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Google Antigravity: How to add custom MCP server to improve Vibe Coding

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Tarun Jain

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Google just announced Gemini 3 Pro and the Antigravity release. I am actually more excited about Antigravity because of [Varun Mohan](#). I have been a big fan of Windsurf, and I had a feeling from the start that once Varun joined the team, something amazing would arrive.

And here we are with Antigravity.



I have been experimenting with it for the past few hours and here are my thoughts:

What is Antigravity?

Google Antigravity is a new Agentic development platform from Google that changes how software is built by letting developers work at a higher task-focused level. With the reasoning and Agentic coding abilities of **Gemini 3**, Antigravity allows AI Agents to plan, code, and validate complete software tasks on their own.

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It includes an Agent manager dashboard, a VS Code-style editor, and deep browser connectivity, letting Agents interact with web apps directly for testing and validation. Instead of being just another coding tool, it becomes a true development partner that improves productivity by managing multiple projects and tasks in parallel with autonomous workflows.

Download now: <https://antigravity.google/download>

Important notes to improve your Vibe Coding with Antigravity

If you want to start with Antigravity, first install it and pick your preferred IDE layout. After setup, move to planning before writing any code.

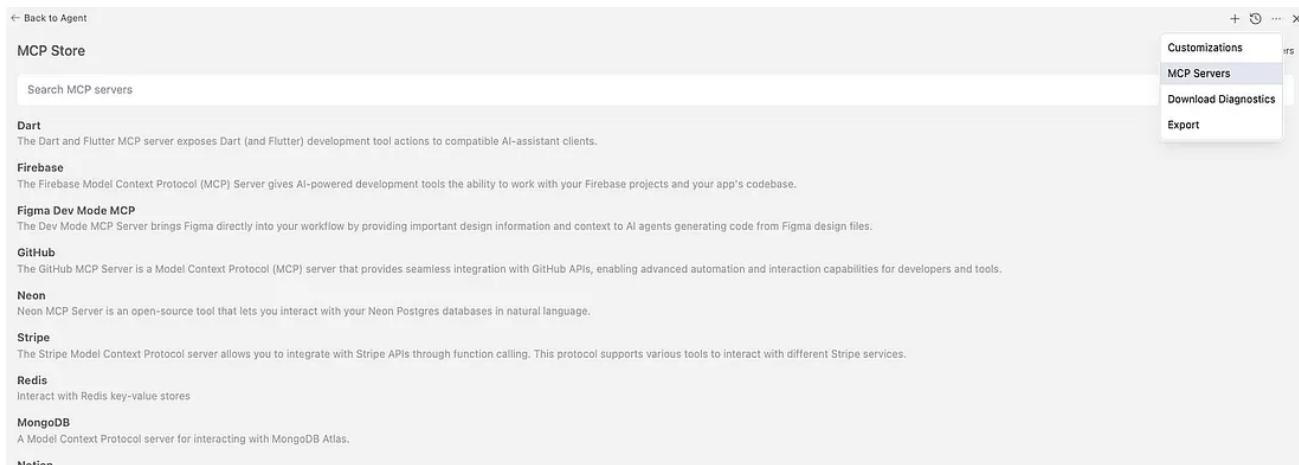
1. Begin by defining your task and the features you need. Then prepare an implementation plan and workflow. If you already have clarity, write it yourself. If not, simply describe the goal and let Gemini 3 generate the **Implementation Plan, Task, and Walkthrough** files.
2. **IMPORTANT: DO** review the **Implementation plan, Task list, and Walkthrough**. If there is any task related to testing, remove that. Do tell the Agent not to run tests automatically.

3. Do the testing manually because **automated testing from the Agent can consume more tokens than required.**
4. When Vibe coding, the key stage is implementing features. Avoid asking the Agent to build all features in a single run. If you have more than 5 features, begin with the first one and then move step by step.
5. After completing the first session, ask Gemini to generate a **SUMMARY.md** of the conversation. Save this summary since you can reuse it for future sessions without repeating the entire process.
6. Once you have two features ready and you have already reviewed the **Implementation plan** and workflow, start a new task using the saved **SUMMARY** as context and follow the same process.
7. Now for further improvements, add **Custom MCP servers** that keep you updated with documentation and SDK references for your tech stack. MCP Servers can help fetch context for better code generation and the latest.

Lets see how to add your own custom MCP Server in Google Antigravity.

