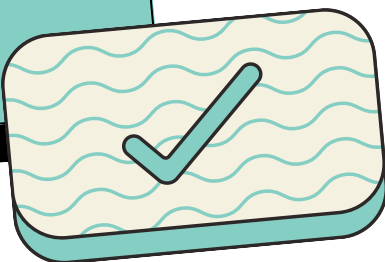


# AGENDA



**01**



Área de Dados

**02**



Langchain

**03**



Docling

**04**



VectorStore

**05**



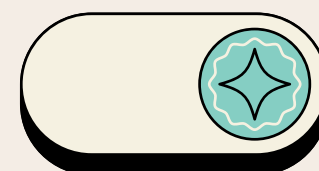
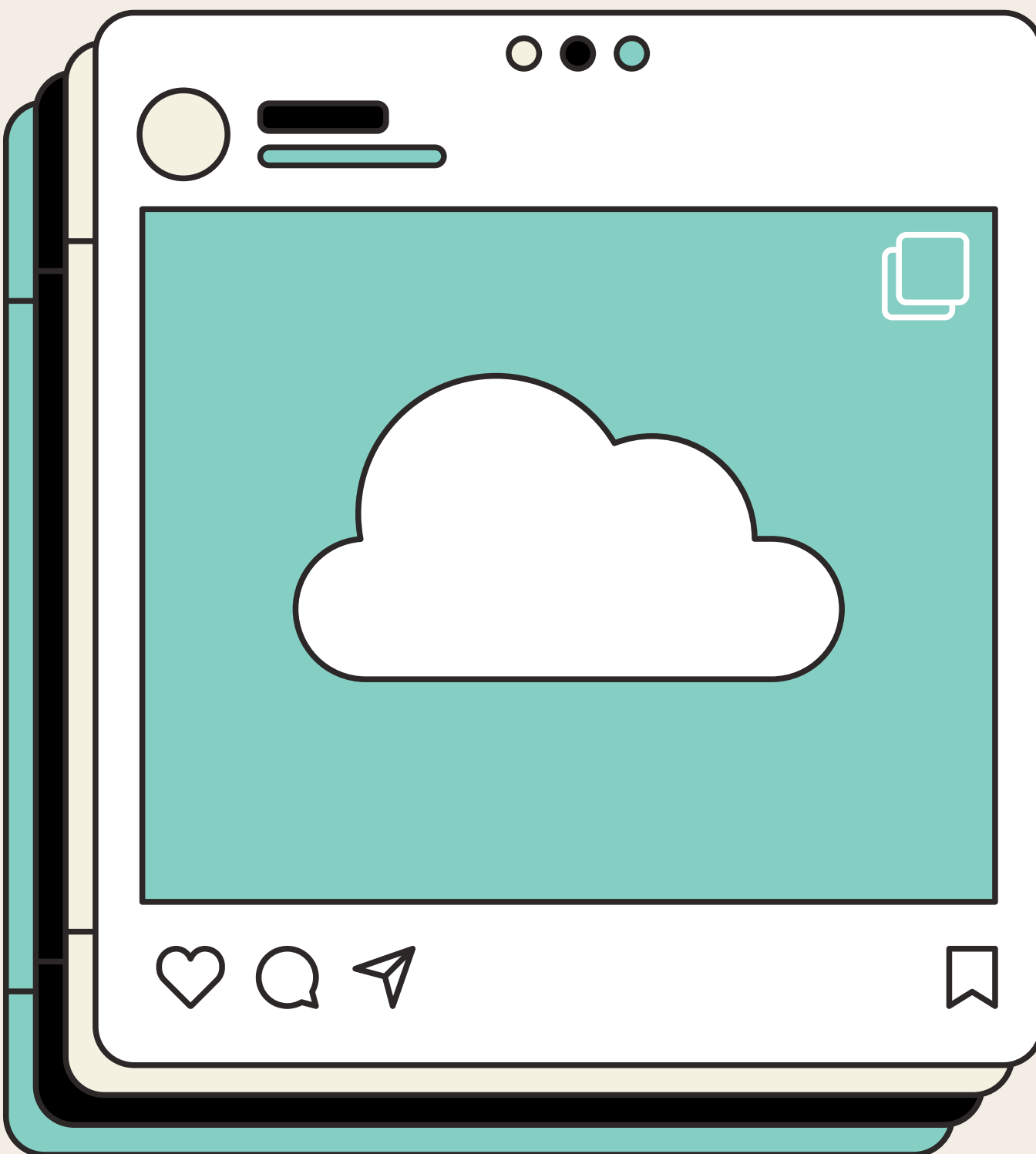
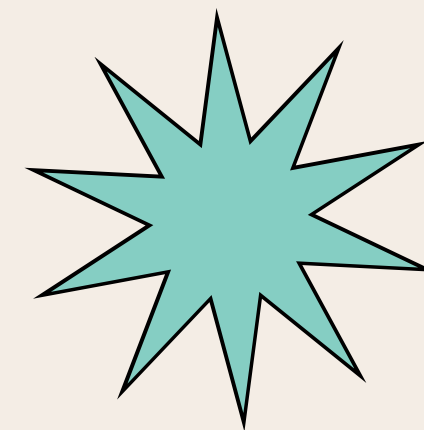
Ollama

