



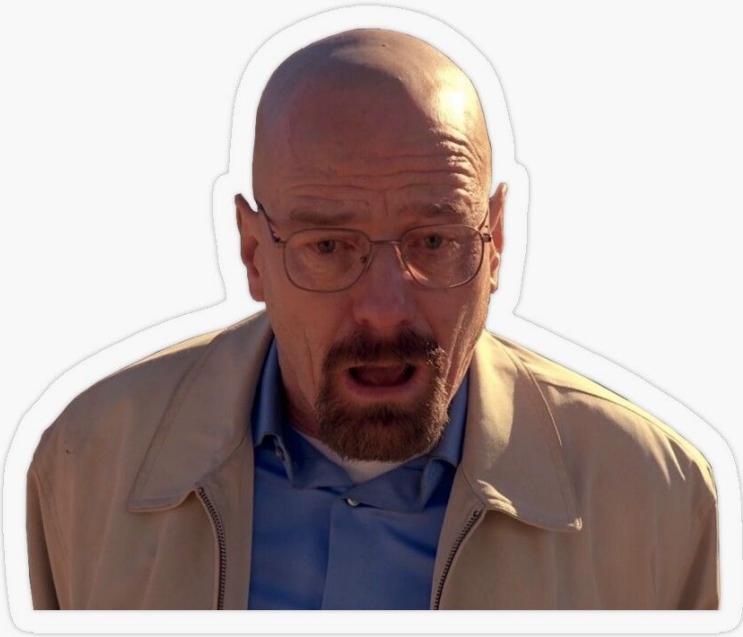
# Long Term Memory

For Agents using Gemini and Cognee  
*(with code)*

Tarun Jain  
Founding Engineer and GDE in AI



Google  
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**Do you know English?**

**Quanti di voi conoscono  
l'inglese?**

**Ciao, I am Tarun Jain,  
A Scuderia Ferrari fan**



# \$whoami

- Founding Engineer
- AI with Tarun - YouTube Content Creator
- Google Developer Expert in AI
- Ex-Google Summer of Code 2024  
Red Hen Lab
- Ex-Google Summer of Code 2023  
caMicroscope

[www.youtube.com/@AlwithTarun](https://www.youtube.com/@AlwithTarun)

[https://x.com/TRJ\\_0751](https://x.com/TRJ_0751)

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# Gemini

\*(Sto viaggiando a Roma,  
consigliatemi qualche  
buon ristorante da  
provare)

Hello, Tarun R

I am travelling to Rome, recommend me some good restaurants to try

+ Tools

Thinking ▾



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# Gemini

No doubt this is famous but its very generic response

*\*(Senza dubbio è famoso, ma è una risposta molto generica.  
Quindi non è una buona risposta.)*



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## 🇮🇹 Classic Roman Trattorias (Mid-Range)

- **Roscioli:** (Near the Campo de' Fiori/Jewish Ghetto) A combination of a deli, wine bar, and restaurant. Famous for its high-quality ingredients, especially the charcuterie, cheeses, and their spectacular Carbonara. **Reservation is essential.**
- **Trattoria Da Cesare al Casaleotto:** (Located in the Monteverde Vecchio neighborhood, requires a tram or taxi) Considered one of the best authentic Roman experiences. Fantastic fried appetizers (like *suppli*) and classic pasta dishes.

## ⭐ A Modern/Upscale Experience

- **Armando al Pantheon:** (Right next to the Pantheon) An institution that has been serving traditional Roman cuisine for decades. They offer all the classics in a slightly more formal, but still traditional, setting. They are very popular with locals and tourists alike.

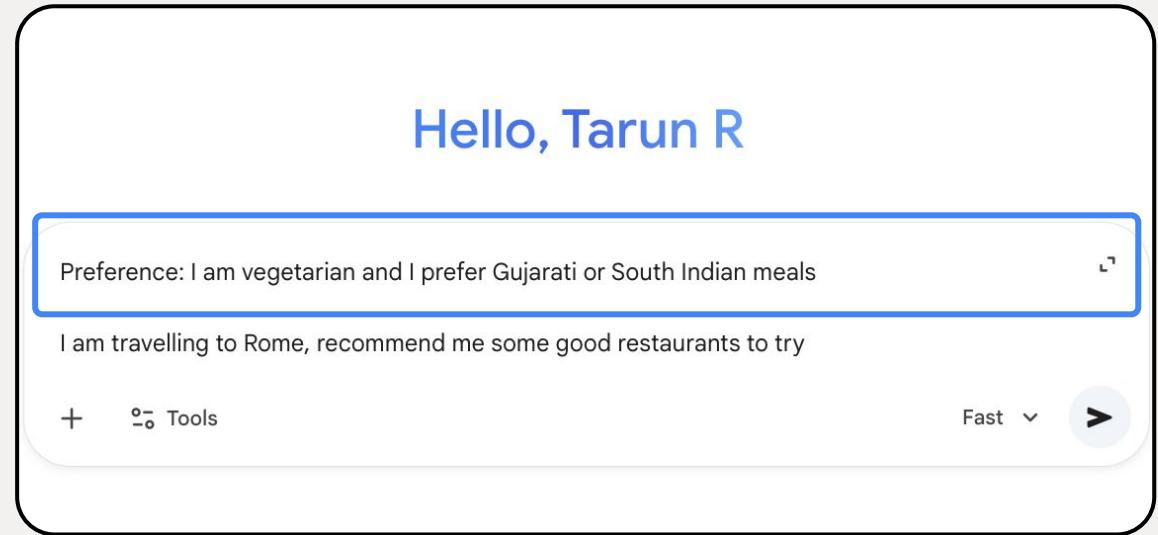
## 🍕 For Pizza

- **Seu Pizza Illuminato:** (In the Ostiense neighborhood) A fantastic example of modern Italian pizza (Neapolitan-style), with creative toppings and a wonderful light crust.
- **Forno Campo de' Fiori:** (In Campo de' Fiori) Perfect for **Pizza al Taglio** (pizza by the slice). Great for a quick, delicious, and cheap lunch. Try the famous potato and rosemary pizza.

