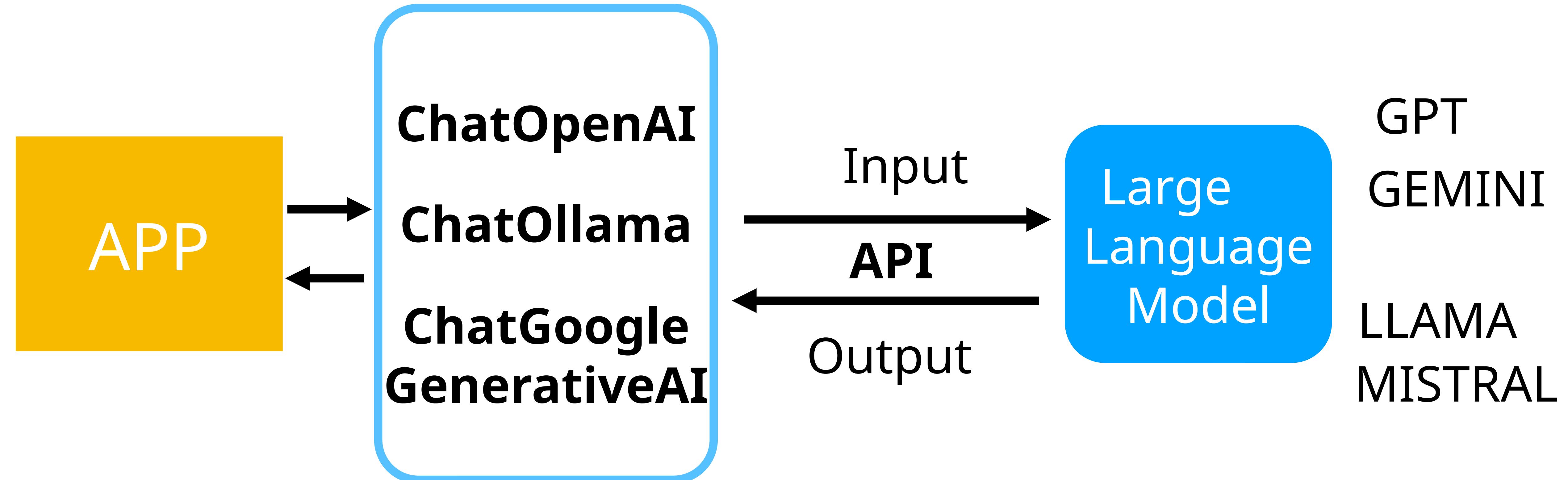
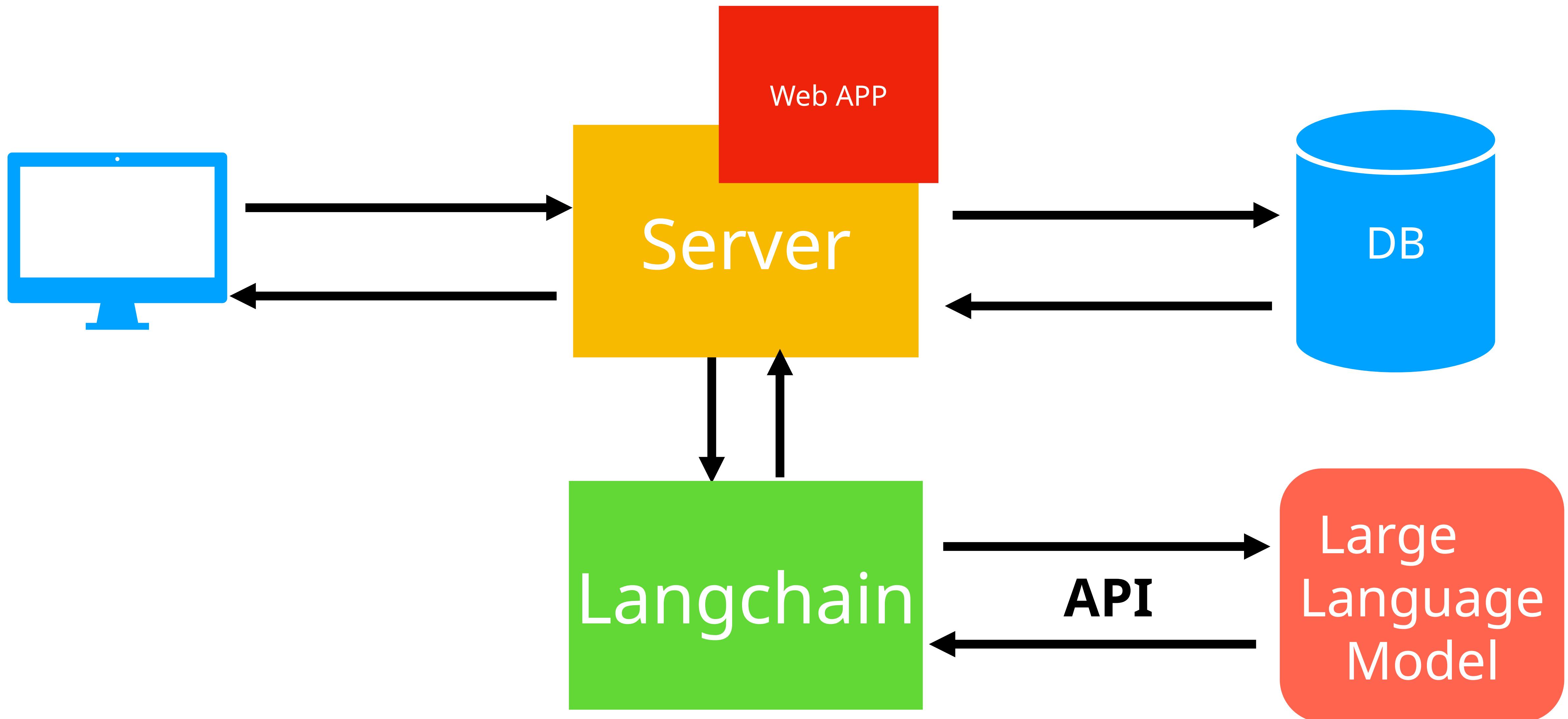


# Langchain





# LLM



```
function use_array(a, b) {  
    if (a.length > b.length) {  
        for (var c = 0; c < a.length; c++) {  
            a[c] = b[c];  
        }  
    } else {  
        for (var c = 0; c < b.length; c++) {  
            a[c] = b[c];  
        }  
    }  
    return a;  
}  
  
function use_object(a, b) {  
    if (a.length > b.length) {  
        for (var c = 0; c < a.length; c++) {  
            a[c].name = b[c].name;  
        }  
    } else {  
        for (var c = 0; c < b.length; c++) {  
            a[c].name = b[c].name;  
        }  
    }  
    return a;  
}
```



