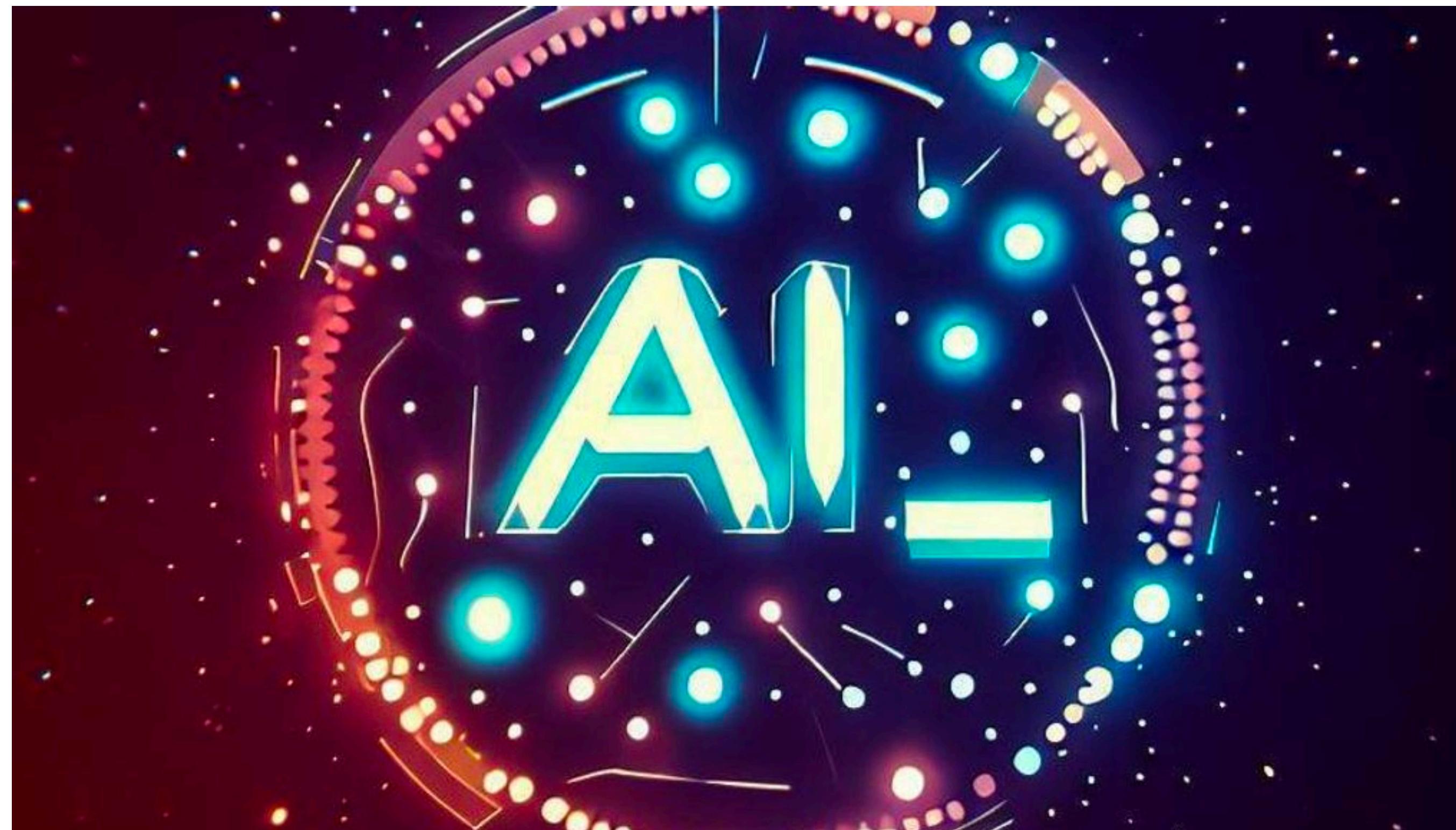


# Generative AI Nantes

Please take a seat and grab a 🍺



# **First time here ?**

- 1 meetup per month**
- 2 Talks or 1 Workshop**

**3)**  

# Sponsors hyper-platinum

**SEYOS**



You ?

