

◆ Gemini

Vibe Coding 101



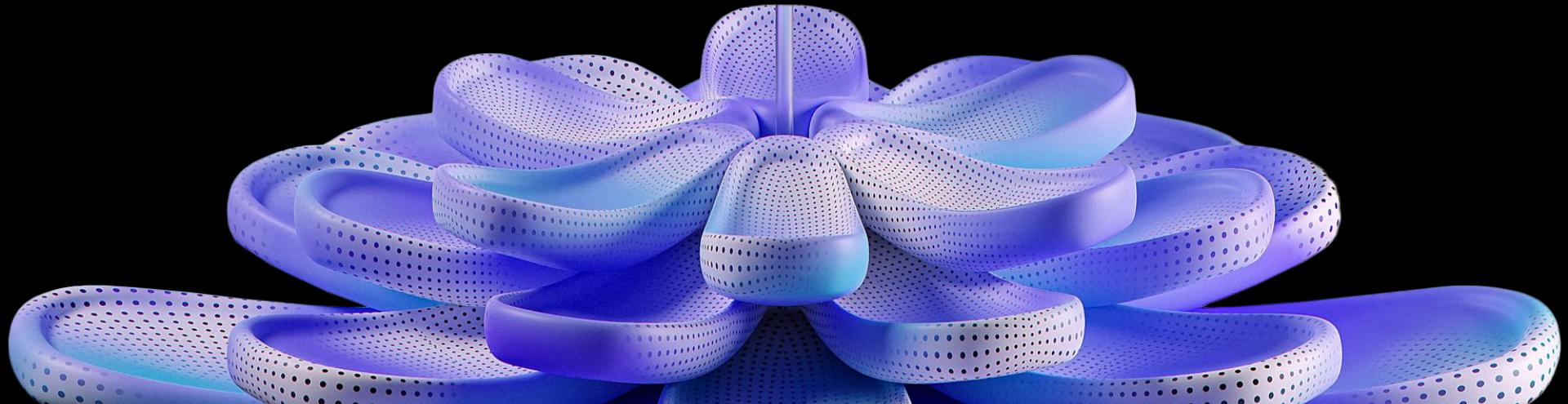
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Google



**The opportunity with
AI is as big as it gets.**





◆ Gemini 3

Bring any idea to life



In Today's Session

1. What is Vibe Coding?
2. Popular Google Tools
3. Demo Time
4. From Idea to a Prototype



What is Vibe coding?

The Evolution of AI Development

Code Generation

The "Assistant" model. Tools like Copilot that autocomplete syntax and write small functions.

- ▷ **Goal:** Speed up typing.
- ▷ **Scope:** Single lines or blocks.
- ▷ **Vibe:** "I'm driving, AI is the GPS."

Vibe Coding

The "Creator" model. Creating entire apps via natural language prompts and iteration.

- ▷ **Goal:** Immediate results.
- ▷ **Scope:** Full files or prototypes.
- ▷ **Vibe:** "Just make it work, I don't care how."

Have you ever had a great idea for an app but didn't know how to code?

What is Vibe Coding?

- AI-assisted development process.
- It's about describing your idea in plain English and letting AI be your coding partner.

Who coined this term?

Vibe coding is an artificial intelligence-assisted software development style popularized by Andrej Karpathy in early 2025

Andrej Karpathy (@karpathy)

There's a new kind of coding I call "vibe coding", where you fully give in to the vibes, embrace exponentials, and forget that the code even exists. It's possible because the LLMs (e.g. Cursor Composer w Sonnet) are getting too good. Also I just talk to Composer with SuperWhisper so I barely even touch the keyboard. I ask for the dumbest things like "decrease the padding on the sidebar by half" because I'm too lazy to find it. I "Accept All" always, I don't read the diffs anymore. When I get error messages I just copy paste them in with no comment, usually that fixes it. The code grows beyond my usual comprehension, I'd have to really read through it for a while. Sometimes the LLMs can't fix a bug so I just work around it or ask for random changes until it goes away. It's not too bad for throwaway weekend projects, but still quite amusing. I'm building a project or webapp, but it's not really coding - I just see stuff, say stuff, run stuff, and copy paste stuff, and it mostly works.