Large  
Language  
Model

# Prompt

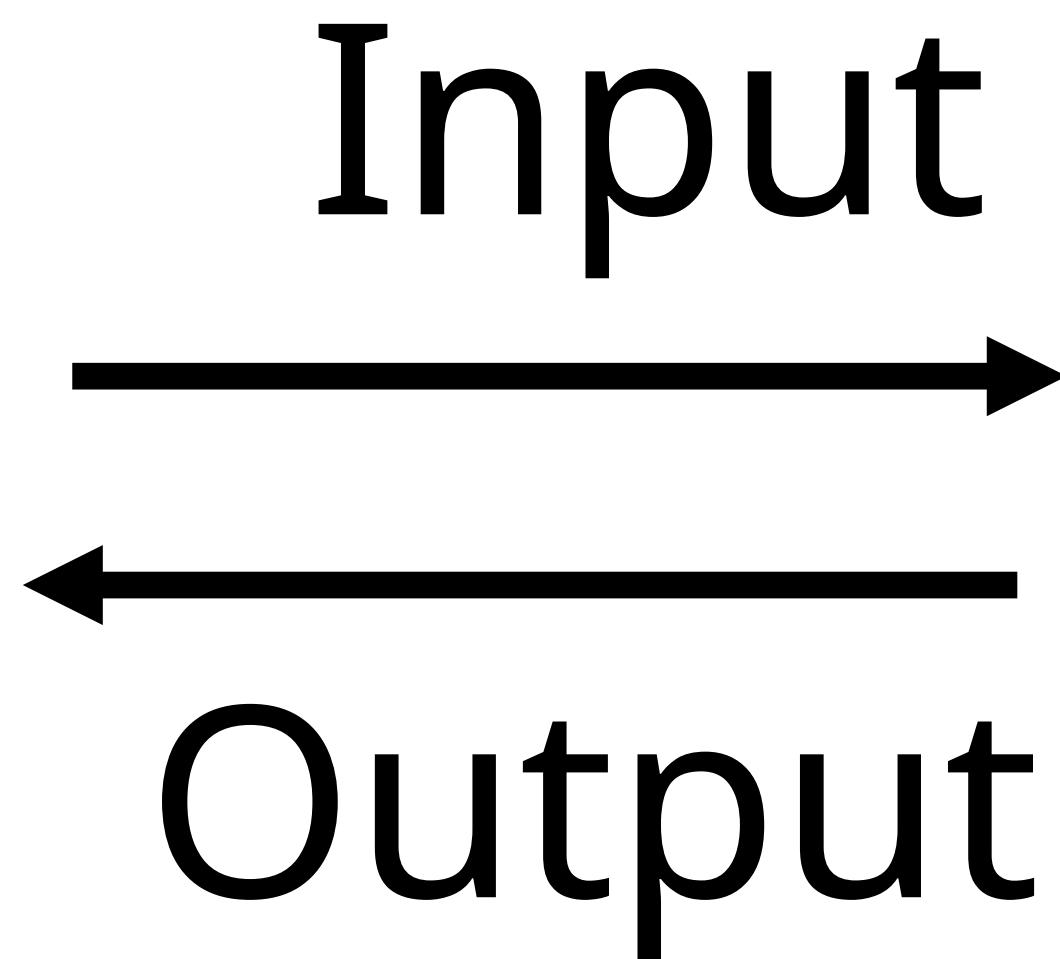
What is Machine Learning

Questions

Marketing Campaigns

Summarising Text

Assistance



Images

Videos

Multi Modal

GPT  
GEMINI

LLAMA  
MISTRAL

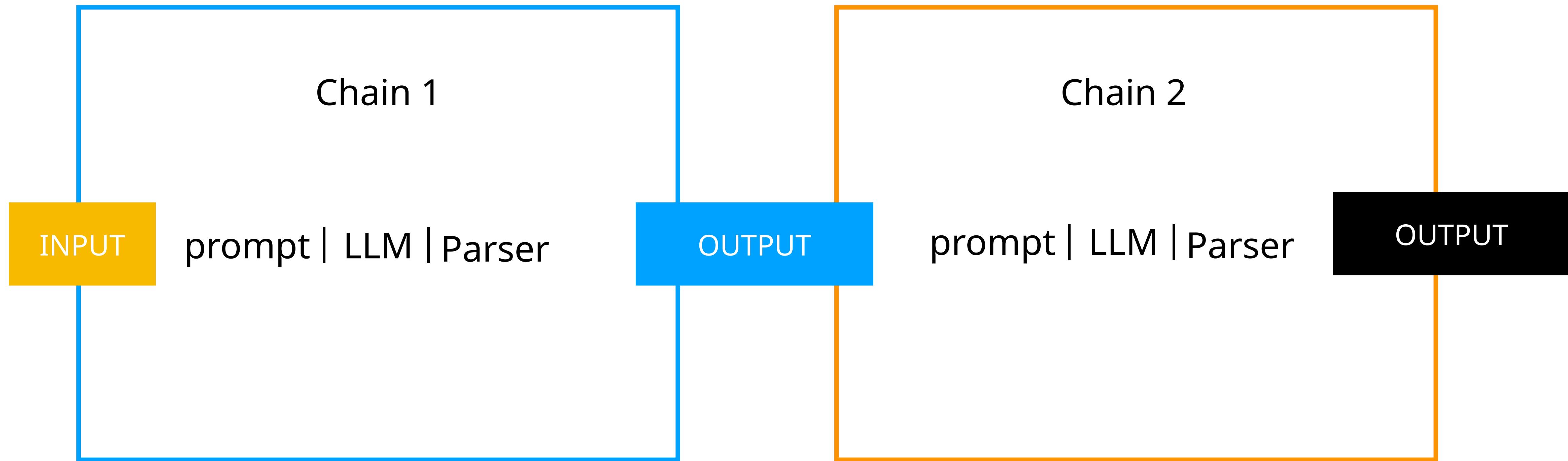
# Streamlit

# PromptTemplate

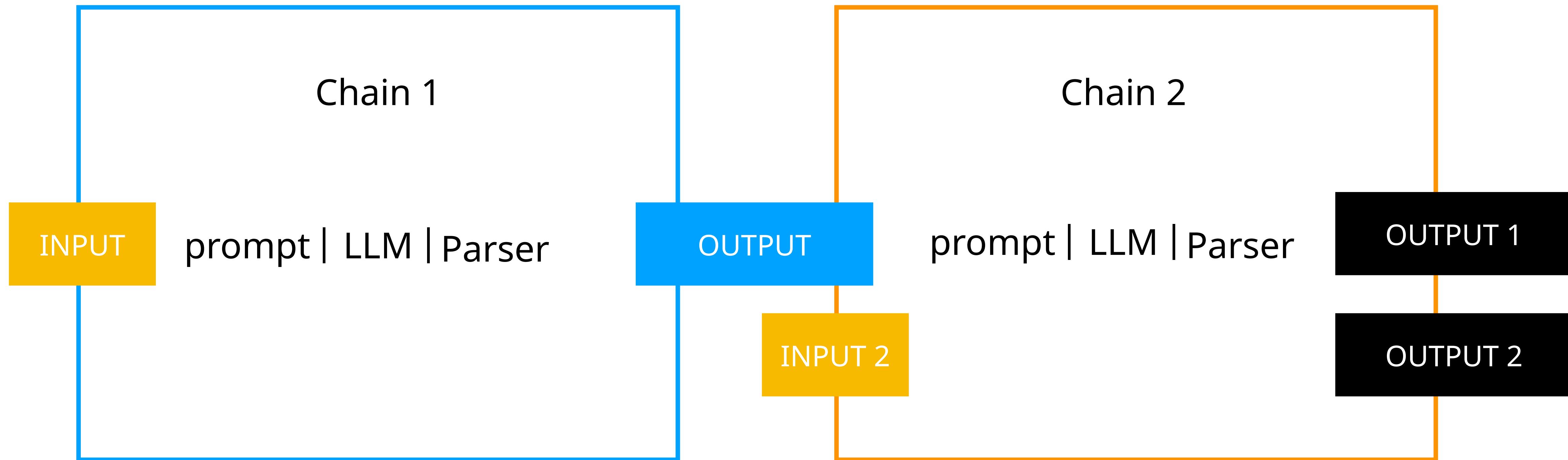
# Chains

prompt | LLM

# Simple Sequential Chain



# Sequential Chain



smith.langchain.com/o/ac724d96-e84c-42d7-955b-983b2bee5553/projects/p/9f079bcd-cdab-4273-ab56-9c248d994287?timeModel=%7B"duration"%3A"7d"%7D&peek=019c4d00-79eb-7a00-990a-bb2698fb159&peeked\_trace...

LangSmith

Personal / Tracing / langchaindemo

Application

All applications

Home

Tracing 2

Monitoring

Datasets & Experiments

Annotation Queues

Prompts

Playground

Studio

Deployments

Search Ctrl+K

Personal vinit.bit006@gmail.com

Compare

langchaindemo ID Runs Threads Events

1 filter Last 7 days Traces LLM Calls Errors

Name Input

LangGraph user: who is the ceo of salesforce today

LangGraph user: who is the ceo of salesforce today

model 3.76s 673

ChatOpenAI gpt-5-nano 3.75s 673

tools 1.17s

duckduckgo\_search 1.17s

model 4.39s 1,083

ChatOpenAI gpt-5-nano 4.38s 1,083

tools 4.00s

wikipedia 4.00s

model 7.87s 1,925

ChatOpenAI gpt-5-nano 7.85s 1,925

tools 3.78s

wikipedia 3.78s

tools 1.11s

duckduckgo\_search 1.10s

model

LangGraph ID

Playground Add to

Run Feedback Metadata

Input

HUMAN

who is the ceo of salesforce today

Output

MESSAGES messages 11

HUMAN

who is the ceo of salesforce today

AI

THOUGHT: I should verify the current CEO of Salesforce, since leadership can change. I'll search a reliable source for the latest information.

ACTION: Use a web search to find who is the CEO of Salesforce today.