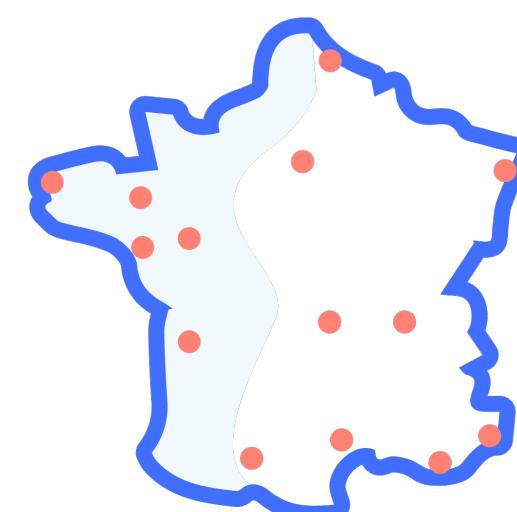
**Snipr**

# Qui sommes-nous ?

Un cabinet de recrutement **IT & digital**



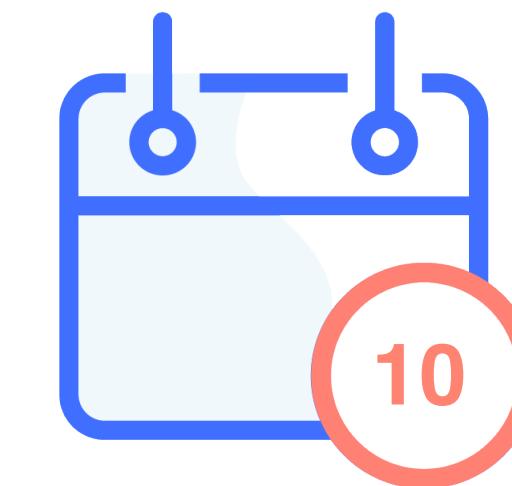
Recrutement  
**en CDI**



Niveau  
**national**



**45**  
collaborateurs



**10 ans**  
d'expérience

**350**  
**Entreprises**  
accompagnées

**1.500**  
**Recrutements**  
depuis 2014

**282**  
**Offres ouvertes**  
actuellement

# Nos clients

à Nantes et aux alentours

showroomprive.com

kiplin

Gens de  
Confiance

L ENGOW

MANITOU  
GROUP

nobilito

ars  
Agence Régionale de Santé  
Pays de la Loire

anytime  
an Orange Bank company

Shop  
opop

GROUPE  
ATLANTIC

iAdvize

akeneo

d-edge  
HOSPITALITY SOLUTIONS

Région  
PAYS DE LA LOIRE



i m a w e b

lucca

immodvisor

KLEE  
GROUP

cegedim

NiCKEL  
COMpte POUR TOUS

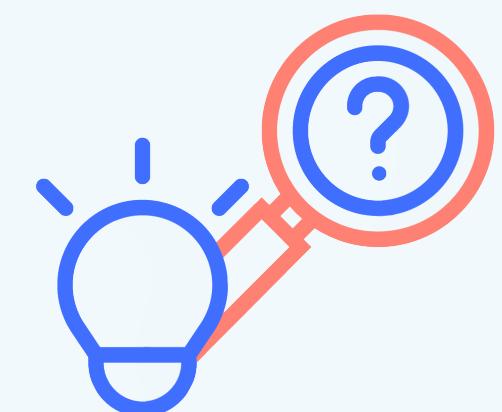
wirquin

HiPay

Veepee

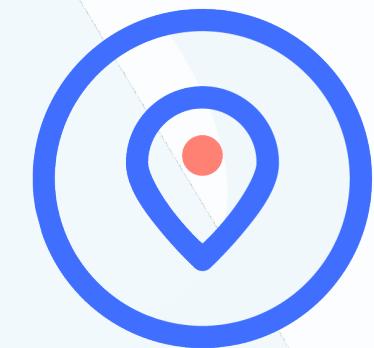
SEYOS

# Nos valeurs



## Expertise du marché IT

Compréhension de **votre profil**



## Connaissance du tissu local

Consultant dédié par **région et par ville**



## Suivi personnalisé

**Accompagnement** pendant le process de recrutement



# Nos offres

**SEYOS**



## Generative AI Paris

Paris, France

1429 membres · Groupe public ?

