

- 1. Conexión con modelos**
- 2. Conexión con datos**
- 3. Encadenamiento
de procesos**

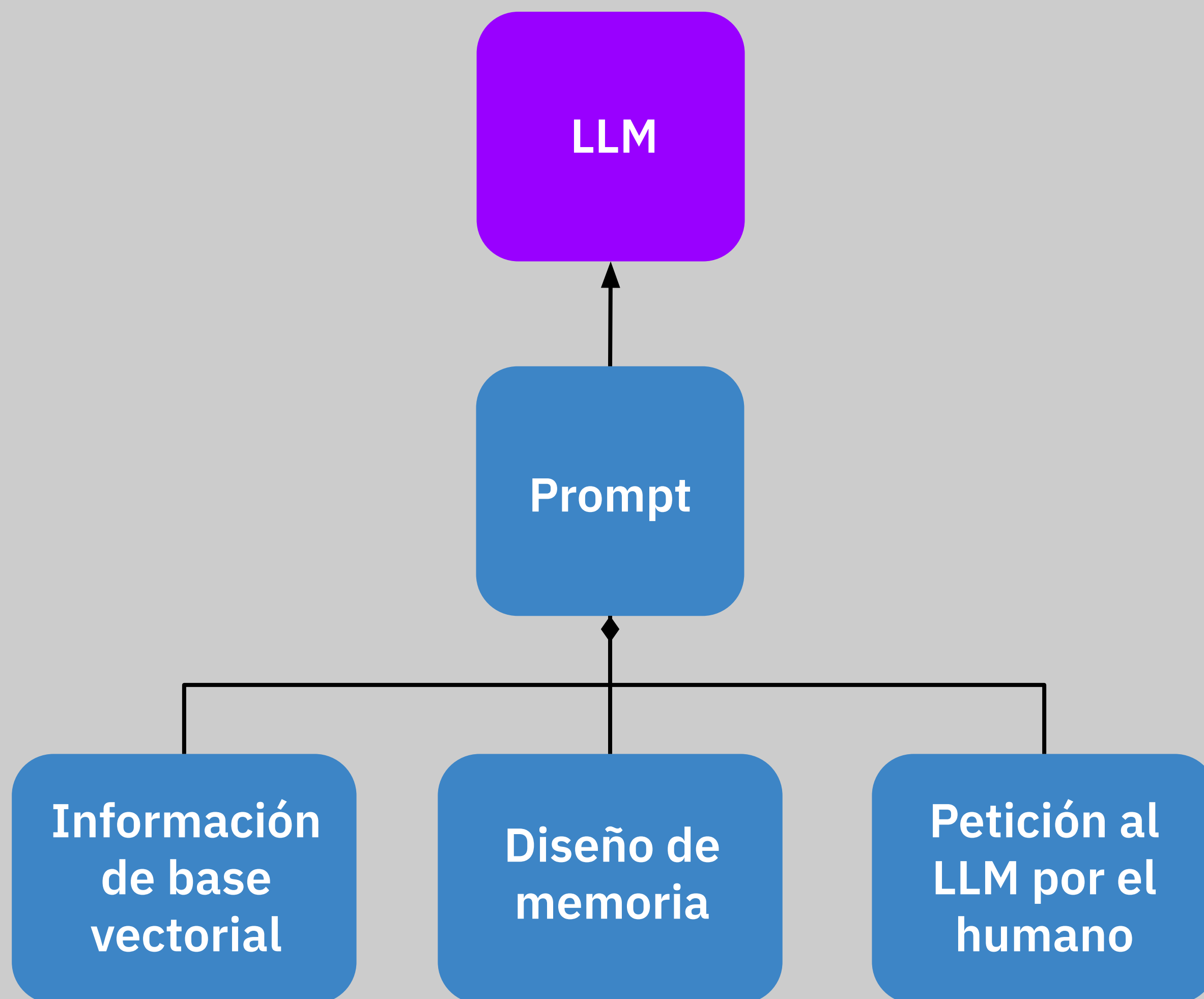
Fundamentos



Ejemplo del procesamiento de datos



Ej. de uso de LLM



1. Repositorio en GitHub

hwchase17 / langchain

<> Code

Issues 1.7k

Pull requests 320

Discussions

Actions

Projects

Security

langchain

Public

Watch 500

Fork 6.3k

Star 50.4k

master

Go to file

Add file

<> Code

About

Branches

Tags

jamesmcraft

Improve performance when retrieving Notio...