duckduckgo\_search call\_P10PV2bDOUmdCt31GZ6vqwg

query: current CEO of Salesforce 2026

YAML

TOOL

START TIME  
02/11/2026, 07:30:02 PM GMT+5

END TIME  
02/11/2026, 07:30:44 PM GMT+5

STATUS  
Success

TOTAL TOKENS  
9,674 tokens / \$0.0015981

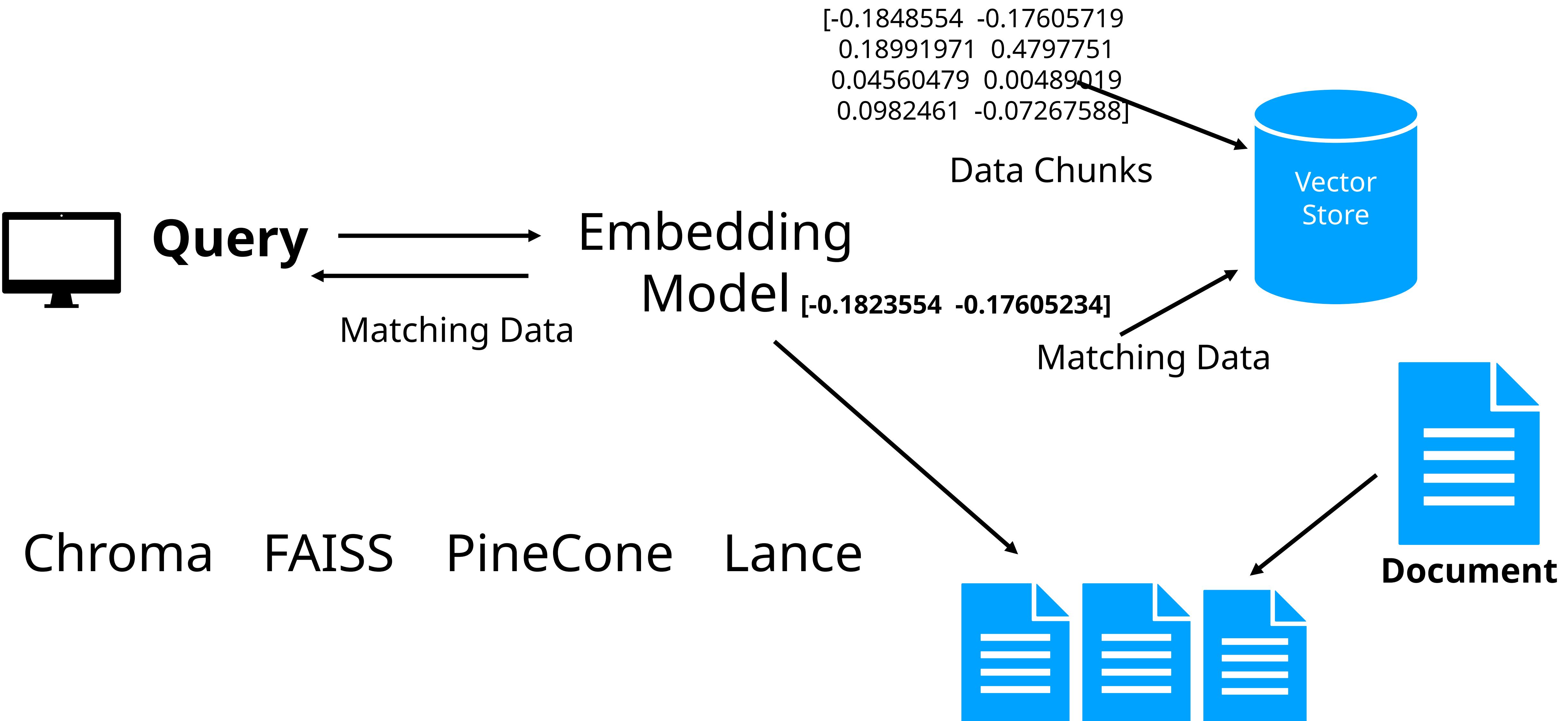
LATENCY  
41.51s

TYPE  
Chain