Animé par Maxime Thoonen et 4 autres personnes

Partager :



# Schedule

- 1) 15min intro**
- 2) 1h30 Workshop**

**3)**  

# Generative Agent - Kezako ?

Autonomous AI Agents can :

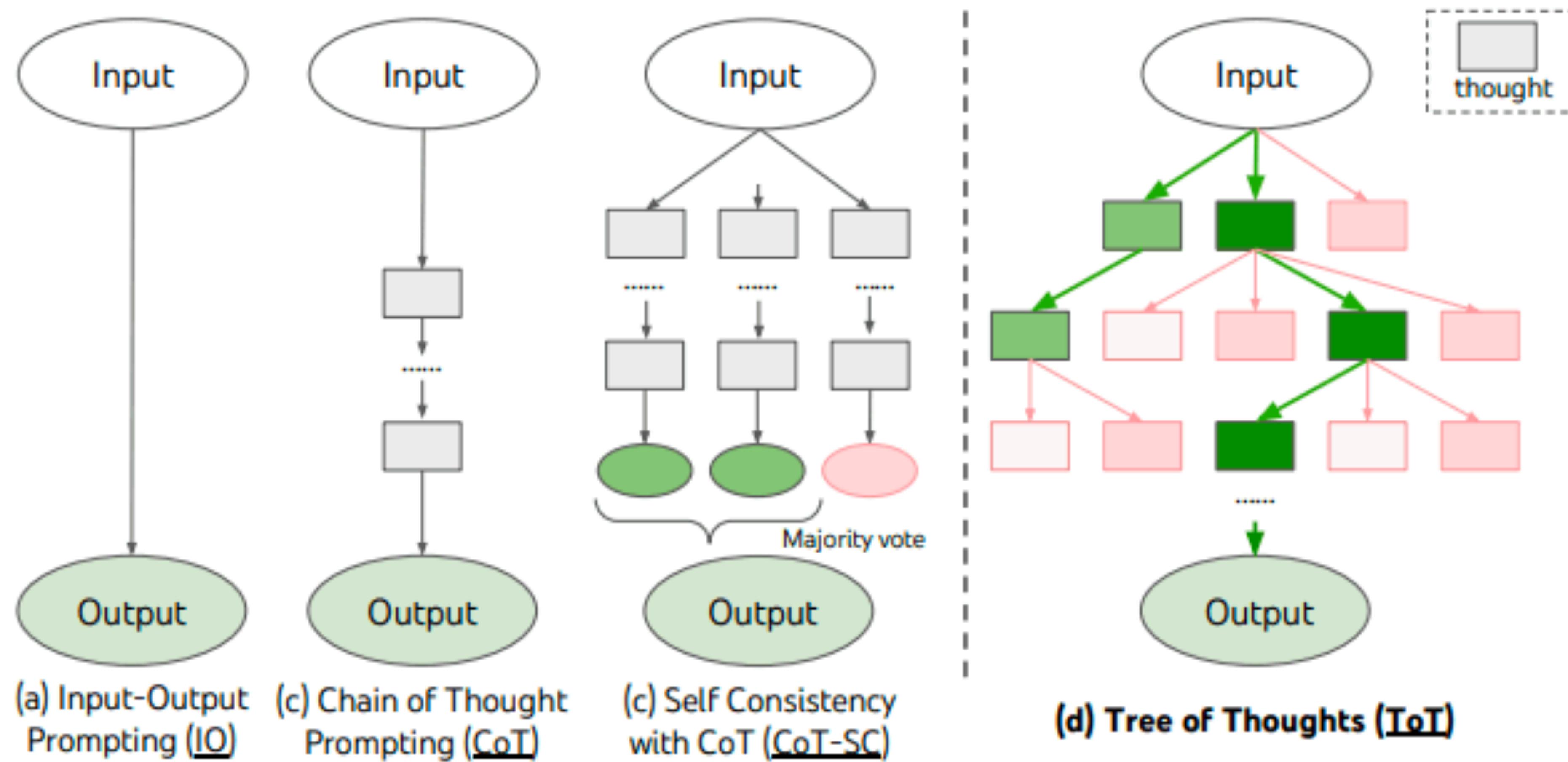
- Independently **understand objectives**
- **Create tasks** to achieve this objectives
- **Execute** the tasks
- Adapt **priorities**
- And **learn** from their actions until the desired goals are reached

# Generative Agent - Kezako ?

Use Cases :

- Content Creation
- Personal Assistants (travels)
- Gaming
- Finance
- Research and Data analysis
- Basically Everywhere