✓ 1 hour ago

🕒 2,725

📁 .devcontainer	Update dev container (#6189)	last week
📁 .github	update pr tmpl (#6552)	5 days ago
📁 docs	Office365 Tool (#6306)	3 hours ago
📁 langchain	Improve performance when retrieving Notion ...	1 hour ago
📁 tests	Confluence added (#6432)	4 hours ago
📄 .dockerignore	fix: tests with Dockerfile (#2382)	2 months ago

⚡ Building applications with LLMs through composability ⚡

[langchain-langchain.vercel.app](#)

📖 Readme

📄 MIT license

🔗 Cite this repository

📈 Activity


☆ 50.4k stars

👁 500 watching


🍴 6.3k forks

Report repository

2. Documentación

 **LangChain** Concepts [Python Docs](#) [JS/TS Docs](#)

[Introduction](#)
Components
 Schema
 Models
 Prompts
 Indexes
 Memory
 Chains
 Agents
Use Cases
 Personal Assistants
 Question Answering Over Docs
 Chatbots
 Querying Tabular Data
 Interacting with APIs
 Extraction
 Evaluation

[Introduction](#)
 **LangChain**
LangChain is a framework for developing applications powered by language models. We believe that the most powerful and differentiated applications will not only call out to a language model via an api, but will also:

1. Be data-aware: connect a language model to other sources of data
2. Be agentic: Allow a language model to interact with its environment

As such, the LangChain framework is designed with the objective in mind to enable those types of applications.
There are two main value props the LangChain framework provides:

1. Components: LangChain provides modular abstractions for the components necessary to work with language models. LangChain also has collections of implementations for all these abstractions. The components are designed to be easy to use, regardless of whether you are using the rest of the LangChain framework or not.
2. Use-Case Specific Chains: Chains can be thought of as assembling

Cadenas

LangChain 

**¿Qué es una cadena y
cómo se relaciona
con los modelos?**



¿Cómo funcionan?



Tipos de cadenas

- Utility
- Foundational
 - LLM
 - Transformation
 - Sequential

Indexes o índices

¿Cómo manejar documentos
en LangChain?

Conexión a datos de documentos



Clases de índices

- Document loaders
- Text splitters
- Vectorstore

¿Por qué usar índices?

- LLM pueden interactuar con otros datos.
- Indexar datos no estructurados.
- Consultas precisas.

Uso de embeddings y bases de datos vectoriales

Embedding class

- Varios modelos de embedding.
- Interfaz estándar para todos los modelos.

Embedding class methods

- `embed_documents`
- `embed_query`

Embedding integrations



LLaMA C++



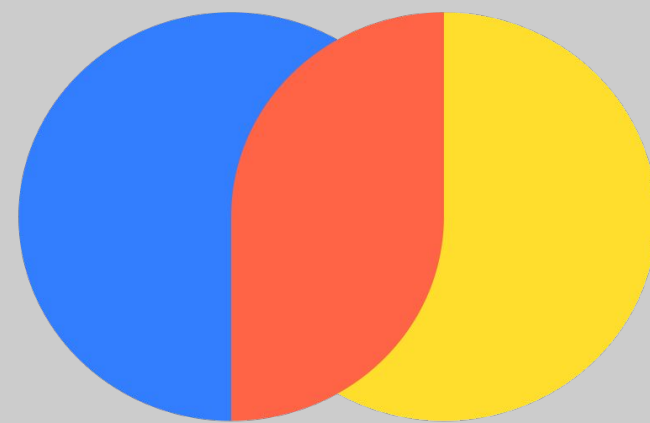
Vector stores

- Almacenar embedded data.
- Consultas a la data de los docs.

Vector store integrations



Pinecone



aws



Google Cloud



Meta



Azure

Memoria en LangChain

¿Para qué se utiliza?



Un **chatbot** por defecto
no recuerda lo que le dijiste.

Tipos de memoria

- Corto plazo
- Largo plazo

```
from langchain.memory import  
ChatMessageHistory
```