3:17 PM · Feb 2, 2025 · 4.9M Views

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Myth Busting

Myth: You need to be a programmer to build an app.

Reality: With tools like Gemini and AI Studio, you can create a functional prototype without writing a single line of code.

Myth: AI does everything, and you just watch.

Reality: Vibe coding is a partnership. Your role is to guide the AI, test the results, and provide feedback.

The case for Vibe Coding



Amazing way to get in tune with the pace of progress in AI

Every time I start a new project, I'm staggered by how good AI has become.



Fun, useful and addictive - the only limit is your patience

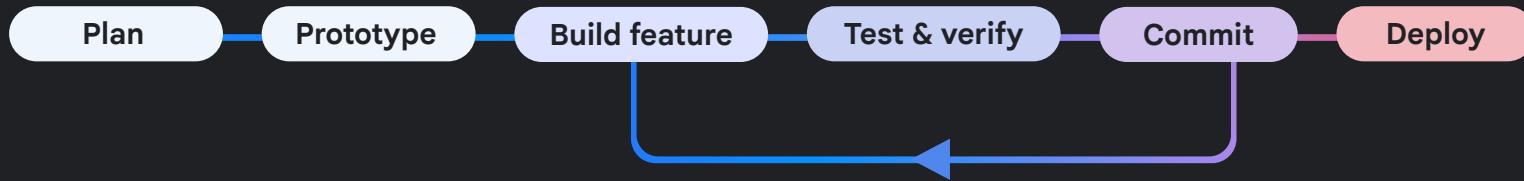
...and being able to finish one project before moving on to another.



Teaches you a new way to use your brain and see the world

This is also very useful in a work context.

How Vibe Coding Works



Plan out your idea

Check viability, plan features, understand end-to-end process

Choose your AI tool

Depends on required technical complexity and freedom, and on your skills and preferences

Build your features

By using natural language, testing features after each addition, and having lots of patience

Share your work

Options to export, share or deploy your work will vary by tool, as will the amount of work required