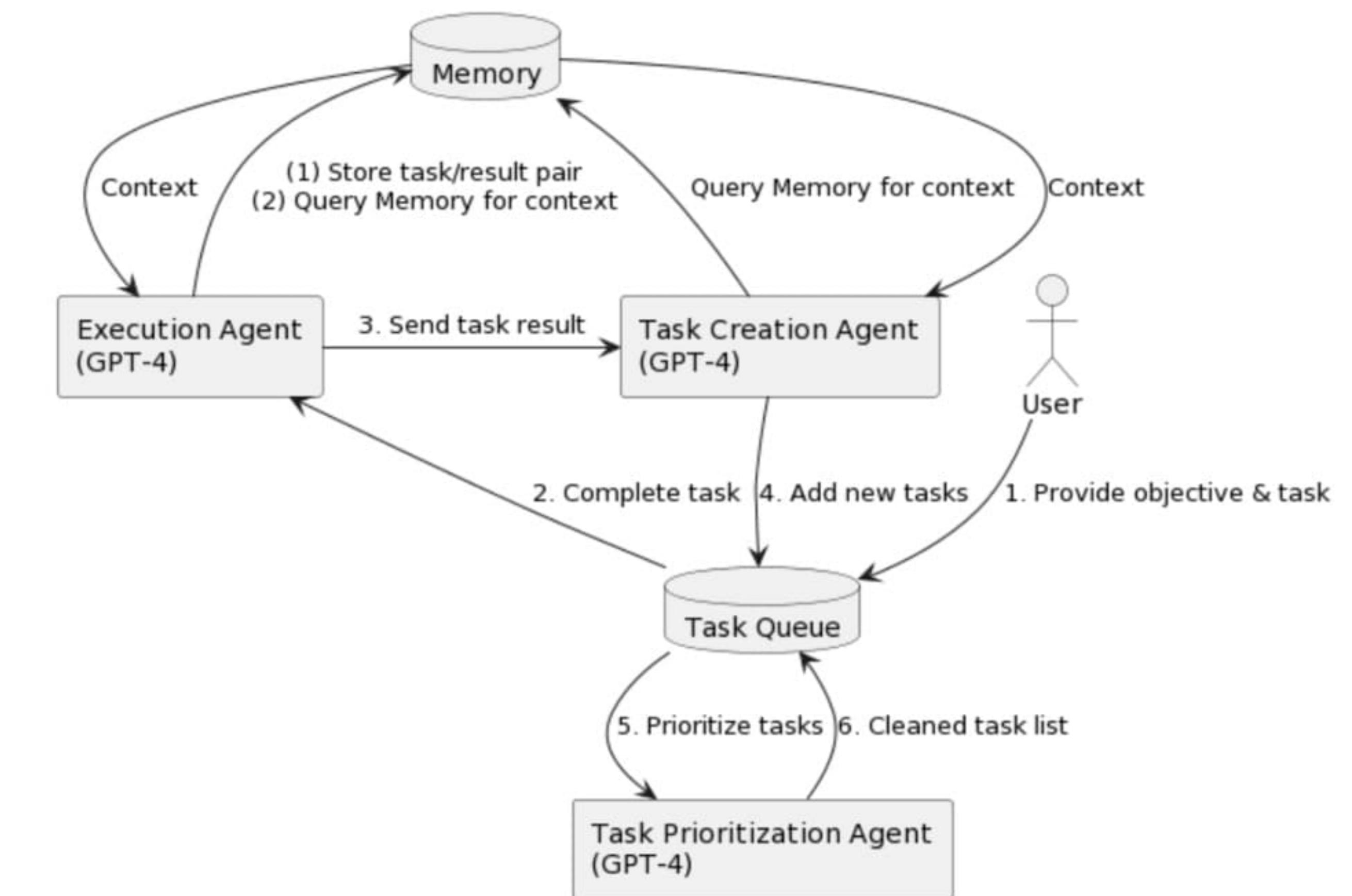
# Generative Agent - Kezako ?