Once you tell me a bit more about your preferences, I can narrow down these suggestions or offer others! **What kind of food experience are you hoping for most?**

# Gemini

*\*(non forniamo più contesto)*



A screenshot of the Gemini AI interface. At the top, it says "Hello, Tarun R". Below that is a blue-outlined input box containing the text "Preference: I am vegetarian and I prefer Gujarati or South Indian meals". Underneath is another input box with the text "I am travelling to Rome, recommend me some good restaurants to try". At the bottom left are "Tools" and "Fast" dropdown buttons. On the right side is a circular arrow icon.



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# Gemini

We want LLM to remember this all the time not just within this chat.

*\*(Vogliamo che LLM lo ricordi sempre, non solo in questa chat.)*

Here are a few recommendations for restaurants in Rome that cater to your vegetarian preference, focusing on Indian and Southern Italian/Mediterranean options which might align with your taste for vegetarian cuisine:

## 🇮🇳 Indian Cuisine (Likely to have Gujarati/South Indian options)

Finding authentic, specifically Gujarati or South Indian restaurants in Rome can be challenging, but these spots are generally highly-rated and offer extensive vegetarian menus which often include Dosa, Idli, curries, and lentil dishes.

- 1. **New Delhi Indian Restaurant**
  - **Style:** North Indian, but often has a dedicated vegetarian section with various lentil and vegetable preparations.
  - **Vibe:** Popular and centrally located near the Termini station.
  - **Why it works:** Good for a reliable Indian fix. You should check their menu for specific South Indian items like Dosa.
- 2. **Krishna 13**
  - **Style:** Highly-rated Indian cuisine, known for its quality and good service.
  - **Vibe:** Cosy and authentic.
  - **Why it works:** They offer many vegetarian dishes, including **Thalis** (platter meals), which are a great way to sample different vegetable and lentil dishes that can feel very familiar to someone who enjoys Gujarati cuisine.

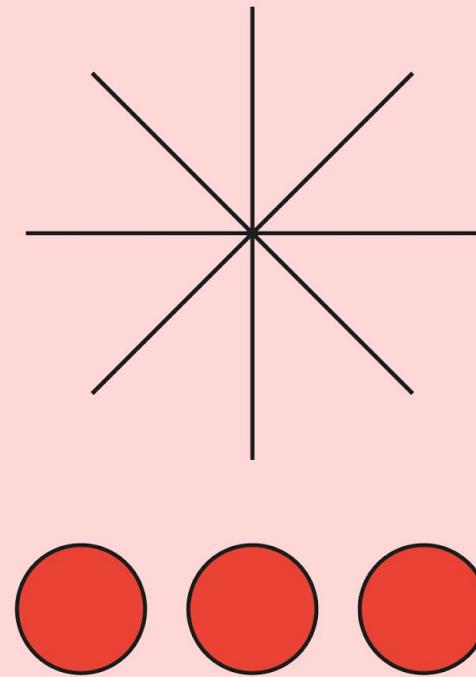


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Let's look into how to  
tackle this  
**Problem statement.**