How to add a Custom MCP server in Google Antigravity

1. Click on Agent session and select the “...” dropdown at the top of the editor’s side panel. And select MCP Servers, you will find the MCP Store.



2. To add a custom MCP server, select **Manage MCP Servers** at the top of the MCP store and then click on View raw config in the main tab.

3. Modify the `mcp_config.json` with your custom MCP server configuration. Note for Vibe coding, having these 3 MCP servers can be handy:

- Context-7: Up-to-date Code Docs for the tech stack your app needs.
- Sequential Thinking: For dynamic and reflective problem-solving through a structured thinking process.
- Retriever-based MCP: Save and retrieve the code that works for future purposes. for example: **[Qdrant MCP Server](#)**.

NOTE: Sequential Thinking is already in MCP Store, just click on Install.

`mcp_config.json`:

Syntax for `npx` and `uvx` based MCP

```
{
  "mcpServers": {
    "sequential-thinking": {
      "command": "npx",
      "args": [
        "-y",
        "@modelcontextprotocol/server-sequential-thinking"
      ]
    },
    "context7": {
      "command": "npx",
      "args": [
        "-y",
        "@upstash/context7-mcp",
        "--api-key",
        "<replace-with-your-Context7-API-Key>"
      ]
    },
  }
}
```

```

    "qdrant": {
        "command": "/Users/tarunjain/.local/bin/uvx",
        "args": [
            "/Users/tarunjain/Desktop/mcp-server-qdrant"
        ],
        "env": {
            "QDRANT_URL": "<replace-with-your-Qdrant-Endpoint>",
            "QDRANT_API_KEY": "<replace-with-your-Qdrant-API-Key>",
            "COLLECTION_NAME": "vibe-coding",
            "EMBEDDING_MODEL": "sentence-transformers/all-MiniLM-L6-v2"
        }
    }
}

```

Get your Qdrant URL and API key after creating a free cluster on: [Qdrant Cloud](#)

Get your Context-7 API key from here: [Context 7 Dashboard](#)

4. Now, come back to Managed MCP servers and click Refresh.

MCP Server	Tools Available	Status
context7	2 / 2	Enabled
qdrant	2 / 2	Enabled
Sequential Thinking	1 / 1	Enabled

qdrant [Configure](#)

- 1. qdrant-find**
Look up memories in Qdrant. Use this tool when you need to: - Find memories by their content - Access memories for further analysis - Get some personal information about the user
- 2. qdrant-store**
Keep the memory for later use, when you are asked to remember something.

We have **5 tools across 3 MCP Servers**. Context-7 have 2 tools, Qdrant have 2 tools and Sequential Thinking have one tool.

If you are new to MCP, watch my video where I use the Qdrant MCP server with Claude Desktop and explain what MCP is, why you need it, and how it works.

Demo

Prompt

Plan: To build a 2 player game, but the **catch is**, the 2 players here are the

Scene-1: Chose 2 players. we need to have options selectbox to pick the LLM .
Each LLM choice needs to have to options: Enter API key and Choose the model

Scene-2: Now I need to have 2 games: Tic-Tac-Toe and Reversi: Both 2 player

Scene-3: Once the game **is** selected, **in** scene 3 I need the visuals, to check

For LLM inference use LiteLLM:

```
import os
from litellm import completion

os.environ["OPENAI_API_KEY"] = "your-api-key"
response = completion(
    model = "gpt-4o",
    messages=[{ "content": "Hello, how are you?", "role": "user"}]
)
os.environ['GEMINI_API_KEY'] = ""
response = completion(
    model="gemini/gemini-pro",
    messages=[{"role": "user", "content": "write code for saying hi from LiteLLM"}]
```