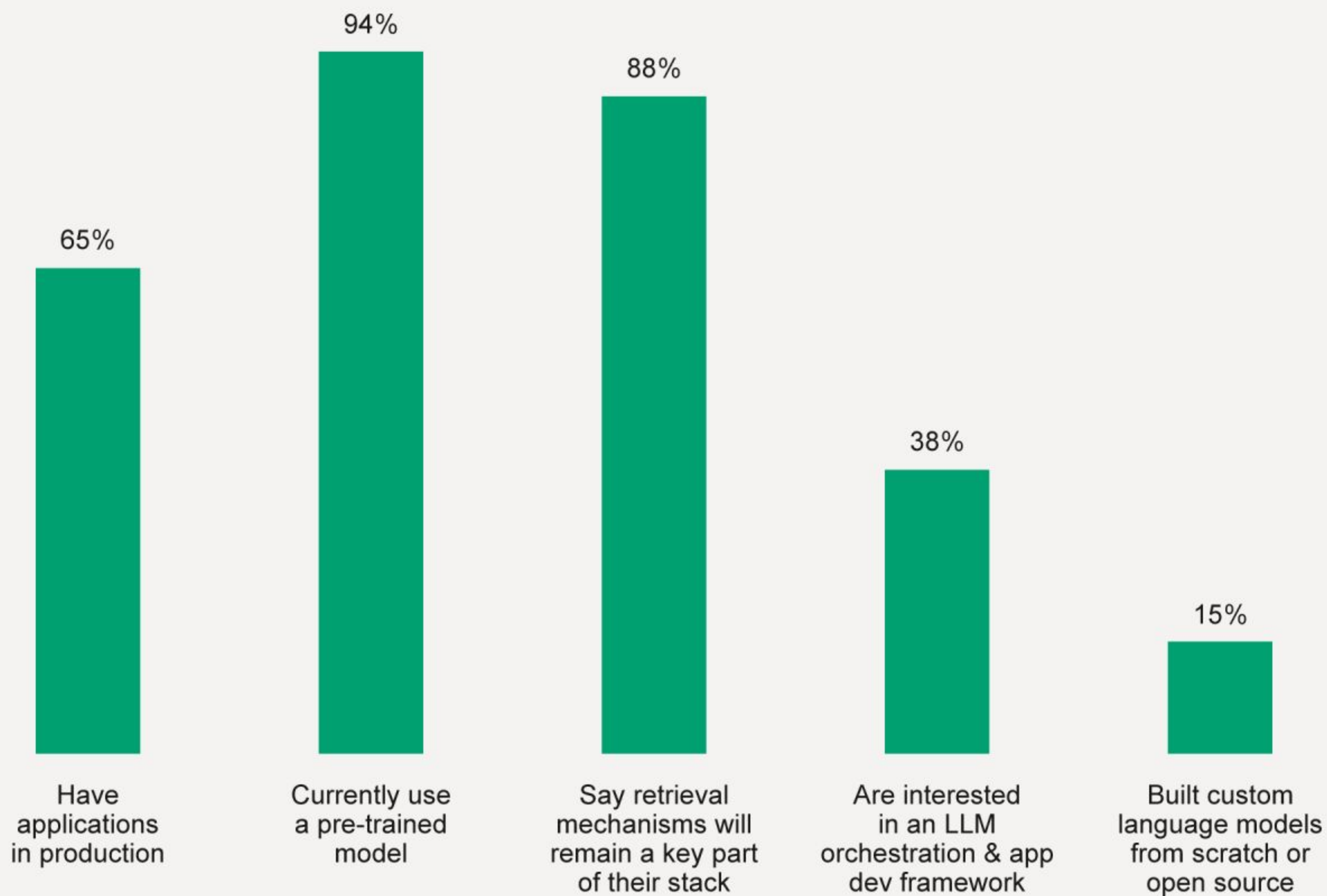
```
history = ChatMessageHistory()
```

```
history.add_user_message("hi!")
```

```
history.add_ai_message("whats  
up?")
```