**06**

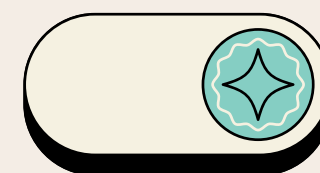


:D

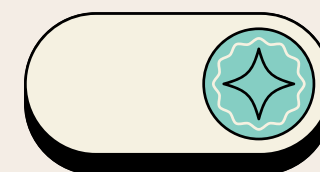




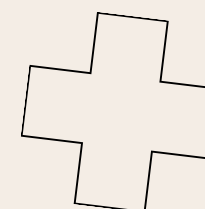
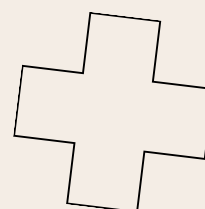
**Ciência Computação - 7º semestre**



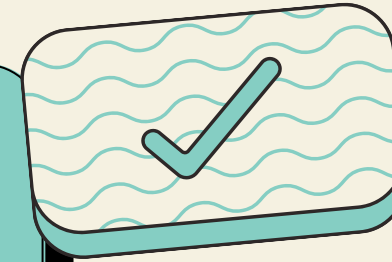
**Engenheiro ML/IA Jr - IBM**



**Gerente LAPES - CESUPA**



# ABORDAGEM



## TEORIA ASSISTENTES IA

### **Assistentes vs Agentes:**

Os assistentes de ia possuem menor autonomia e abordam fluxos menos complexos.

### **Entendimento RAG:**

É o enriquecimento do contexto de um chat usando documentos sobre os temas abordados durante conversa.



## RECURSOS DEV

### **Ecosystema Langchain:**

Langchain, Langchain Hub, Langsmith e Langgraph compõem esse ecossistema.

**Docling:** Biblioteca que facilita, principalmente, o processamento de arquivos.

**Pinecone:** VectorStore (RAG) remoto. Pago, mas com quota free bem generosa.



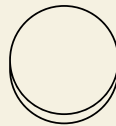
## DEVELOPING!!!

### **Developing com Recursos:**

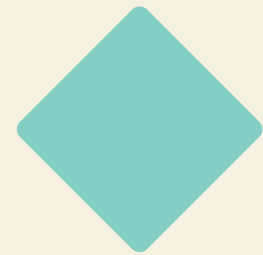
Desenvolver- e explorar, algumas features usando langchain.

### **Debugando:**

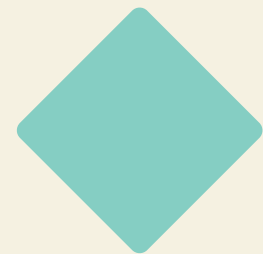
Melhores métodos para debugar chains desenvolvidas utilizando langchain.