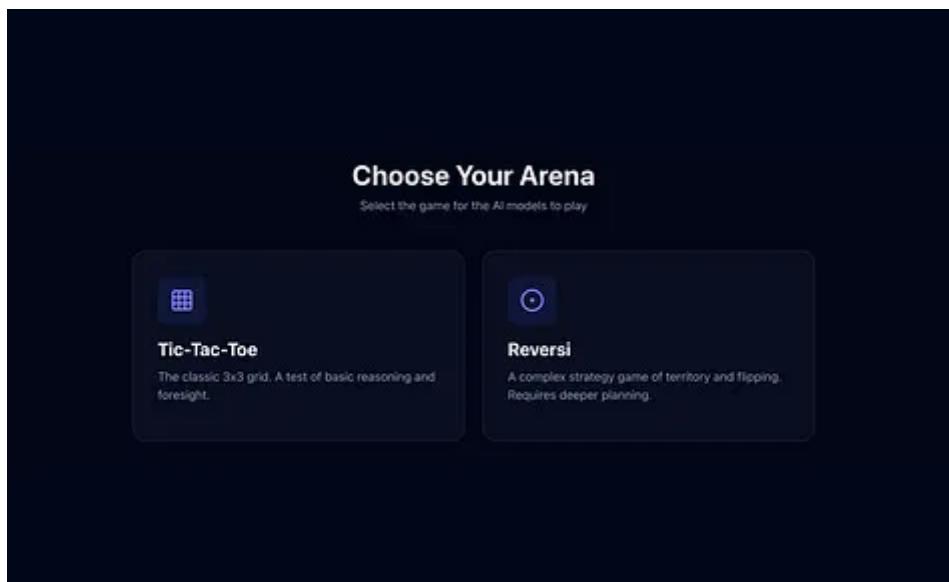
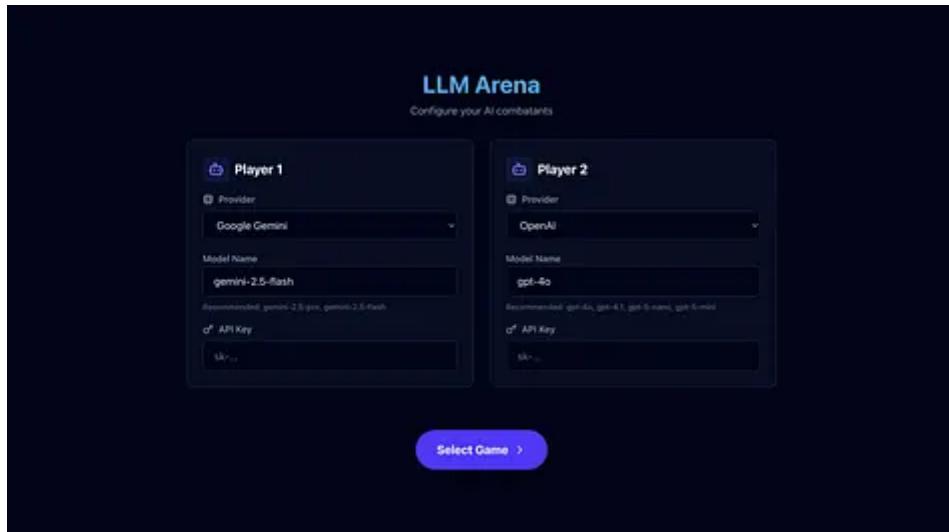
)

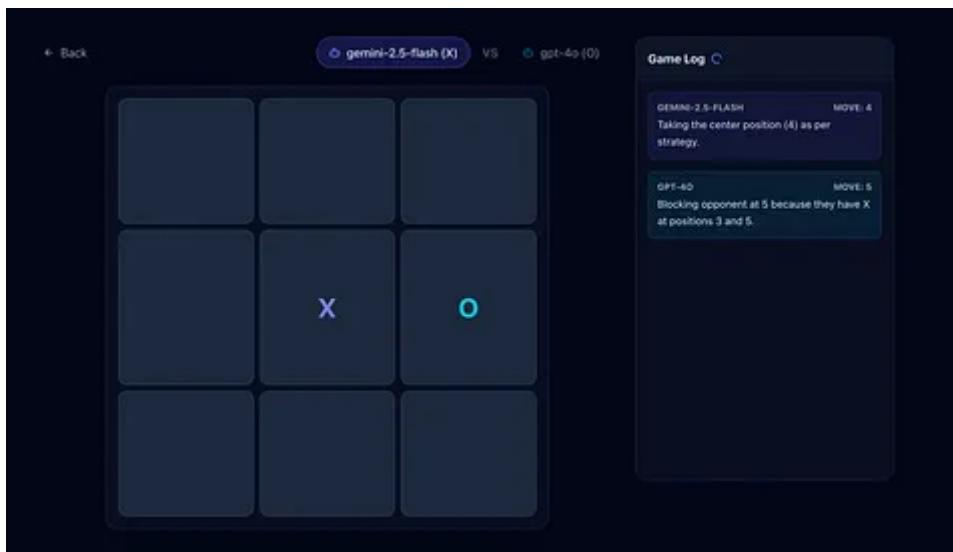
```
os.environ["ANTHROPIC_API_KEY"] = "your-api-key"

messages = [{"role": "user", "content": "Hey! how's it going?"}]
response = completion(model="claude-opus-4-20250514", messages=messages)
print(response)
```

First start with Tic-Tac-Toe and then Reversi. One game at a time.