Some Popular Google Tools

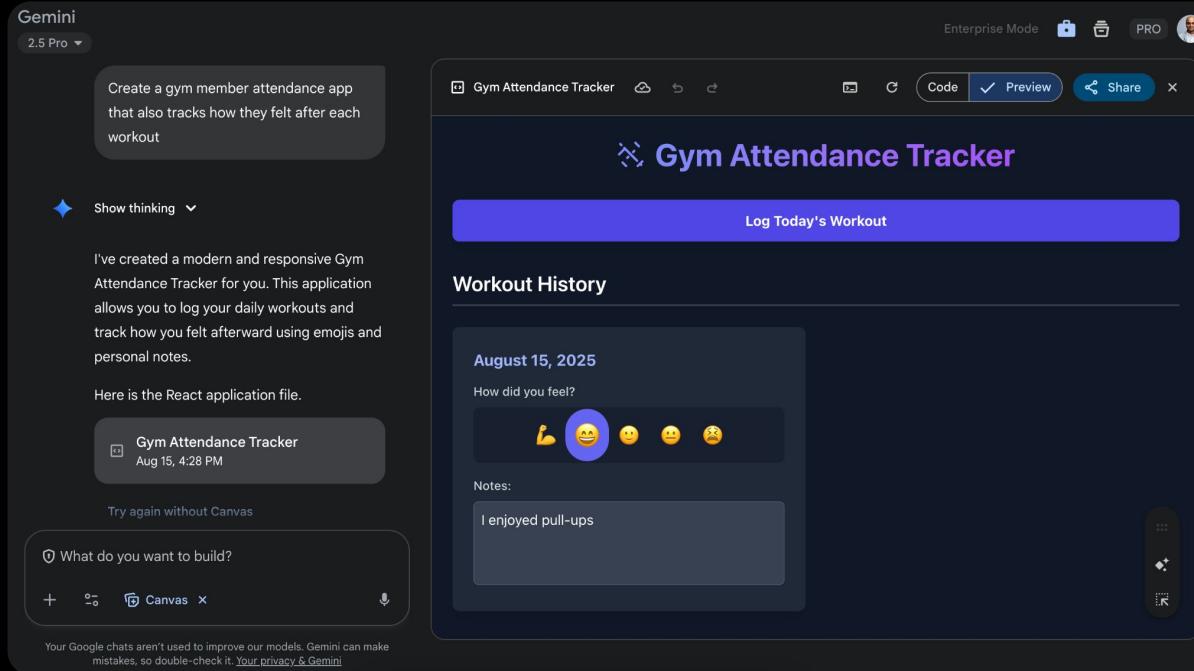
Google's suite of vibecoding tools

Shortlist, ranked from simple to more complex and powerful

Tool	First helps you develop a plan & list of features?	Run code from within the environment?	Supports more complicated code (eg multiple files)?	Integrates with 3P (data storage etc) services?	Share without deploying somewhere else?	Choose your own language?	Main reason to use this tool
 Gemini Web App (with Canvas)	If you ask	Yes ✓	No ✗	No ✗	Yes ✓	No ✗	Lives within familiar UI, fast
 "Build With Gemini" in AI Studio	No ✗	Yes ✓	Yes ✓	No ✗	Yes ✓	Yes (within a set list)	Best combination between easy and powerful
 Firebase Studio	Yes ✓	Yes ✓	Yes ✓	Yes ✓	Yes ✓	Yes (within a set list)	Planning: deploy to users without Google accounts; more advanced options
 Antigravity	Yes ✓	Runs code on your device	Yes ✓	Yes ✓	No ✗	Yes ✓	More independent than Gemini CLI, better planning, can test your code on its own with agentic browsing
 Gemini CLI	If you ask	Runs code on your device	Yes ✓	Yes ✓	No ✗	Yes ✓	SUPER powerful and flexible; execute all actions from one tool