But before that, lets  
understand  
**what is an Agent?**

**\*cos'è un agente?**



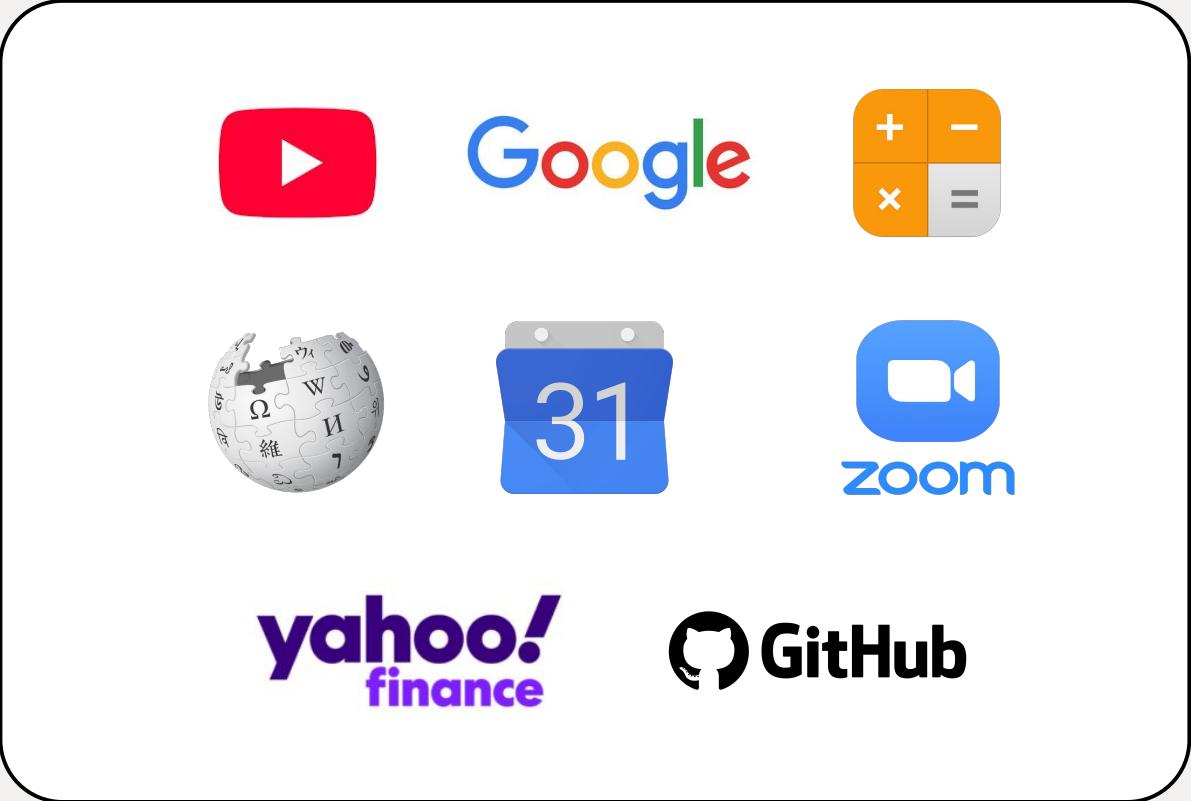
# Task | Compio



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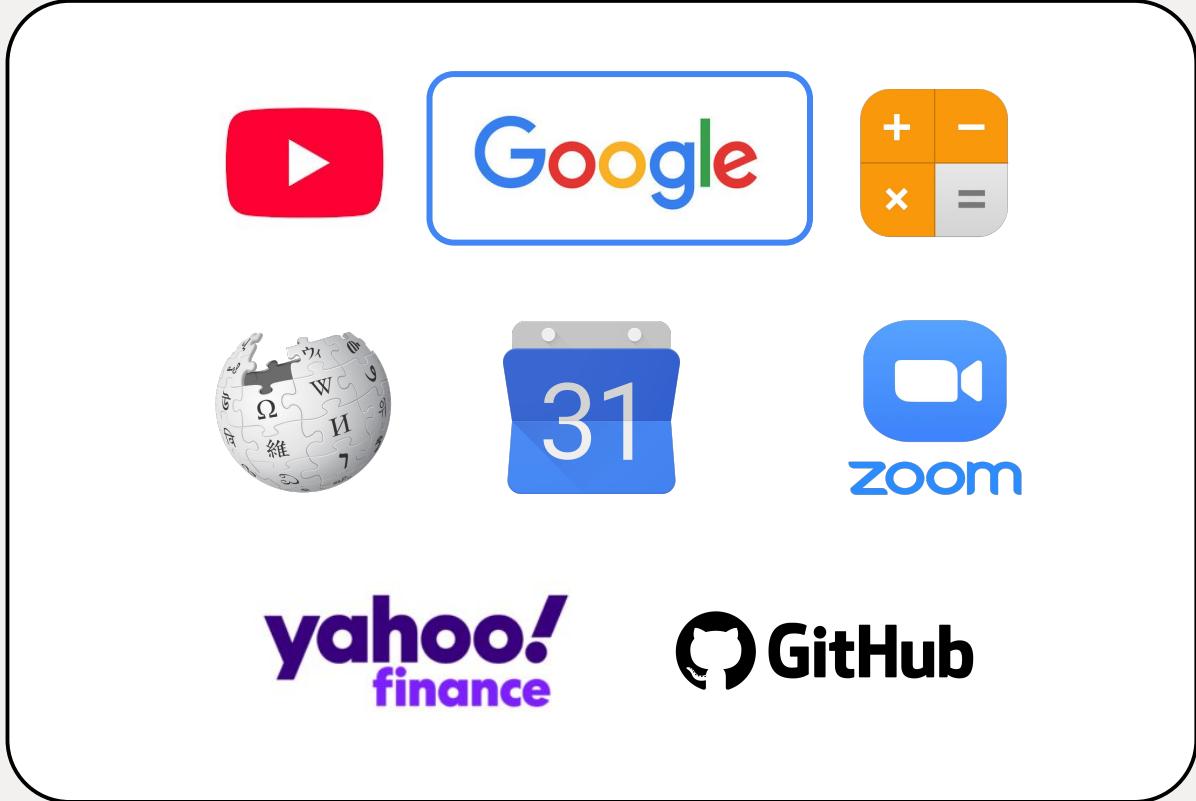


## Tools | Utensili



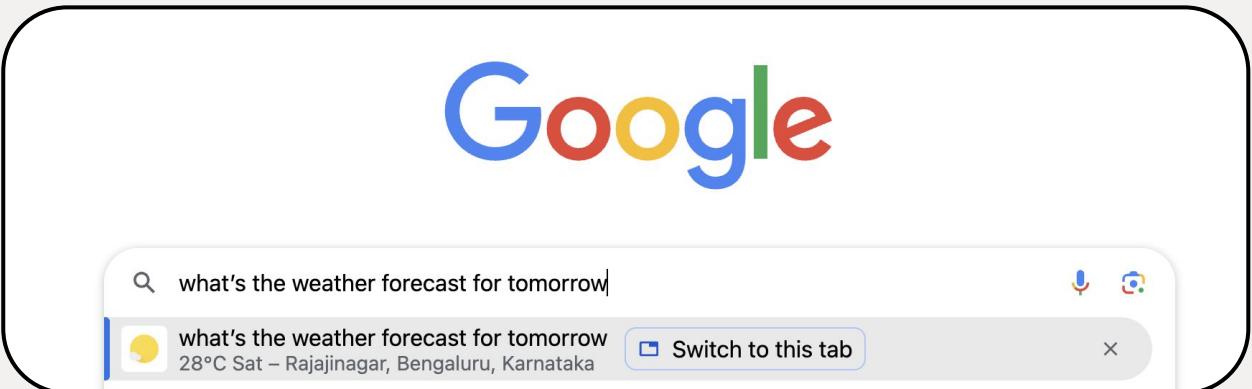
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# Action | Azione



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# Decision



*So, tell me: what is your answer:  
will you take an umbrella?*



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# LLM vs Agent

⏰ Time: 19:30

LLM:

Good morning



Good morning! 😊 How can I assist you today?

Agent:

Good morning

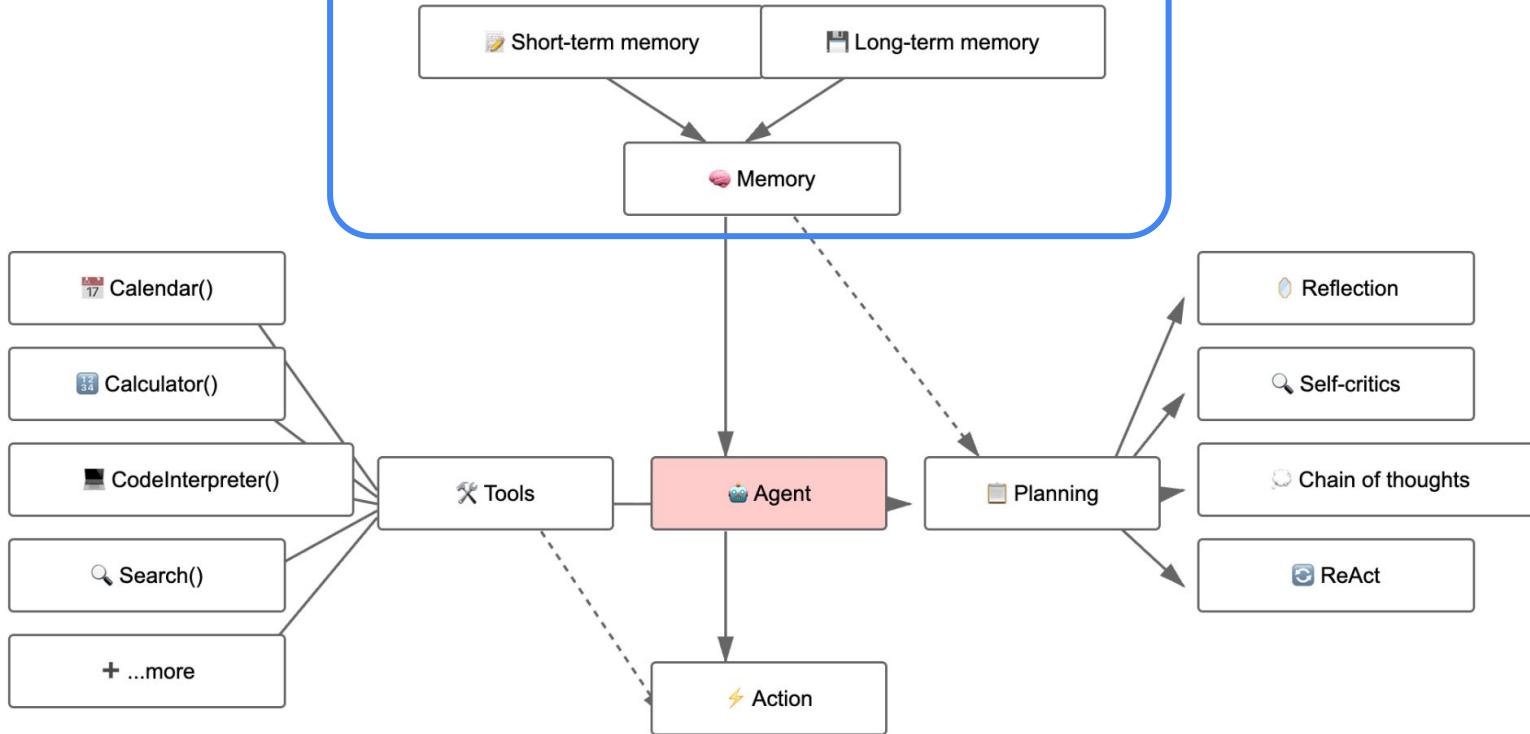


Good evening! 😊 It seems like it's still nighttime, but if you're greeting me with "Good morning," maybe you're preparing for a fresh start or a specific context—let me know how I can assist!



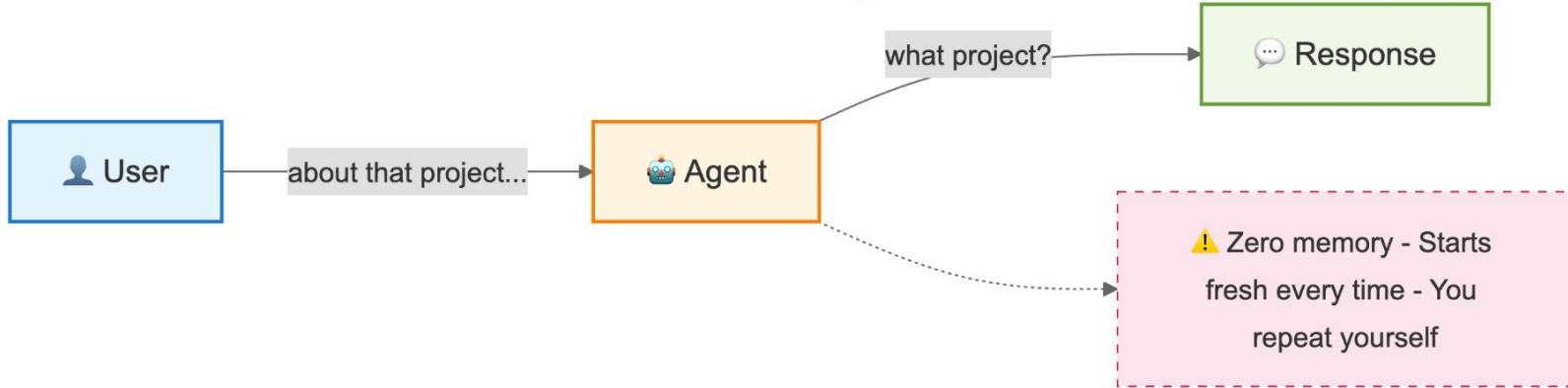
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## our focus



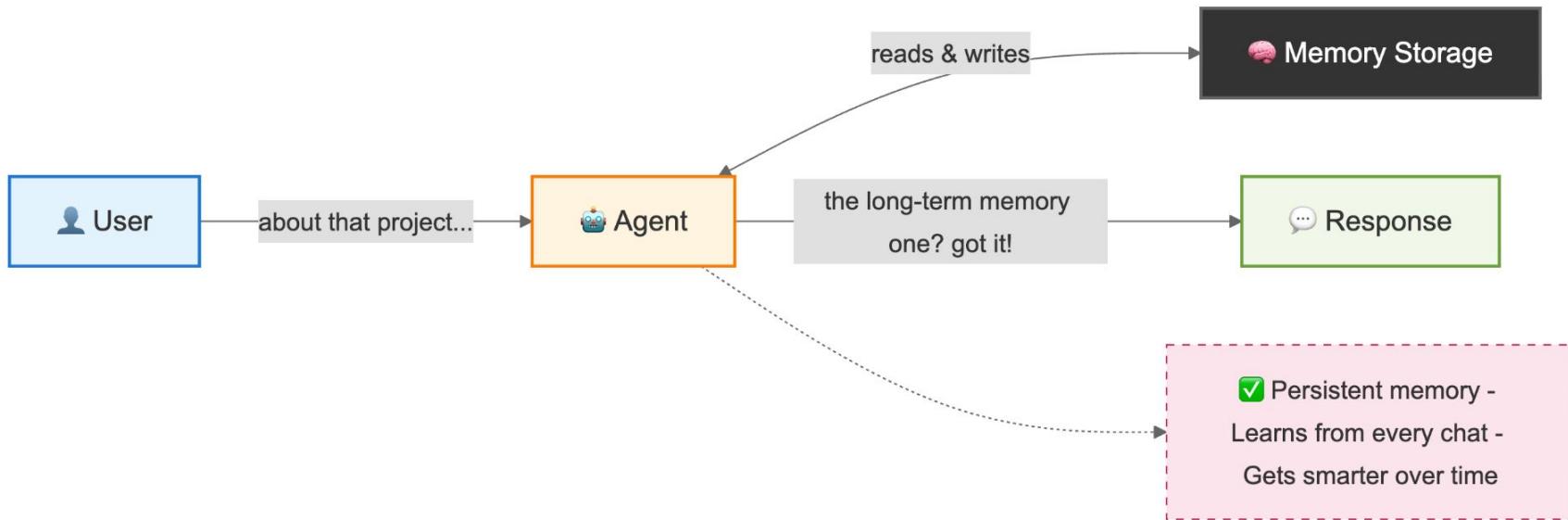
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# Stateless Agent