# Generative Agent - Kezako ?

3 agents :

- Execution
- Task Creation
- Prioritization



# Generative Agent - Kezako ?

3 Frameworks :

- AutoGPT
- BabyAGI
- LangChain

# **Generative Agent - Kezako ?**

Use Case Gaming : [https://reverie.herokuapp.com/arXiv\\_Demo/](https://reverie.herokuapp.com/arXiv_Demo/)

# **Generative Agent - Kezako ?**

Use Case Editor : <https://youtu.be/2aMGoHwy7-Y?t=1012>

# **Generative Agent - Kezako ?**

Use Case GitHub copilot : go online

# Generative Agent - Kezako ?

Démo : Trip to Croatia

Plan a detailed trip to south Croatia, from Zadar to Split, in 7 days. I'm traveling from 25 of august to 1st of september. I like nature, parcs, adventurous activities and beautiful cities. I have a budget of 1000€.

<https://agentgpt.reworkd.ai/>

# Nocode workshop



# Tech workshop



# Your first nocode AI Agent



**IRL**



# Langchain - Getting started

- \* Framework for building AI Agent backed by LLM
- \* Natural language driven
- \* Available in Python and Javascript (Python is better)



# Langchain - Models

Interact with 30+ LLMs: OpenAI, HuggingFace, Llama-cpp, GPT4All...

*Full list: [https://python.langchain.com/docs/modules/model\\_io/models/llms/](https://python.langchain.com/docs/modules/model_io/models/llms/)*

## Features:

- Prompt templating
  - Cache
  - Mocks (unit tests)
- Few-shot prompts (samples)



# Langchain - Data sources

50+ data sources: S3, Git, Notion, Spreadsheet, CSV, Slack, Github, Stripe, Wikipedia, Datawarehouse...

*Full list: [https://python.langchain.com/docs/modules/data\\_connection/document\\_loaders/](https://python.langchain.com/docs/modules/data_connection/document_loaders/)*

## Features:

- Prompt templating
  - Cache
  - Mocks (unit tests)
- Few-shot prompts (samples)



# Langchain - Text embedding

20+ text embedding: OpenAI, Llama-cpp, Elasticsearch...

*Full list: [https://python.langchain.com/docs/modules/data\\_connection/text\\_embedding/](https://python.langchain.com/docs/modules/data_connection/text_embedding/)*

## Features:

- Convert tokens from data source into vectors



# Langchain - Vector stores

30+ vector stores: Elasticsearch, pg\_vector, Pinecone, Chroma, Clickhouse, In-Memory...

*Full list: [https://python.langchain.com/docs/modules/data\\_connection/vectorstores/](https://python.langchain.com/docs/modules/data_connection/vectorstores/)*



# Langchain - Retriever

10+ retriever: kNN, TF-IDF, BM25...

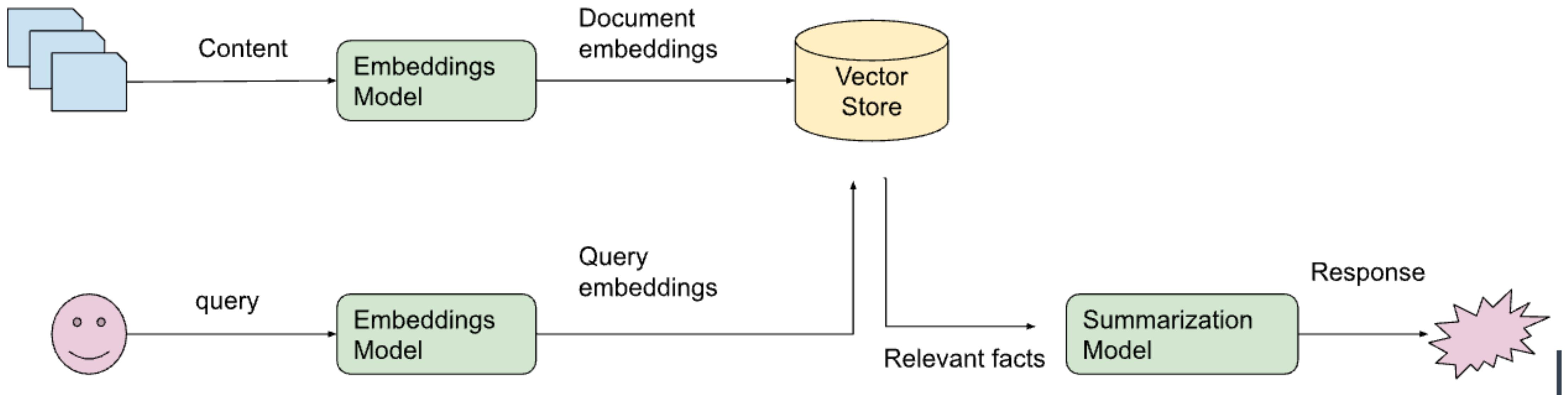
*Full list: [https://python.langchain.com/docs/modules/data\\_connection/retrievers/](https://python.langchain.com/docs/modules/data_connection/retrievers/)*