Gemini Canvas

gemini.google.com

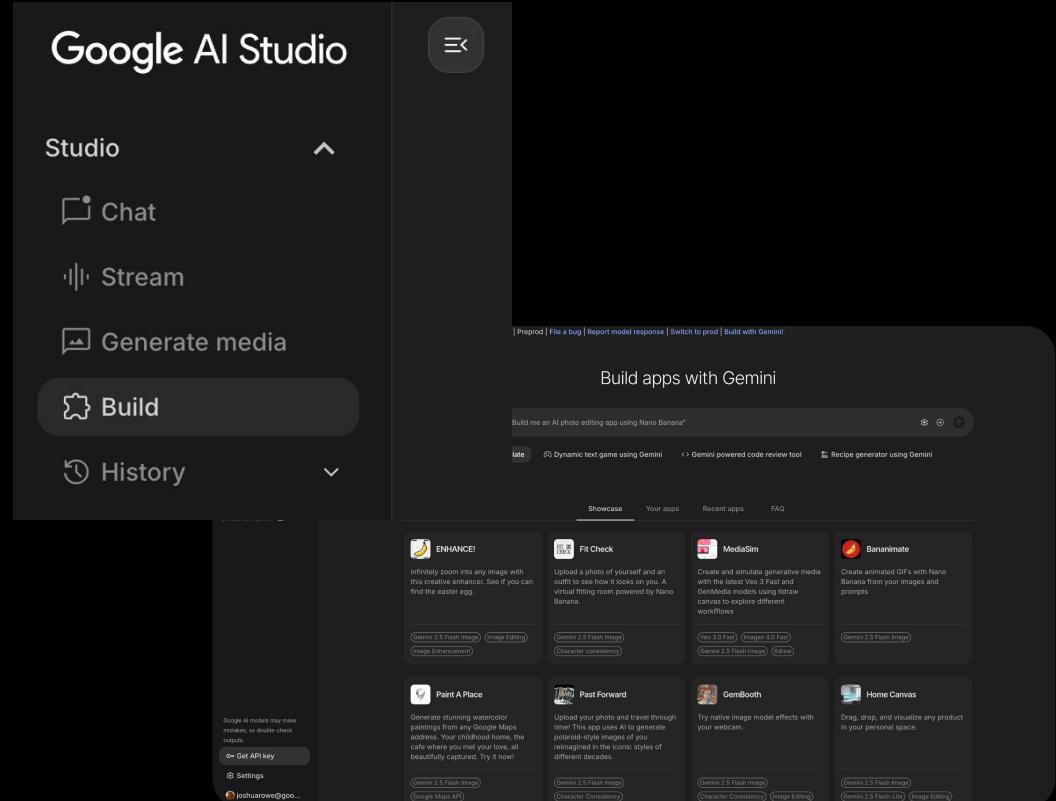


The image shows a screenshot of the Gemini Canvas interface. On the left, a dark-themed sidebar displays a summary of the 'Gym Attendance Tracker' project. It includes a description: 'Create a gym member attendance app that also tracks how they felt after each workout', a 'Show thinking' dropdown, and a detailed description of the application's purpose and a React application file. On the right, the main workspace shows the 'Gym Attendance Tracker' application. The application has a dark blue header with the title 'Gym Attendance Tracker' and a 'Log Today's Workout' button. Below this is a 'Workout History' section for 'August 15, 2025'. It shows a summary of the workout with emojis (strong, smiling, neutral, neutral, sad) and a note: 'I enjoyed pull-ups'. The workspace includes standard browser controls (refresh, back, forward) and a toolbar with 'Enterprise Mode', 'Code', 'Preview', 'Share', and a user profile icon.

AI Studio - Build

Hosted development environment with fully managed development environment and deployment

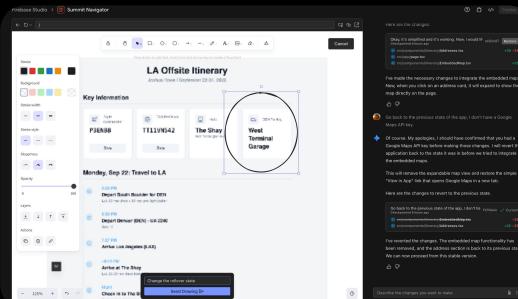
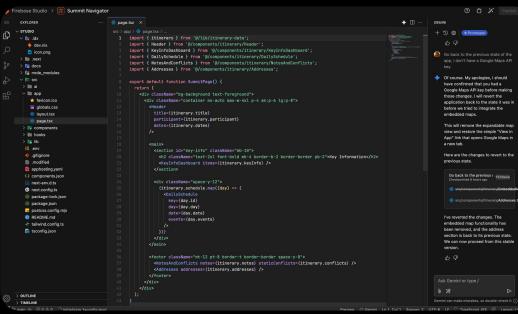
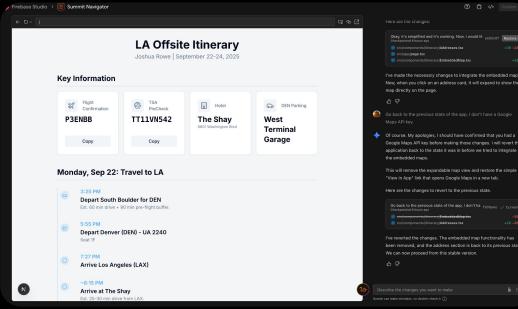
- Tight integration with Gemini API
- Full IDE
- Set your own system prompt
- Optimized for Angular or React



Firebase Studio

Hosted IDE with fully managed development environment and deployment

- Prototyper mode - agent + live preview
- Code mode - full IDE (VS Code)
- Visual annotation and editing tools