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# Stateful Agent



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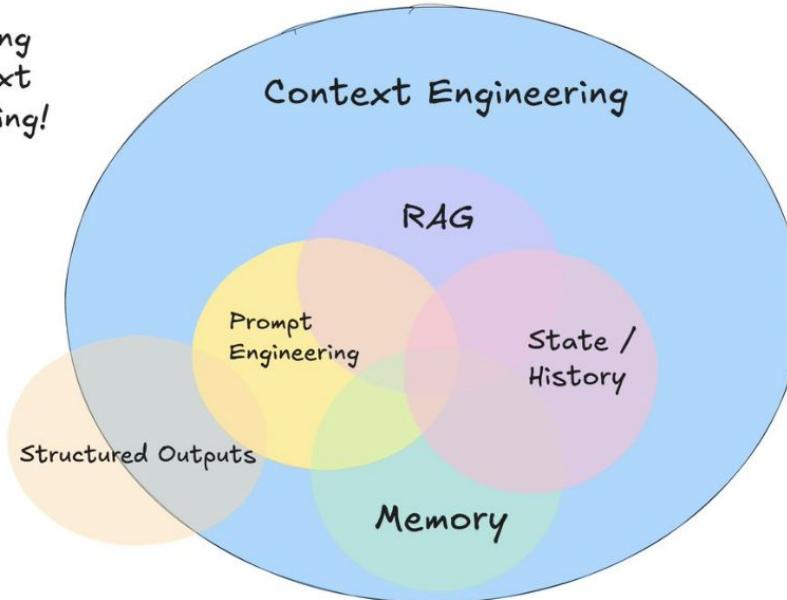


dex ✅ @dexhorthy · Jun 26

wrote about this here! [github.com/humanlayer/12...](https://github.com/humanlayer/12...)

∅ ...

Everything  
is Context  
Engineering!



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Advanced Hybrid Search RAG that  
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SSE MCP Server Agent - Agno |  
MCP Tutorial - Part 3



Build MCP Agents - using Google  
ADK || MCP Tutorial - Part 2



How I use Qdrant MCP Server for  
Vibe Coding || MCP Tutorial - Part 1

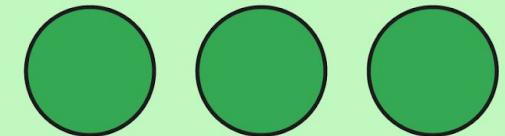
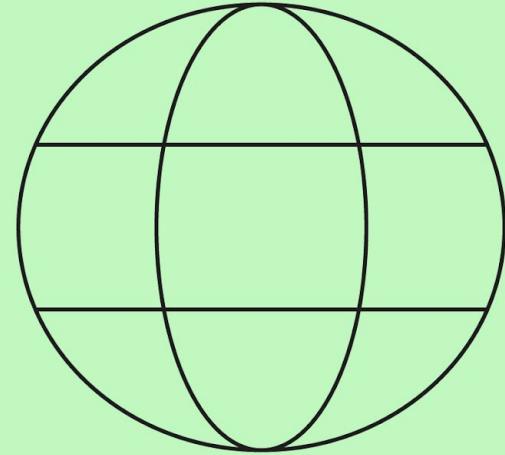


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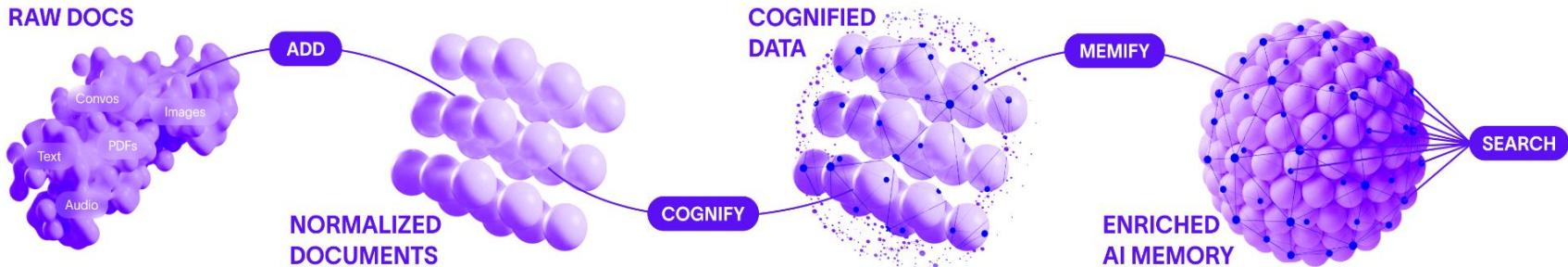


Introducing **Cognee**:

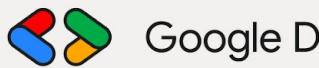
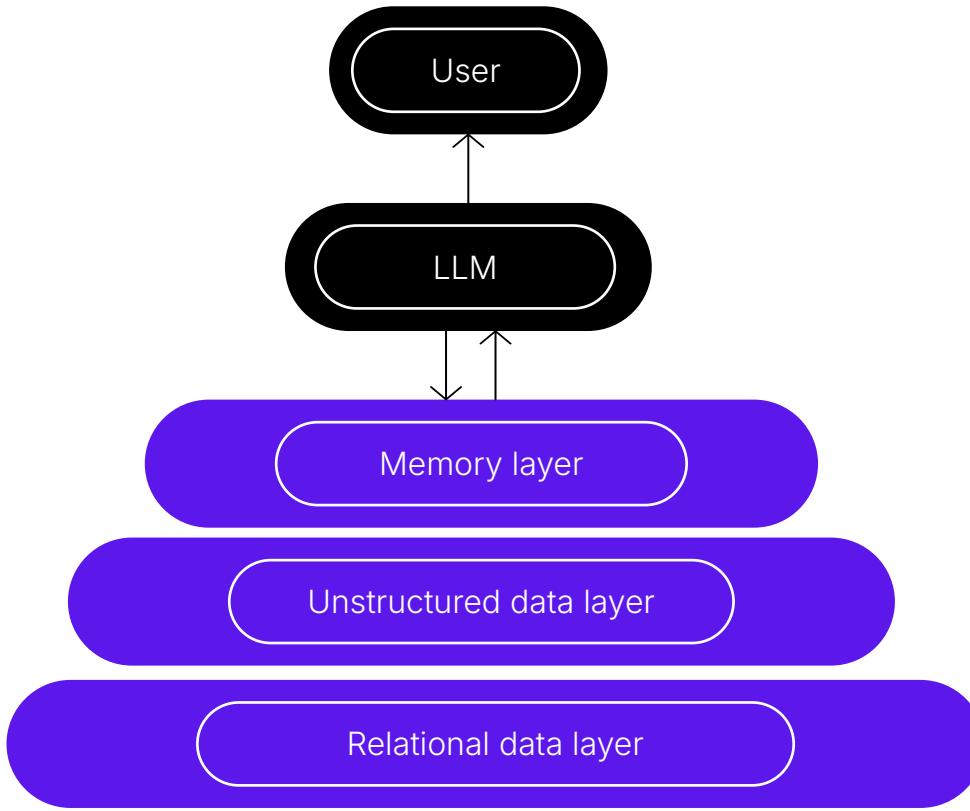
Build reliable AI agent  
memory.



# HOW DOES AI MEMORY WORK?

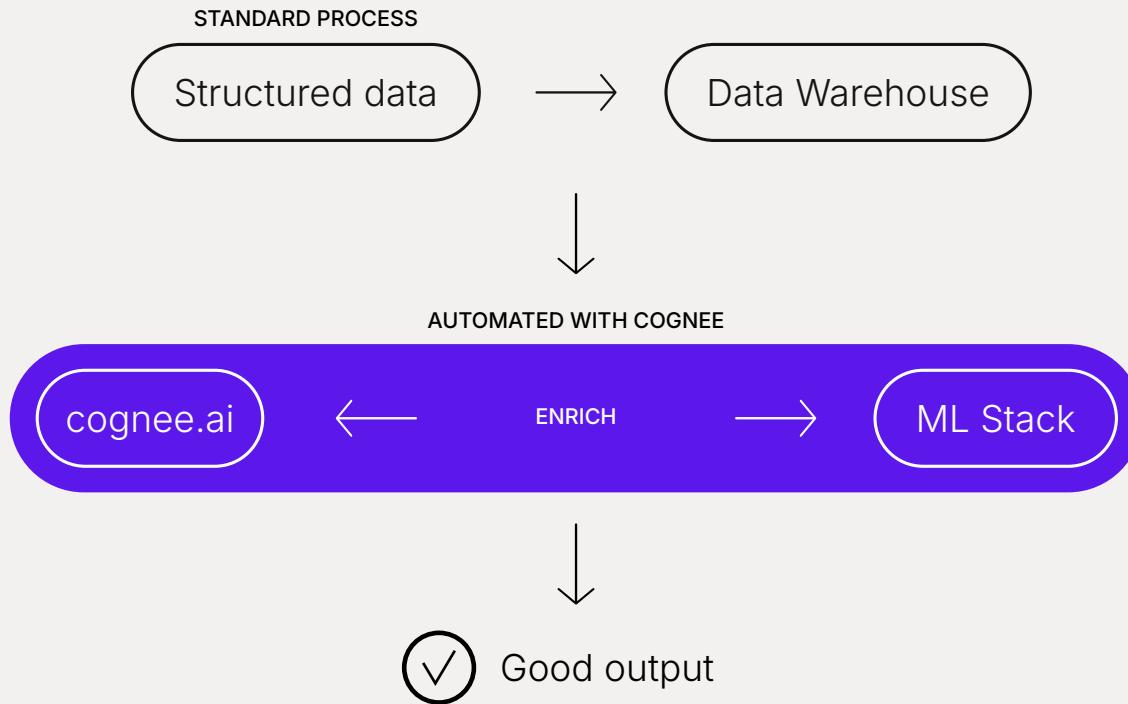


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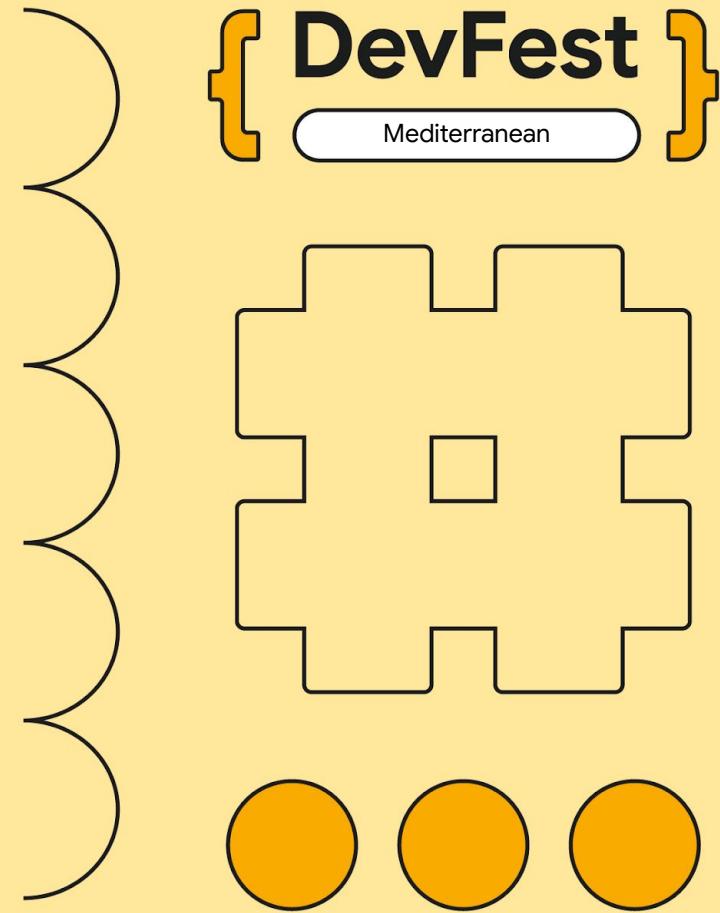
# Self hosted service on Any Cloud