## Features:

- vector similarities
  - time-weighted
- returns original documents

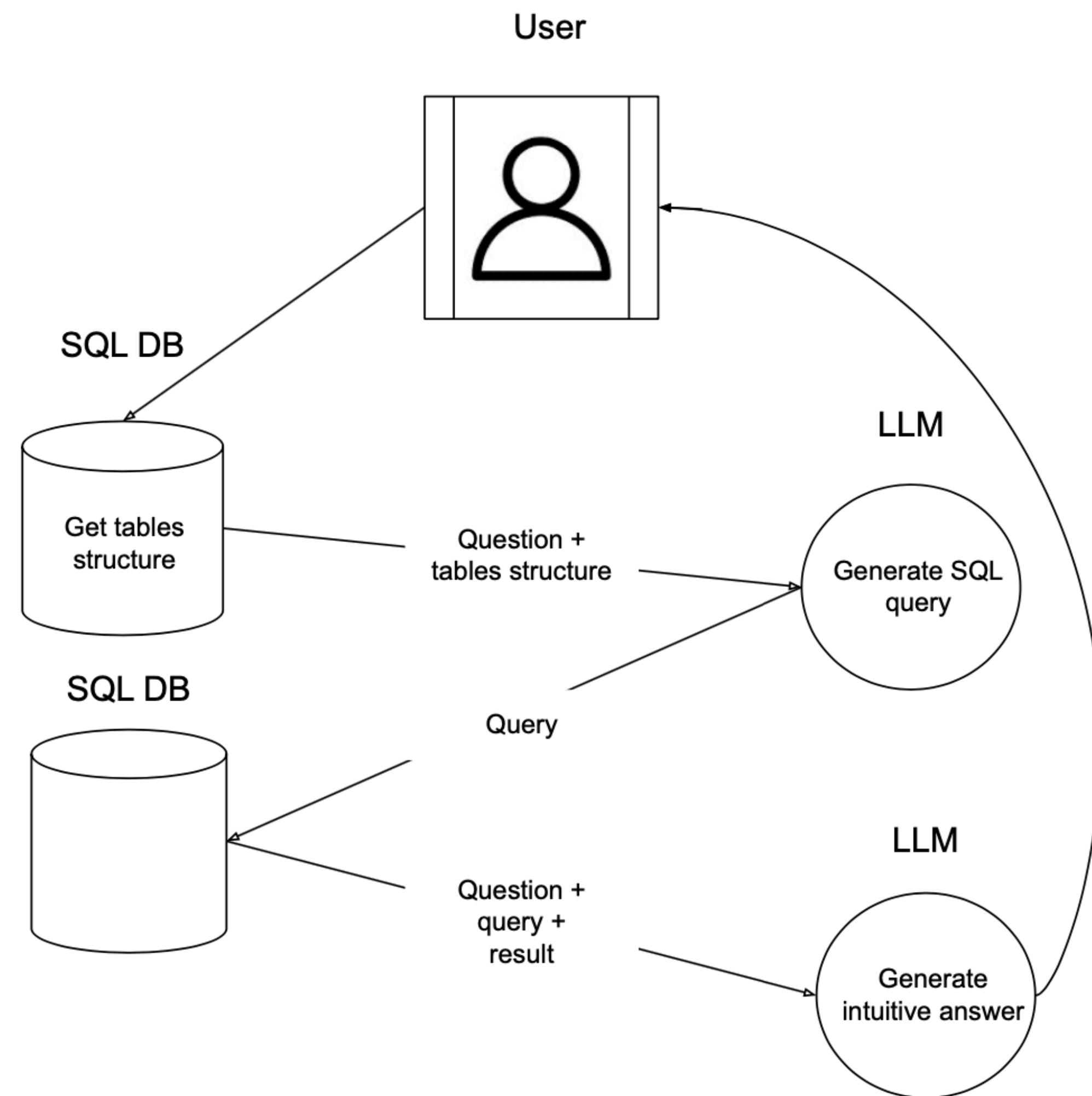


# Langchain - Chain: Retrieval Q/A





# Langchain - Chain: Database Q/A





# Langchain - Memory

10+ retriever: kNN, TF-IDF, BM25...