Polly

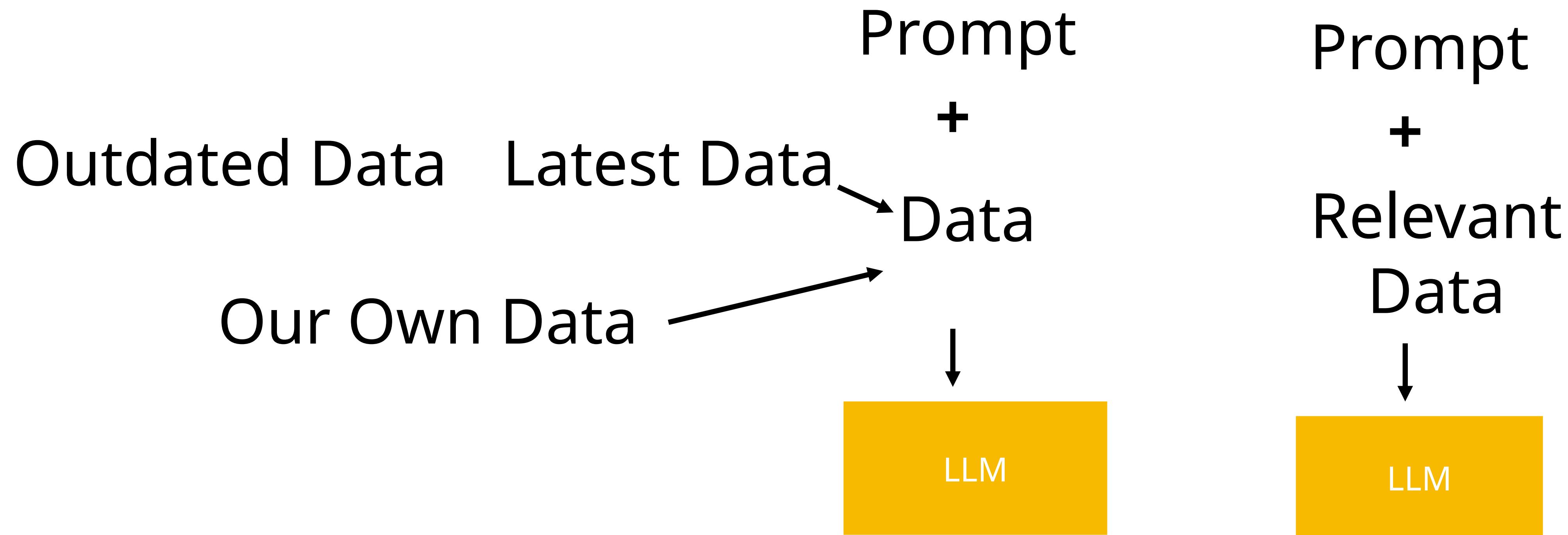
# Chat History

# Using Vector Database

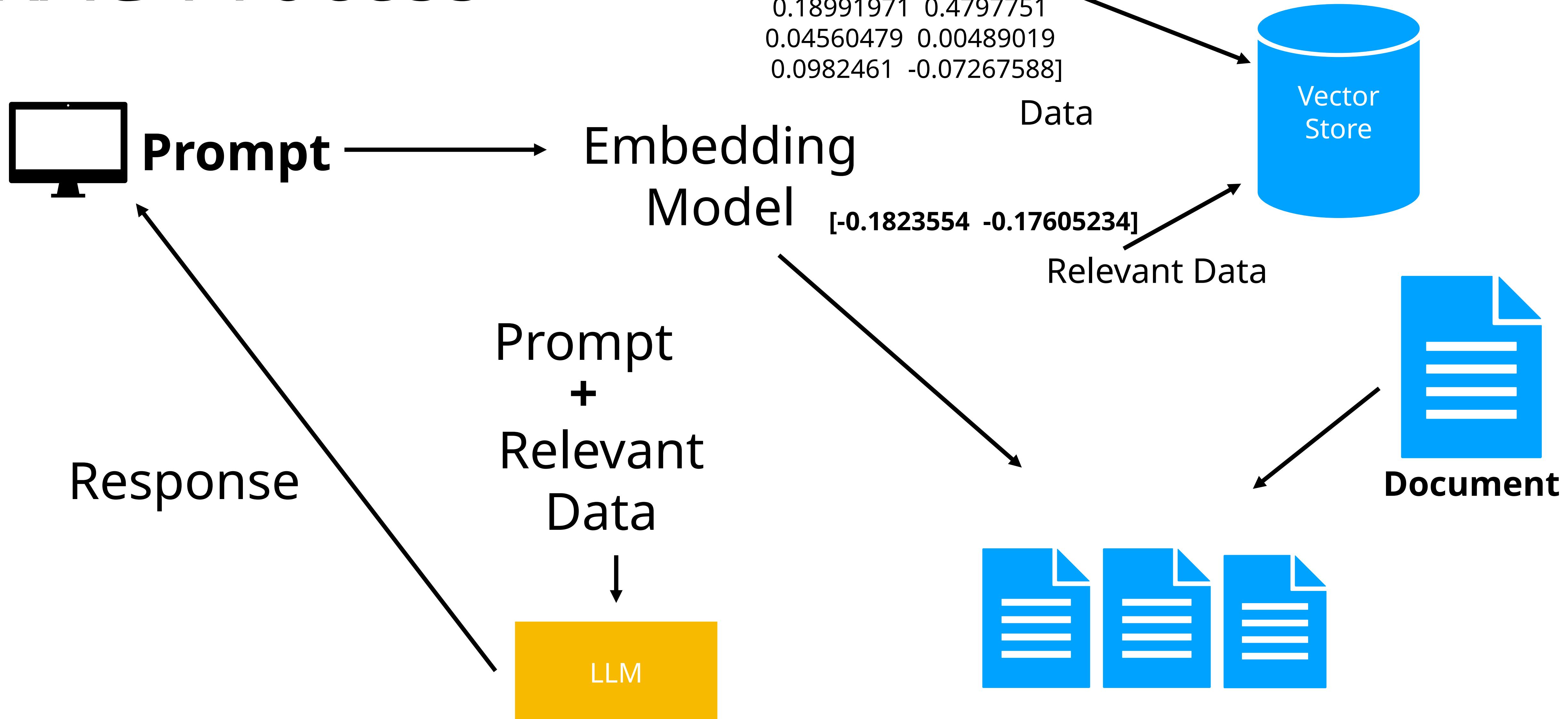


# RAG

# Retrieval Augmented Generation



# RAG Process



# Other LLMs

Google Gemini

Open Source

Llama

3.1 8B

2 7B

Gemma

2B

3B

Mistral

7B