App Screenshot





[GitHub Repo – LLM Game Vibe Coded: <https://github.com/lucifertrj/llm-game-battle>](#)

VIDEO TUTORIAL COMING SOON. Subscribe to YouTube

<https://youtube.com/@aiwithtarun>

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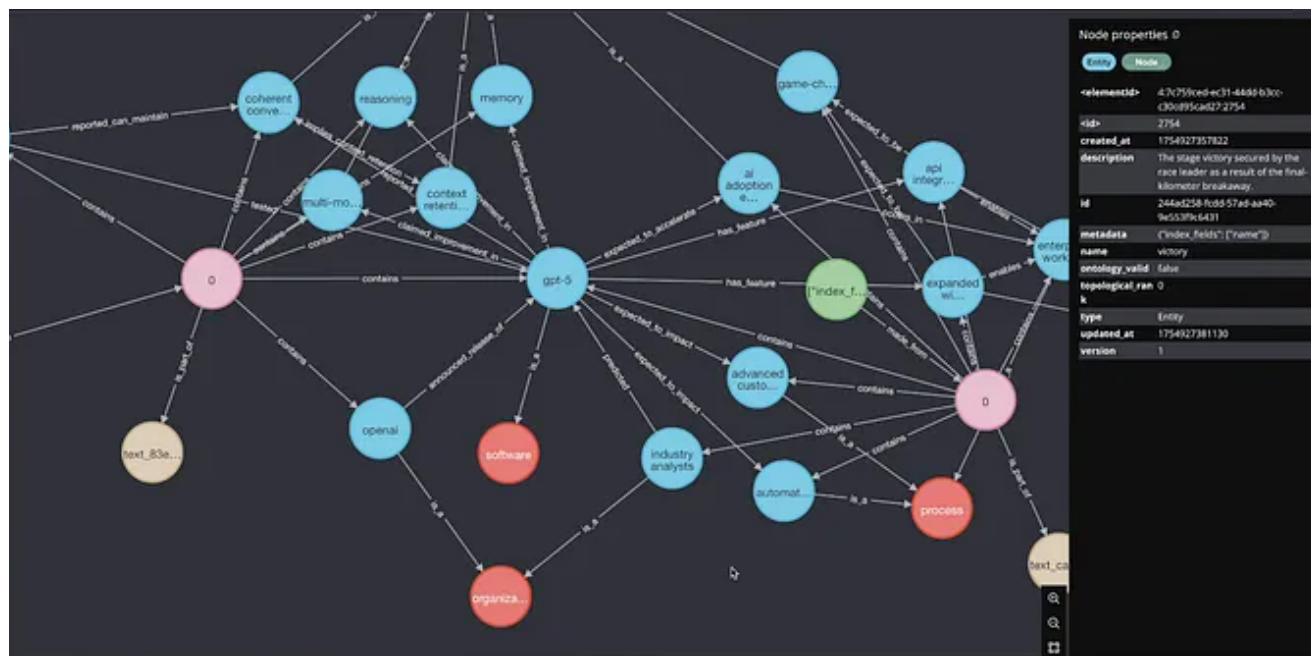
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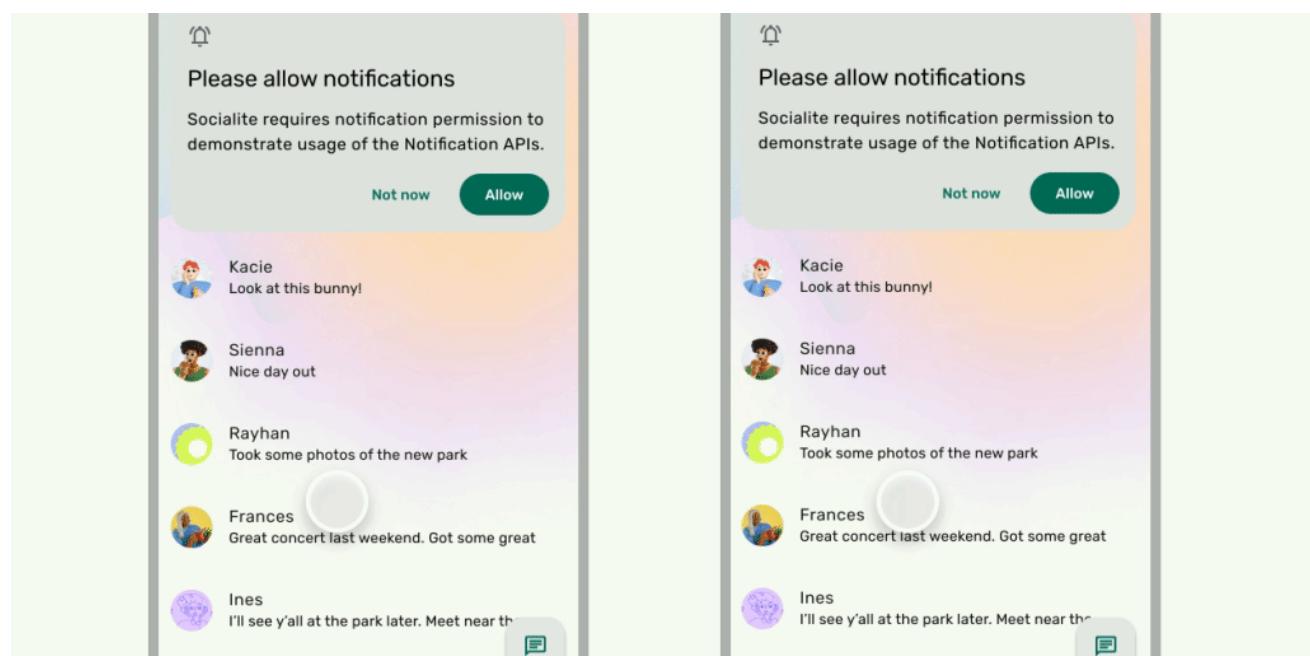
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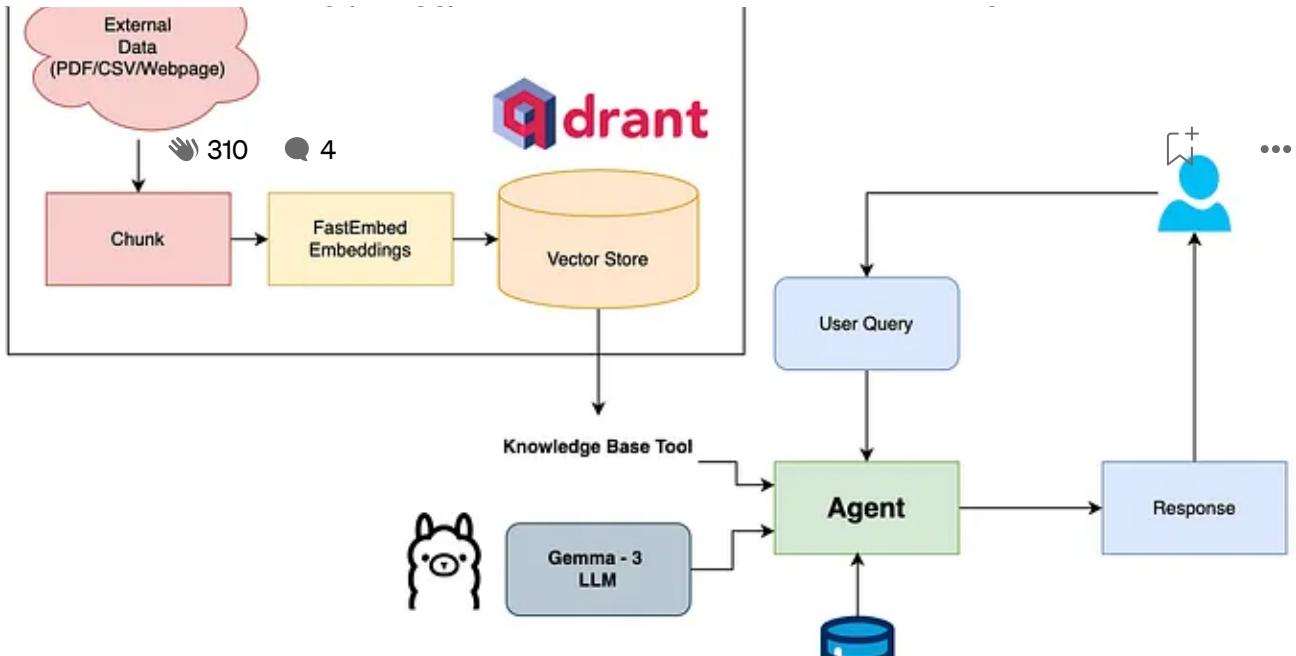