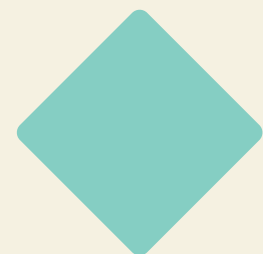
## **ASSISTENTES IA**



**DECISÕES GUIADAS**



**USUÁRIO GUIANDO A  
UTILIZAÇÃO DE TOOLS**



**ATUA DE FORMA  
REATIVA**

## **AGENTES IA**



**PROCESSO DE  
APRENDIZAGEM ADAPTIVA**

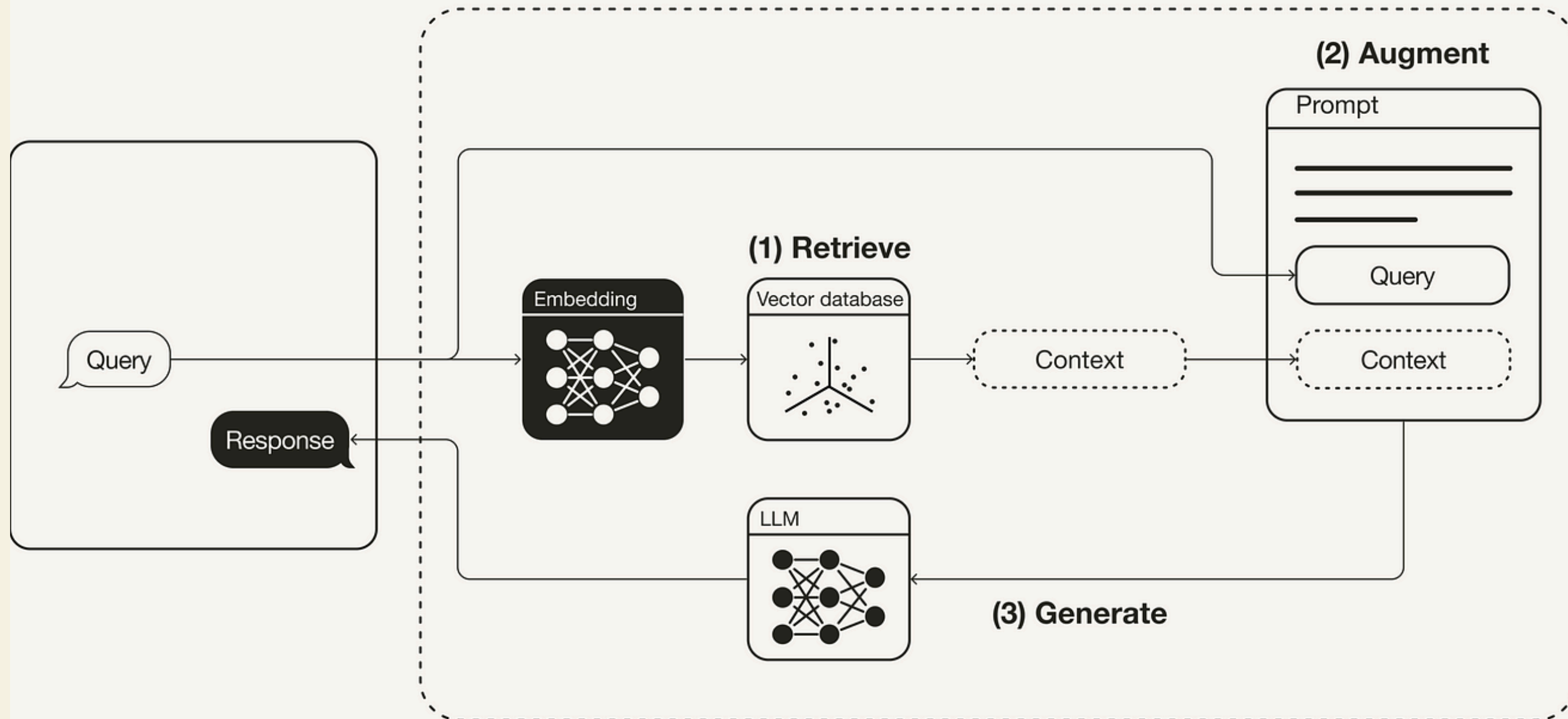


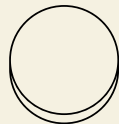
**APLICAÇÃO AUTONOMA  
DE TOOLS**