*Full list: <https://python.langchain.com/docs/modules/memory/>*

## Features:

- cache
- conversational history
- in-memory or database backend



# Langchain - Tools

30+ tools: Bing, Google, OpenAPI, BeautifulSoup, AWS Lambda, Twilio...

*Full list: <https://python.langchain.com/docs/modules/agents/tools/>*

## Features:

- embed third party into chains and agents



# Langchain - Agent

ReAct, Zero-Shot, OpenAI Functions

ReAct Agent



# Langchain - Agent

Execution plan, prioritisation, coordination...

BabyAGI



# Langchain - Workshop

## Step 1: Create a Slack bot that ask questions to a SQL database

7:59 ? /itineris top 10 organisations by number of responses and visitors ?  
By @Samuel

🧠 Response:  
The top 10 organizations by number of responses and visitors are:

1. [REDACTED] responses, [REDACTED] visitors
2. [REDACTED] responses, [REDACTED] visitors
3. [REDACTED] responses, [REDACTED] visitors
4. [REDACTED] responses, [REDACTED] visitors
5. [REDACTED] responses, [REDACTED] visitors
6. [REDACTED] responses, [REDACTED] visitors
7. [REDACTED] responses, [REDACTED] visitors
8. [REDACTED] responses, [REDACTED] visitors
9. [REDACTED] responses, [REDACTED] visitors
10. [REDACTED] responses, [REDACTED] visitors

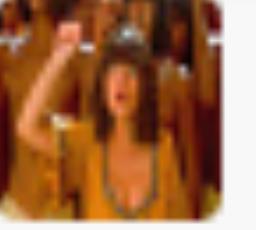
💡 SQL query:

```
SELECT name, forever_survey_responses, forever_visitor  
FROM orgs_v  
ORDER BY forever_survey_responses DESC, forever_visitor DESC  
LIMIT 10;
```



# Langchain - Workshop

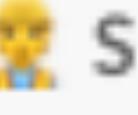
**Step 1:** Create a Slack bot that ask questions to a SQL database

 **Itineris** APP 7:07 PM  
? /itineris how many new users since june ? ?  
By [@Samuel](#)

---

 **Response:**  
Final answer: There have been [REDACTED] new users since June.

---

 **SQL query:**  

```
SELECT COUNT(*) FROM "public"."users" WHERE created_at >= '2022-06-01';
```



# Langchain - Workshop

**Step 1:** Create a Slack bot that ask questions to a SQL database

7:11 ? /itineris How many new users per month in 2023 ? Reply in json. ?

By @Samuel

---

🧠 Response:

```
{"new_users_per_month": [{"month": 1, "count": [REDACTED]}, {"month": 2, "count": [REDACTED]}, {"month": 3, "count": [REDACTED]}, {"month": 4, "count": [REDACTED]}, {"month": 5, "count": [REDACTED]}]}
```

---

👤 SQL query:

```
SELECT COUNT(*) AS new_users_per_month
FROM users
WHERE EXTRACT(YEAR FROM created_at) = 2023
GROUP BY EXTRACT(MONTH FROM created_at)
ORDER BY EXTRACT(MONTH FROM created_at)
LIMIT 5;
```



# Langchain - Workshop

👉 <https://github.com/samber/lab-langchain-getting-started>

Use Slack Bolt in Python

An IMDB database is provided, but you can your own.

An Slack account is provided, but you can your own.

OpenAI free tier: 5€



# Langchain - Workshop

Conclusion step 1:

- Limited by the number of tokens
- Exclude some tables
- Few shot seeding (3 rows as samples)
- No jsonb columns -> use views



# Langchain - Workshop

## Step 2: Create a PDF search engine

- Download PDFs from S3, git, Drive...
  - Text splitter
  - Text embedding (~~OpenAI \$\$\$~~)
  - Persist vectors and documents into a vector database
- 
- Q/A in the vector database
  - Generate natural language answer with sources



# Langchain - Workshop

👉 <https://github.com/samber/lab-langchain-getting-started>

Use IPCC ar6-spm dataset from the git repository.

Don't use costly OpenAI models (GPT\*), but  
sentence-transformers/all-mnlp-base-v2 hosted on HuggingFace.

Use an in-memory with persistence vector database.

**Beer time** 🔥🍕