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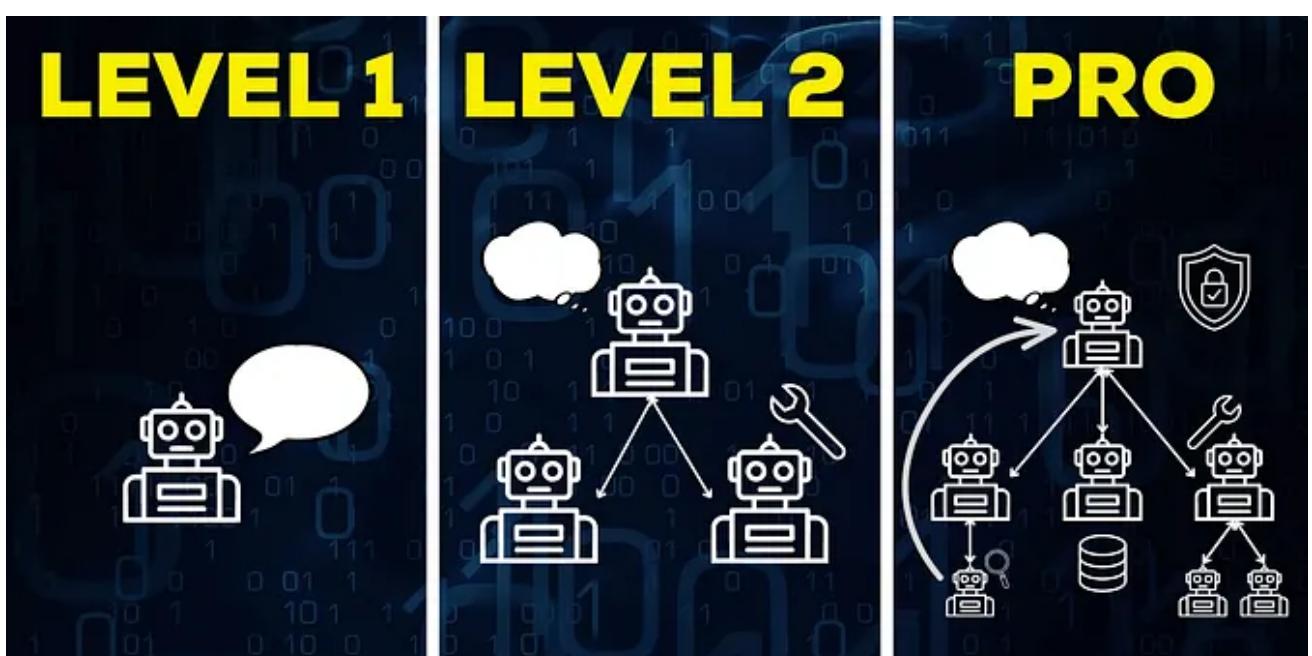