**7B**

**13B**

**33B**

**8GB**

**16GB**

**32GB**

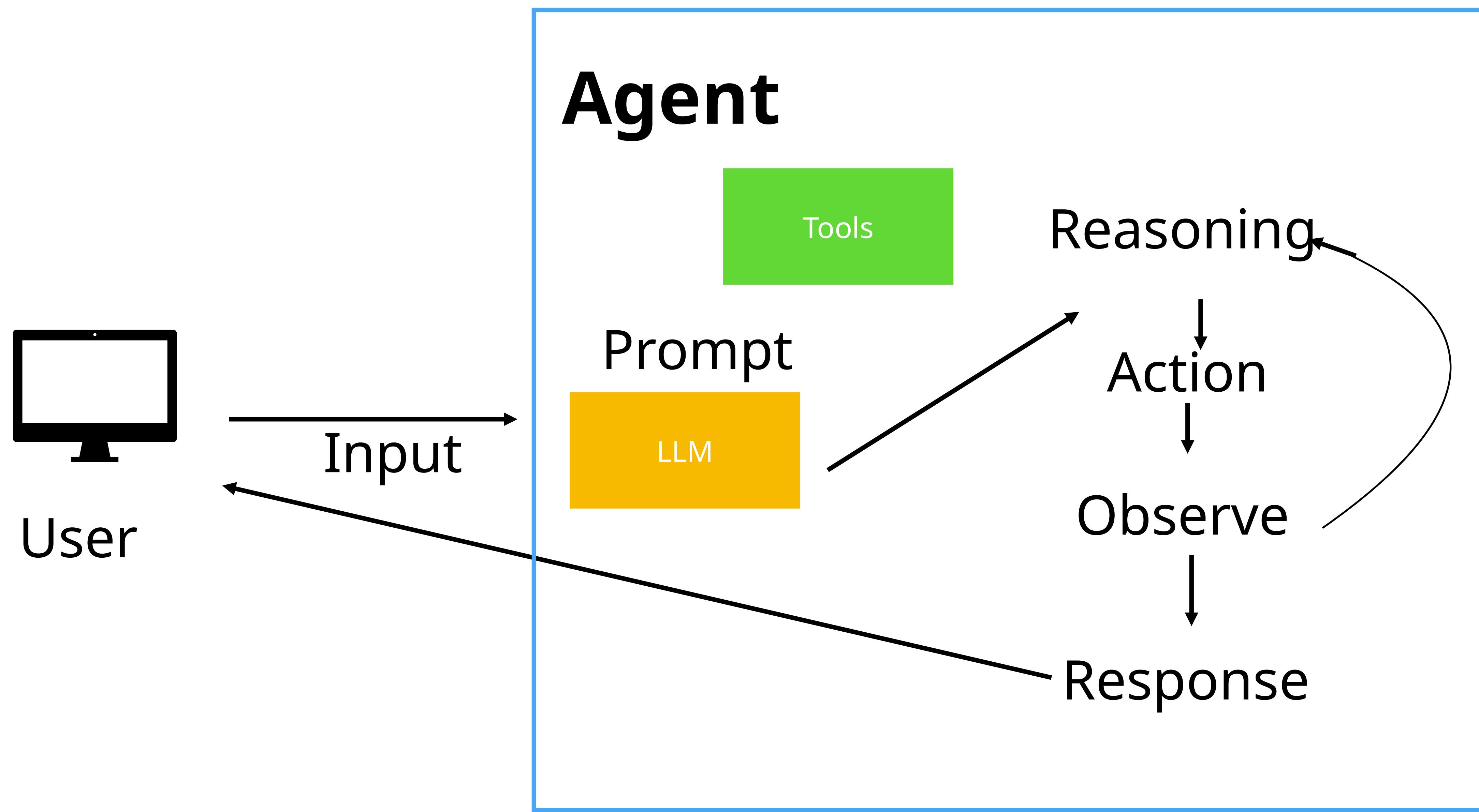
# Deploy

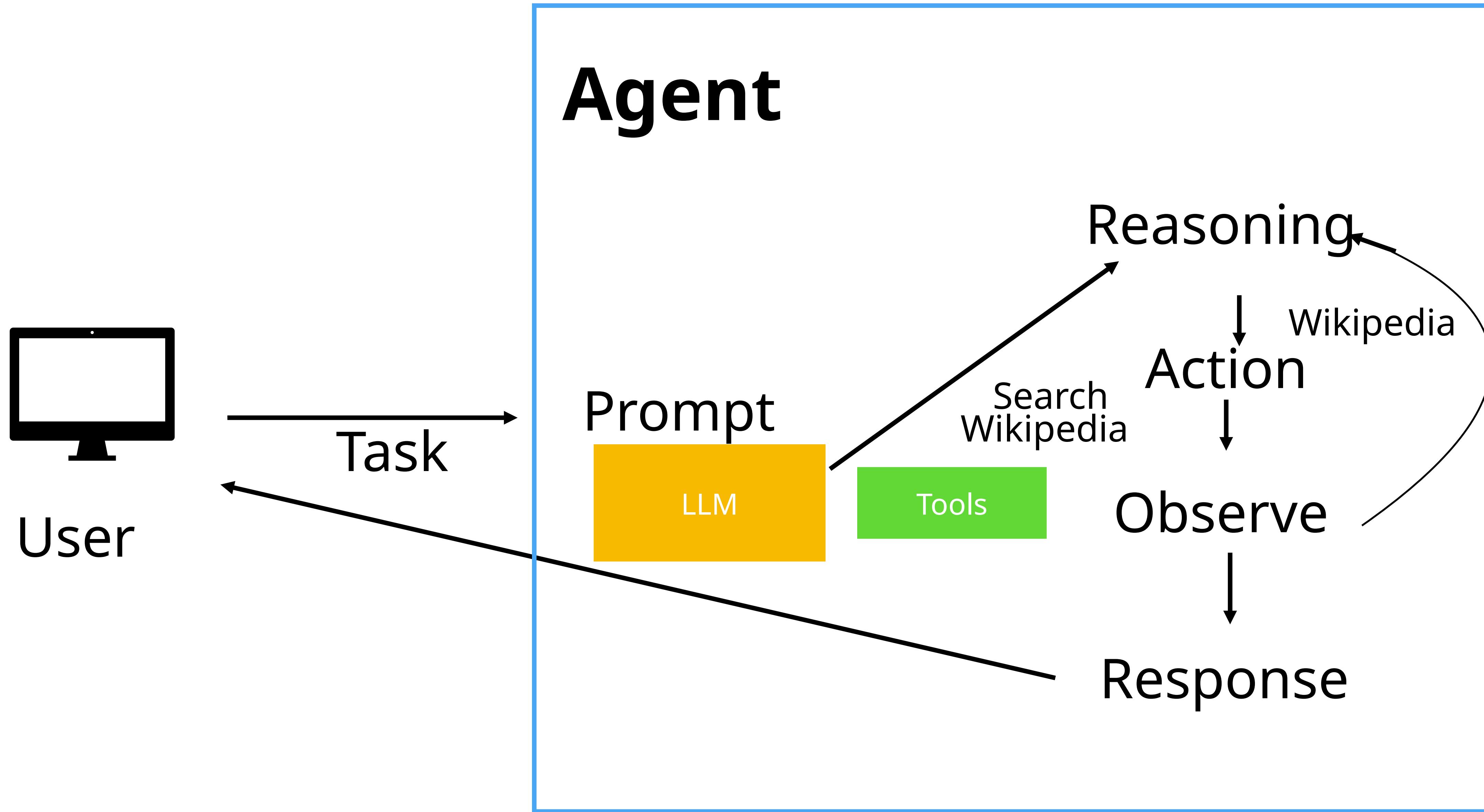
Update the code

requirements.txt

Push to github

Deploy using StreamLit Cloud

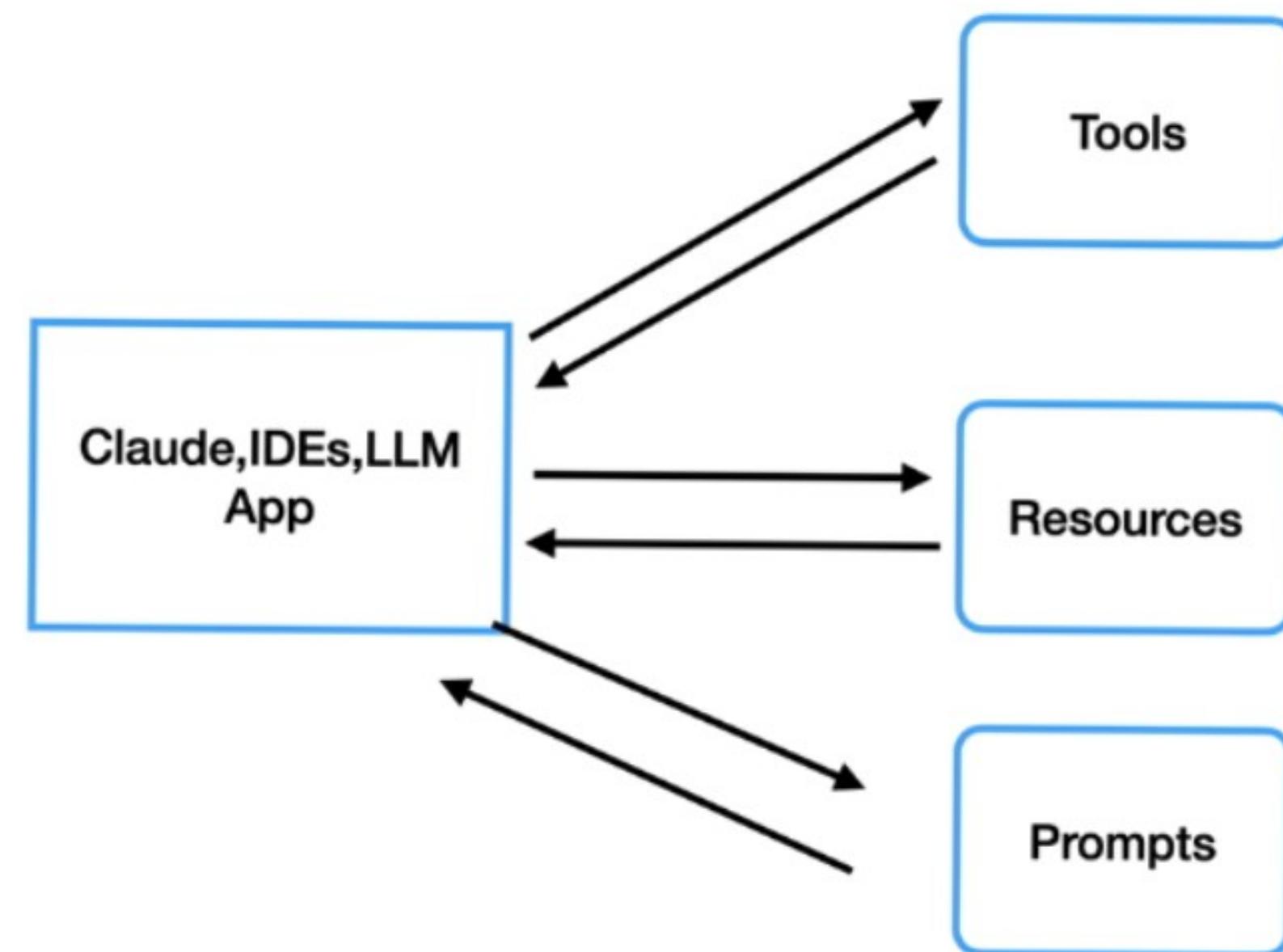




## Why MCP

- Duplication of tools, resources and prompts per host or agents.