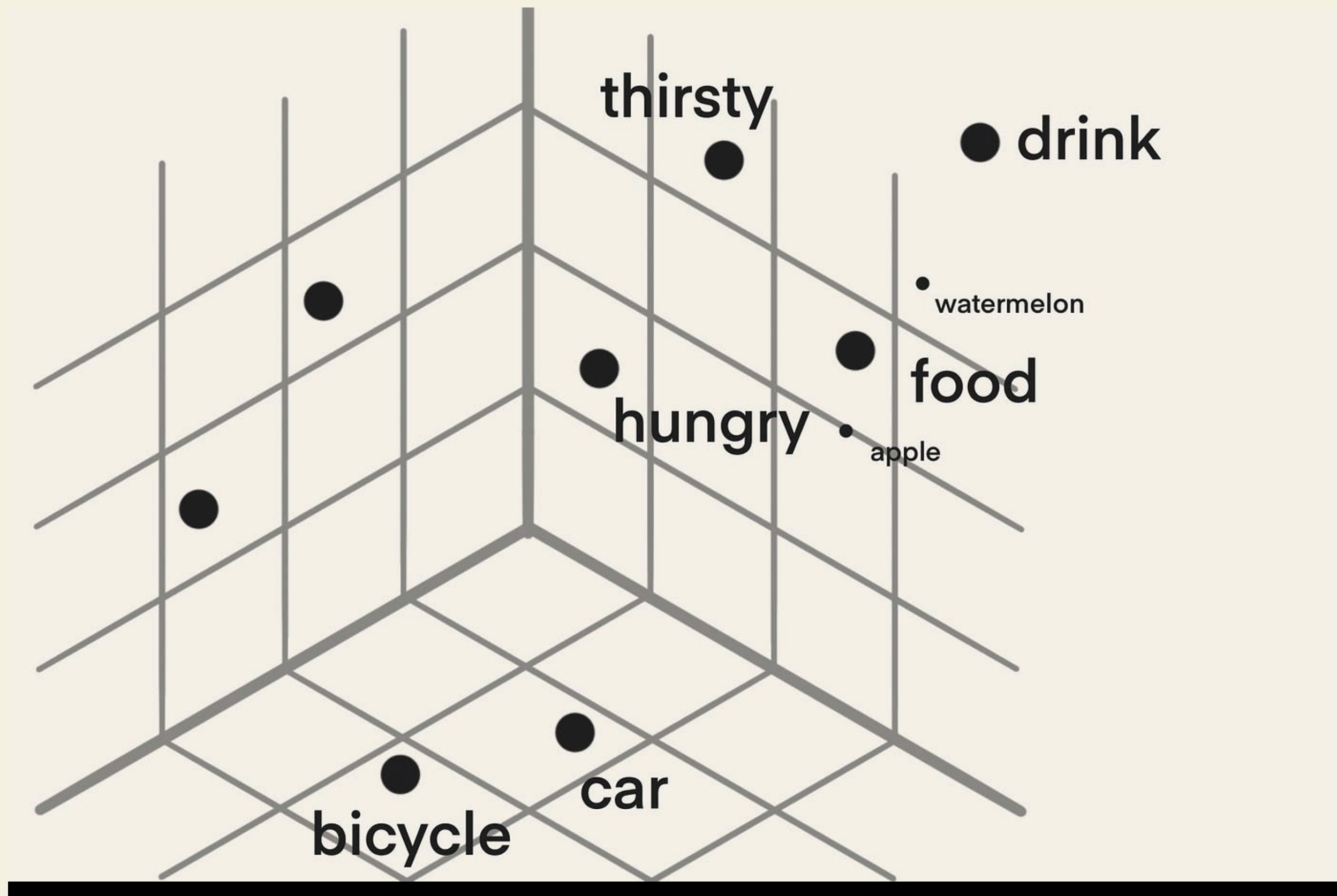
**ATUA DE FORMA  
PROATIVA**

# RAG





# ESPAÇO VETORIAL





# LANGX

INSIGHTS

## LangChain

- Prompts
- Modelos
- Memoria
- Assistente / Agente

— CHAINS →

## LangGraph

- Gerenciamento de estados
- Conditional Edges
- Detecção de Ciclos

— WORKFLOWS →

## LangSmith

- Logging
- Monitoramento
- Testes A/B
- Evaluation