Gemini CLI

Gemini in your Terminal

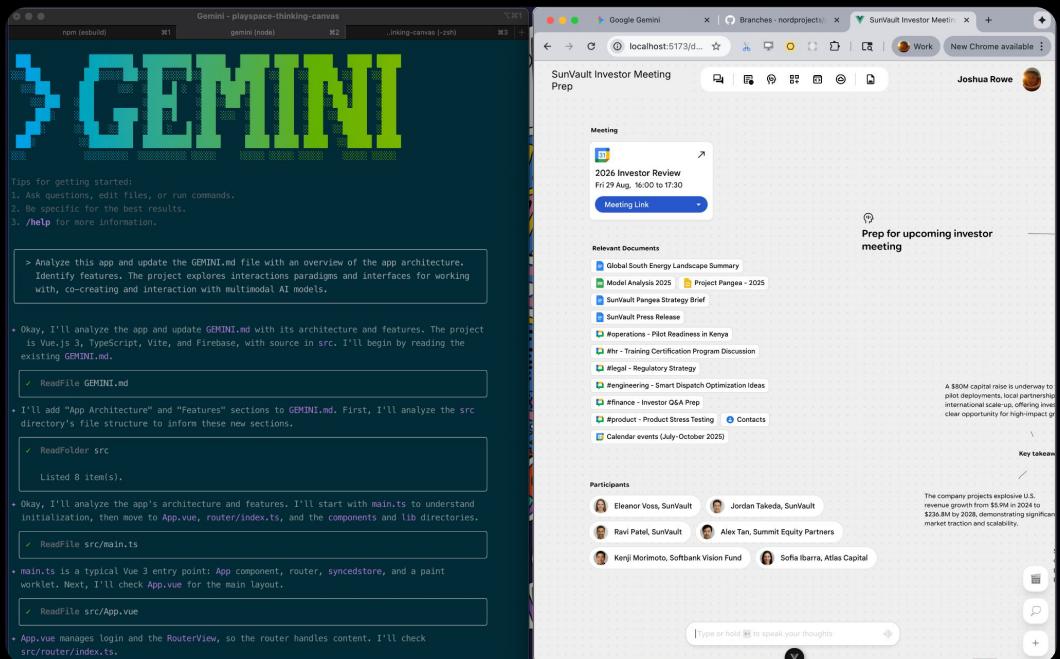
- Local file system access
- Execute all terminal commands
- Manage local development environment
- Natural language git* commands
- g * the golden rule “commit early and often” learn git!
- MCP servers

Install

```
npm install -g @google/gemini-cli
```

or, if you use brew:

```
brew install gemini-cli
```





Google Antigravity

Google Antigravity is an **agentic development platform** that empowers developers to act as architects, orchestrating autonomous agents that plan and execute complex tasks across the editor, terminal, and browser.

IDE & Code

High-level orchestration
in familiar interface

Terminal & Operations

Autonomous building,
testing, fixing

Browser & Preview

End-to-end execution &
verification

Gemini Native Foundation

Gemini 3 Pro Reasoning

Gemini 2.5 Computer Use

Demo Time

Register for the Geotab Hackathon



From Idea to Prototyping

Vibe Coding Context Collapse

Relying solely on AI's "feel" for complex projects creates fragile systems. As the "big-picture" context fades, projects suffer from architectural decay and mounting technical debt.

Why the Collapse Happens

- **Loss of System Context:** AI excels in isolation but fails to maintain system-wide coherence, leading to broken dependencies.
- **The "Slop" Feedback Loop:** Low-quality AI output pollutes future training data, causing model degradation.
- **Developer Skill Gap:** Over-reliance creates a generation unable to debug deeply or understand underlying logic.

The Evolution: Prompt Engineering → Context Engineering

Context Engineering

The art of providing the necessary context
for an agent to accomplish a specific task

- System prompt, user prompt, attachments, tools, etc.

- A system capable of autonomously performing a task.

From Visual Idea to a Working App

Start with your blueprint

Create Simple Mockups:

Use prompts like, "Create a simple UI layout for the app's home screen. It needs a logo at the top, a list of three items, and a navigation bar at the bottom." Gemini Canvas will generate a visual wireframe.

Define the User Journey:

Ideate with Gemini and creates a clear flow for you to follow.

The Output:

A clear, visual plan

Build using AI Studio

Craft the Core Logic:

For example, if you're building a "Guide to AI," you'd use AI Studio to create and test the prompt that powers your jargon buster.

Get Your API Key:

This key is like a password that lets your final app use Gemini API.

Deploy using Firebase Studio or Vertex AI

Deploy and Share:

With a single click, Firebase Studio builds the app and hosts it on a shareable URL. (You can use this link to submit for the hackathon)

For Prod grade deployments, you can use use Vertex AI too.

**"Don't be a code monkey. Be the Architect.
Let Antigravity be the contractor."**

— The Future of Software

Thank you