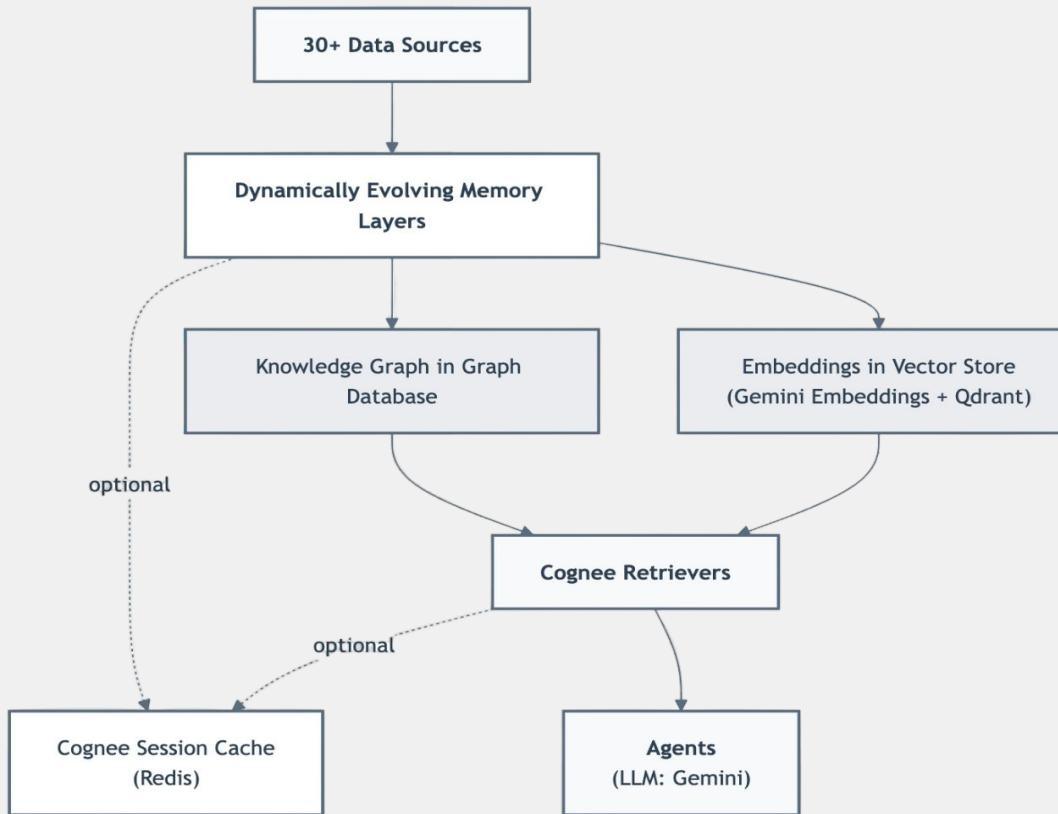
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**DEMO TIME.**



# Cognee's Memory Architecture



```
# installation
uv init
uv add cognee google-genai cognee-community-vector-adapter-qdrant

# .env: (keys: https://aistudio.google.com/)
LLM_PROVIDER=gemini
LLM_MODEL=gemini/gemini-2.5-flash
LLM_API_KEY=AI-----
EMBEDDING_PROVIDER=gemini
EMBEDDING_MODEL=gemini/gemini-embedding-001
EMBEDDING_API_KEY=AI-----
EMBEDDING_DIMENSIONS=3072
QDRANT_URL=http://localhost:6333
```



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topoteretes/cognee ★

```
# utils.py

import os, pathlib, cognee
from cognee_community_vector_adapter_qdrant import register

def get_db_config():
    system_path = pathlib.Path(__file__).parent
    cognee.config.system_root_directory(os.path.join(system_path, ".cognee_system"))
    cognee.config.data_root_directory(os.path.join(system_path, ".data_storage"))
    cognee.config.set_relational_db_config({"db_provider": "sqlite"})
    cognee.config.set_vector_db_config({
        "vector_db_provider": "qdrant",
        "vector_db_url": os.getenv("QDRANT_URL"),
        "vector_db_key": os.getenv("QDRANT_API_KEY")
    })
    cognee.config.set_graph_db_config({"graph_database_provider": "kuzu"})
```



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topoteretes/cognee ★

```
import cognee
import asyncio
from utils import get_db_config
from dotenv import load_dotenv
load_dotenv()

async def main():
    get_db_config()
    await cognee.prune.prune_data()
    await cognee.prune.prune_system(metadata=True)
    text = "Gemini 3.0 and Google Antigravity were released on November 18, 2025"
    await cognee.add(text)
    await cognee.cognify()
    for txt in await cognee.search(query_text="when did Google release Antigravity?"):
        print(txt)
if __name__ == '__main__':
    asyncio.run(main())
```