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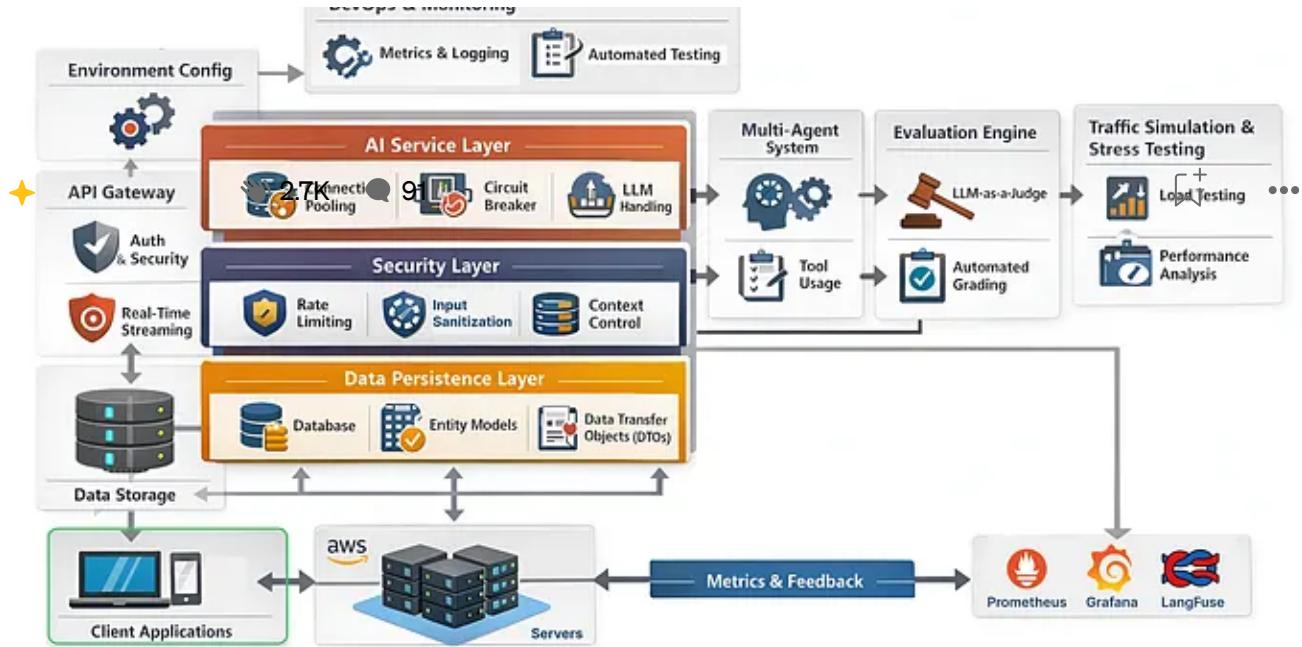
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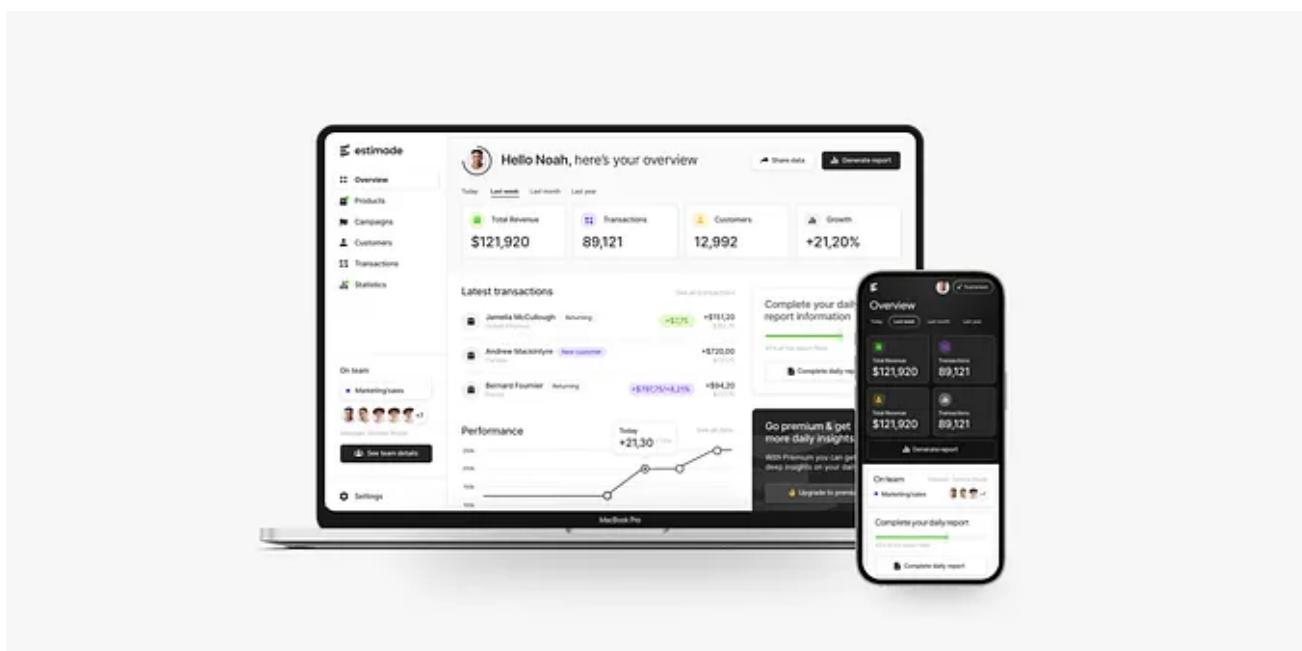
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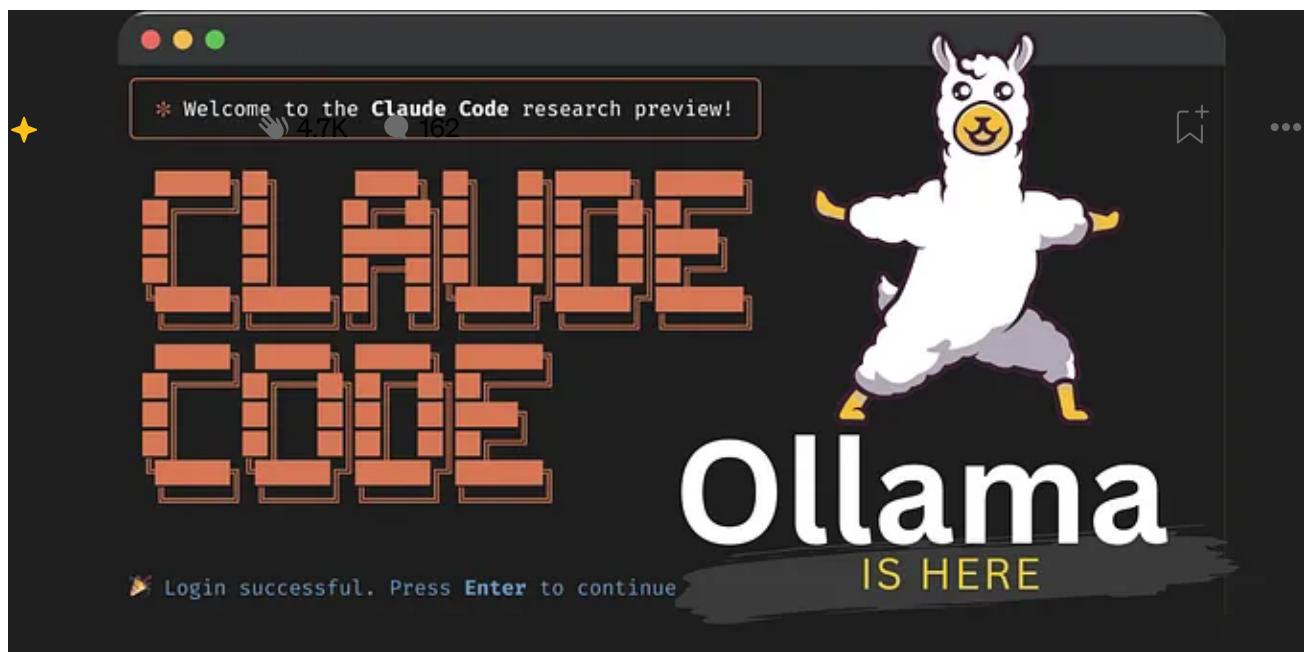