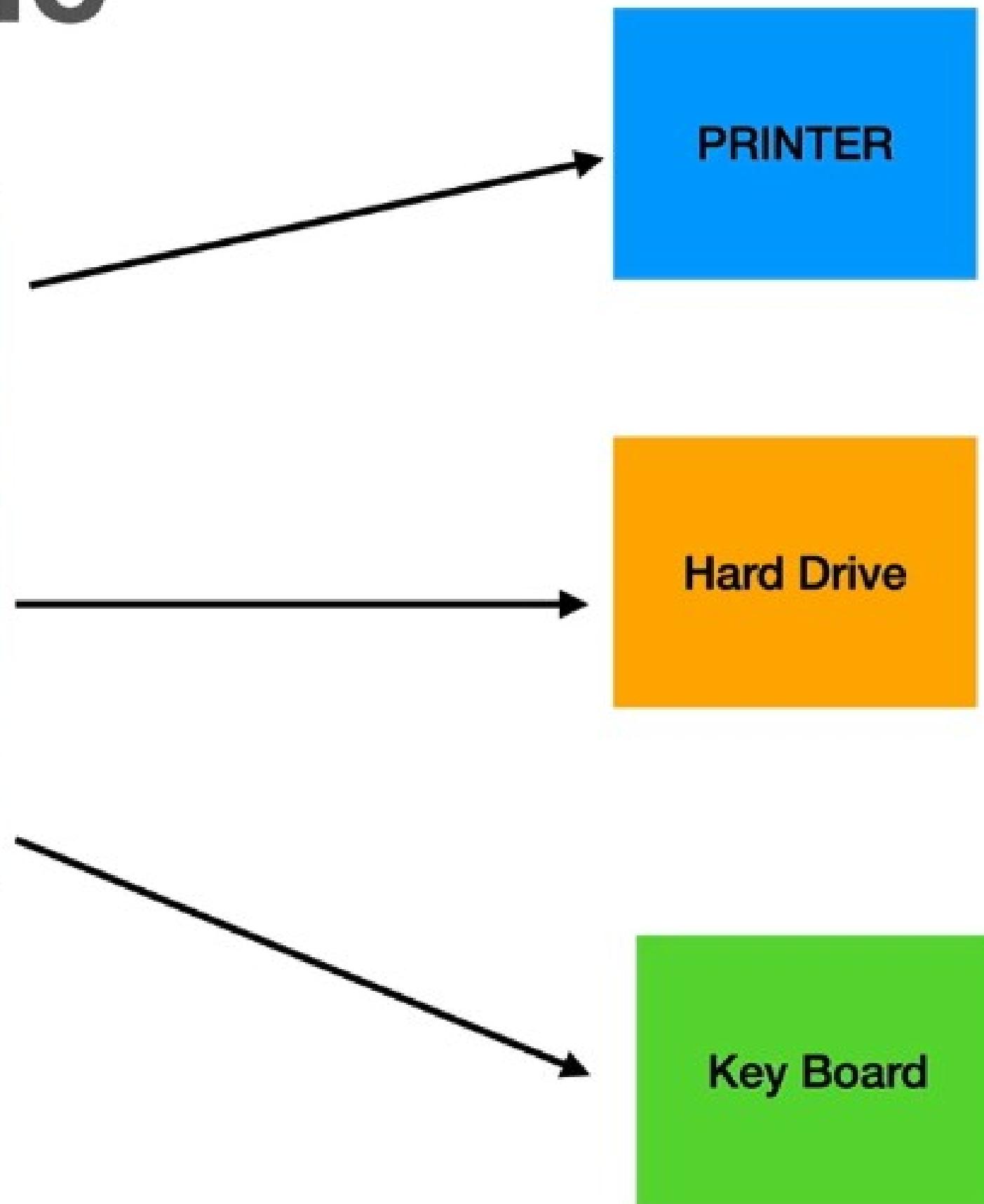
# MCP



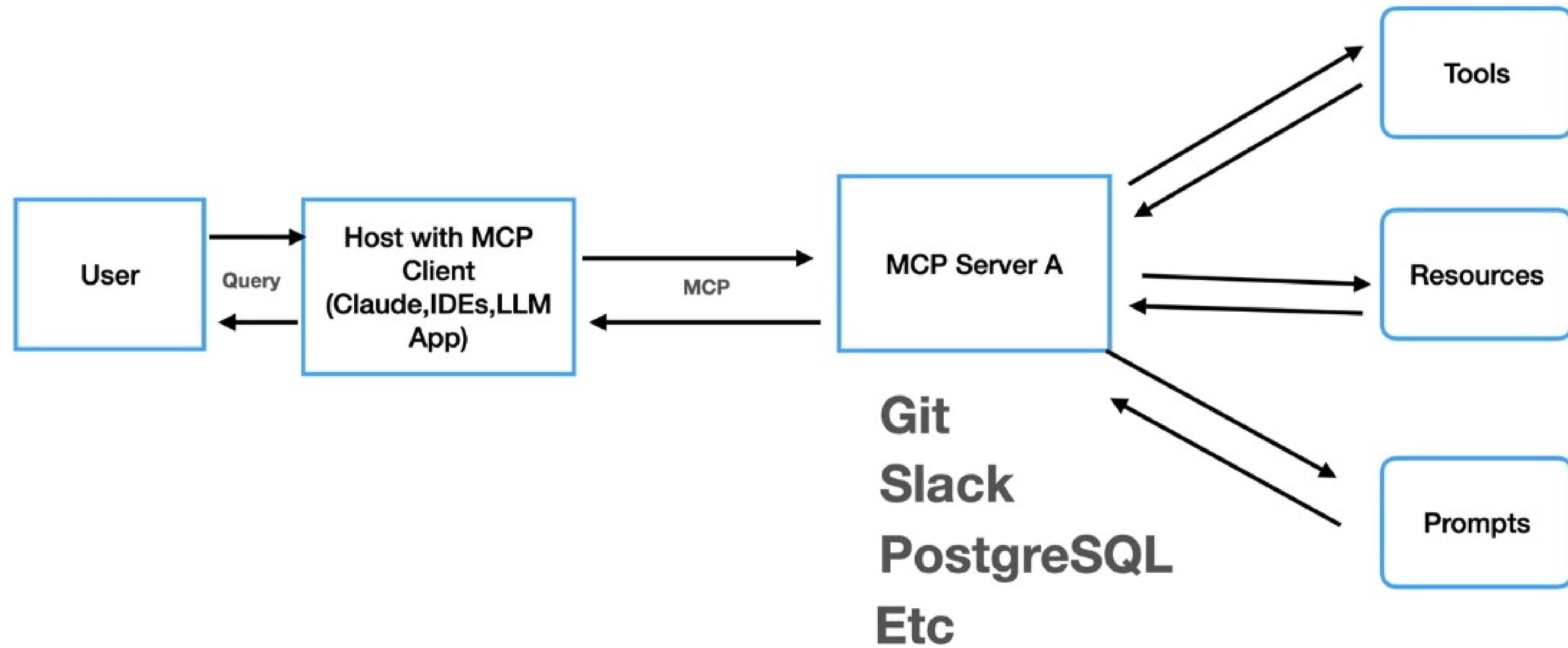
Anthropic introduced MCP

MCP