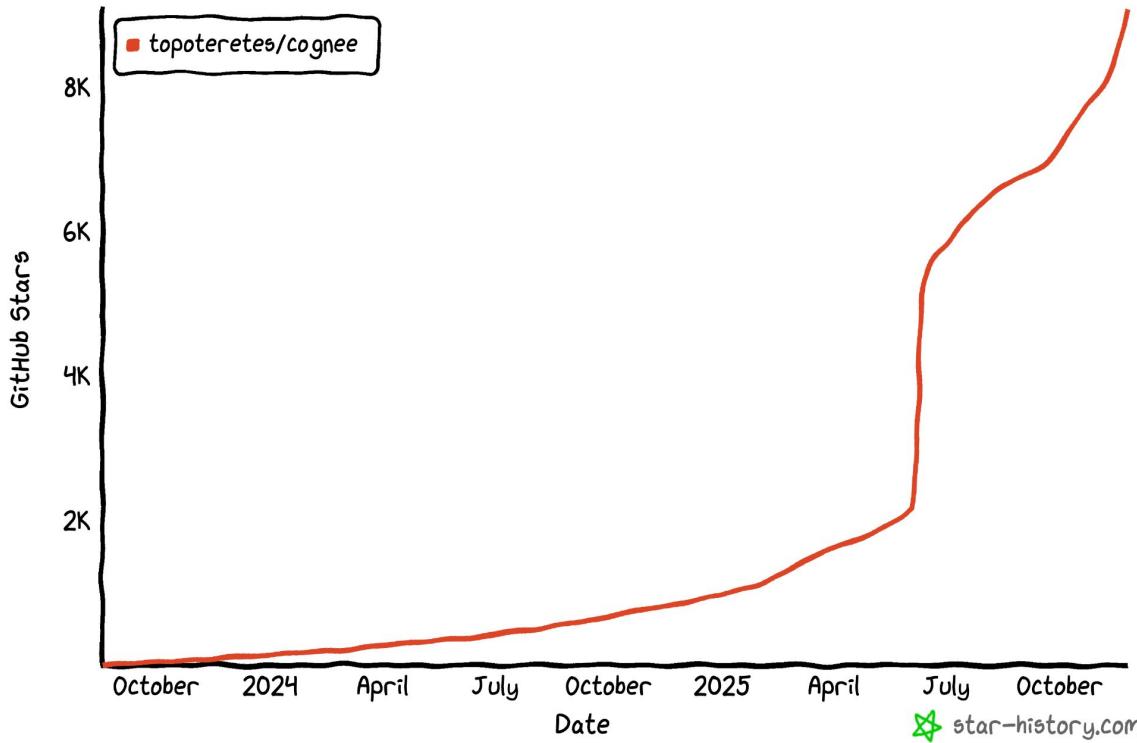


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## Star History



 `topoteretes/cognee` 

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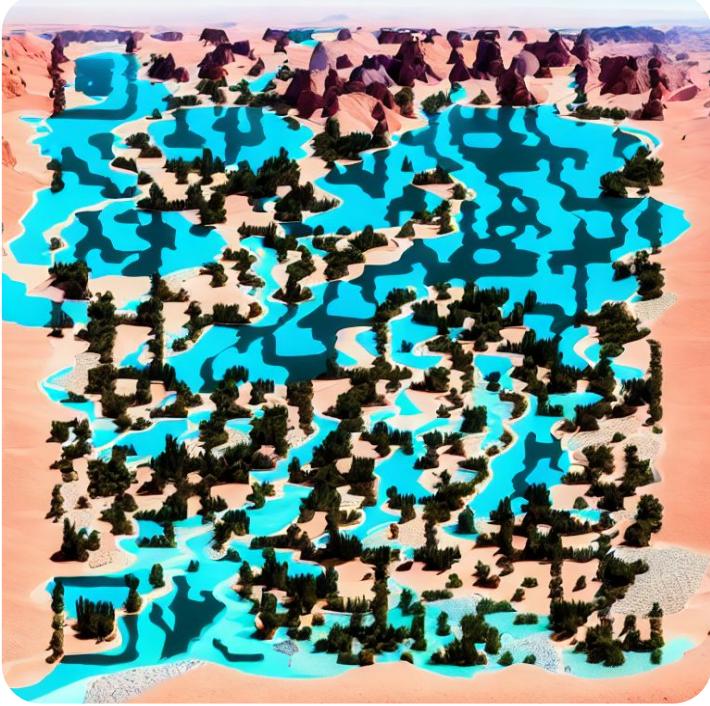
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**CREATE A 3D WORLD**

**WTF is**

**RAG**

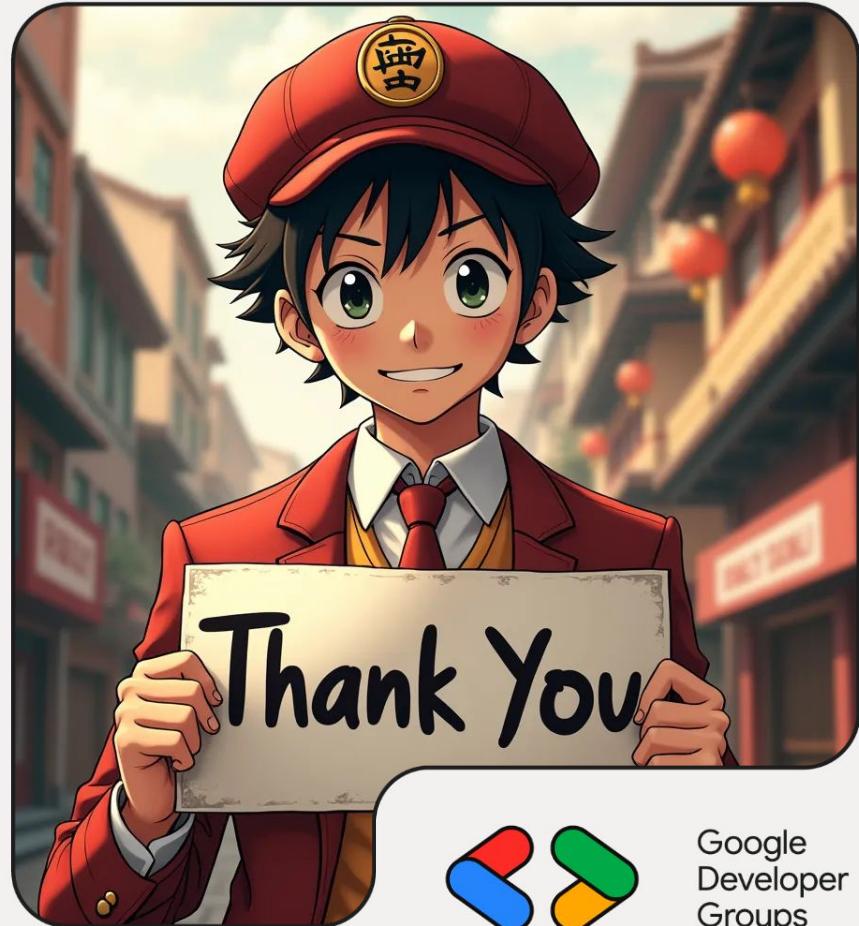
**vLLM Faster**



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# Any Questions?

-  Tarun R Jain
-  @TRJ\_0751
-  AI with Tarun
-  jaintarun.ai



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