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ABSTRACT

Post-training alignment often reduces LLM diversity, leading to a phenomenon known as *mode collapse*. Unlike prior work that attributes this effect to algorithmic limitations, we identify a fundamental, pervasive data-level driver: *typicality bias* in preference data, whereby annotators systematically favor familiar text as a result of well-established findings in cognitive psychology. We formalize this bias theoretically, verify it on preference datasets empirically, and show that it plays a central role in mode collapse. Motivated by this analysis, we introduce *Verbalized Sampling (VS)*, a simple, training-free prompting strategy to circumvent mode collapse. VS prompts the model to verbalize a probability distribution over a set of responses (e.g., "Generate 5 jokes about coffee and their corresponding probabilities"). Comprehensive experiments show that VS significantly improves performance across creative writing (poems, stories, jokes), dialogue simulation, open-ended QA, and synthetic data generation, without sacrificing factual accuracy and safety. For instance, in creative writing, VS increases diversity by 1.6-2.1 \times over direct prompting. We further observe an emergent trend that more capable models benefit more from VS. In sum, our work provides a new data-centric perspective on mode collapse and a practical inference-time remedy that helps unlock pre-trained generative diversity.

Problem: Typicality Bias Causes Mode Collapse

Tell me a joke about coffee

Solution: Verbalized Sampling (VS) Mitigates Mode Collapse

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