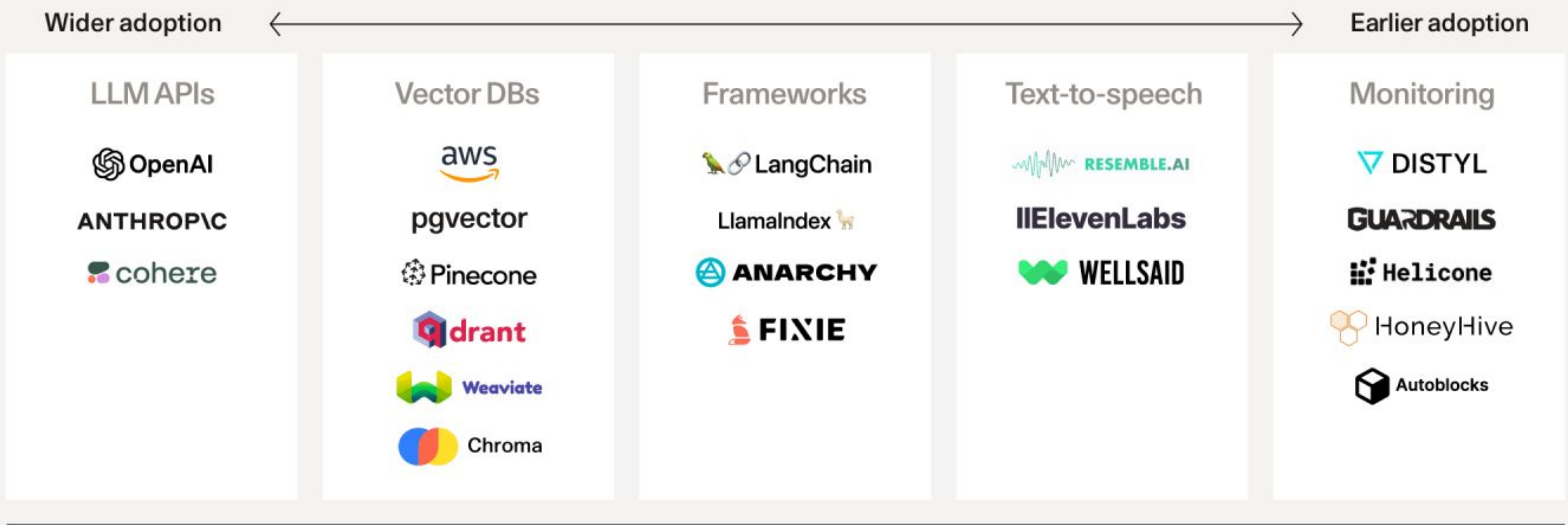

LangChain y LLM en evolución constante

Language model API survey



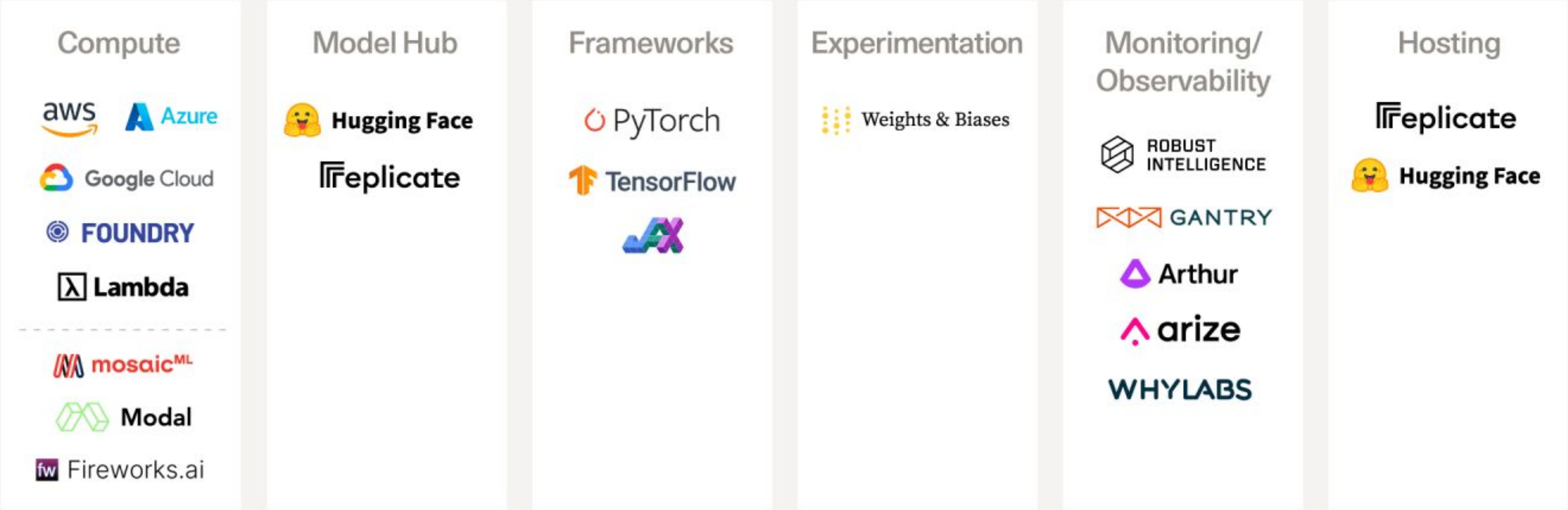
Fuente: Sequoia Capital - The New Language Model Stack

LLM API Stack



Fuente: Sequoia Capital - The New Language Model Stack

Custom Model Training / Tuning Stack



Note: this is not exhaustive. This is based on customer-reported usage and perception.

Fuente: Sequoia Capital - The New Language Model Stack