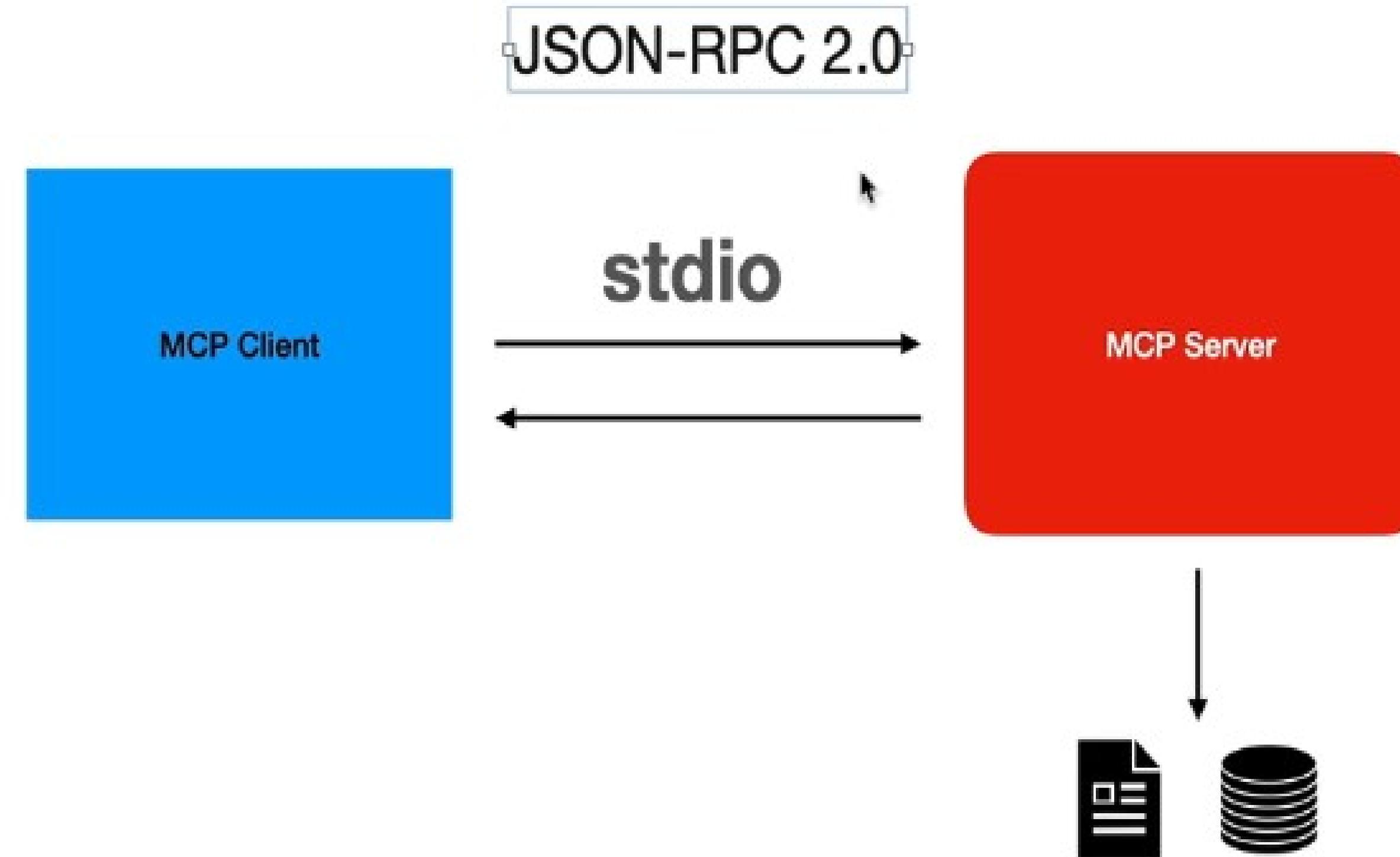
Anthropic



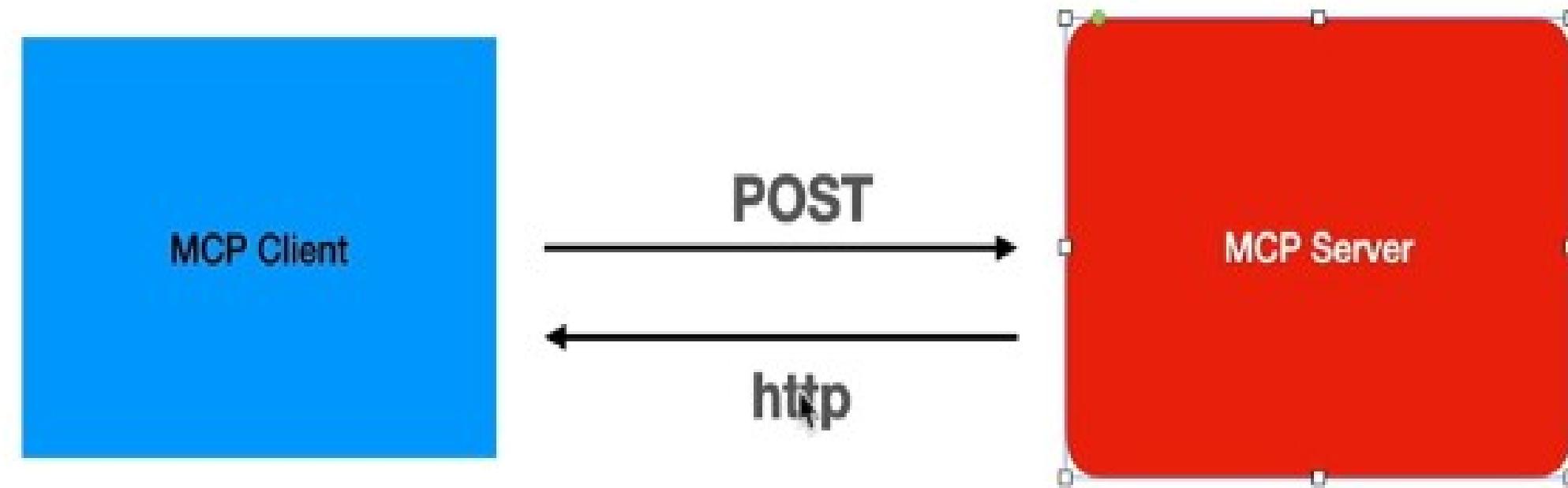
# MCP



# Transport



## Streamable HTTP



WebSocket

SSE