



TOKENIZER

Surfing the AI wave on the Sunshine Coast

Full Court Press

Cohort	Program Activities
Hub Members	Weekly AI workshops, talks, builder sessions, show & tell, 1:1 mentoring support
AI Startups	Peer founder support, regular founder events, and best practice sharing via AI founder network
Digital Marketers	Workshops & talks for upskilling via Reboot Noosa meetup group
Digital Creatives	AI Residencies, workshops & talks for upskilling via Sunshine Coast Screen Collective meetups
Technologists	AI Residencies, Hackathons, Workshops & talks for upskilling via Coding from Beach network
Non Exec Directors	AI Workshops via the Hub's Investor network
Teenagers	AI Cadetship program for grade 9-11 students in term 3
Kids	Inventing and building with AI via weekly Hub Inventors Club for kids aged 10-15
SME Leaders	Workshops, 1:1 mentoring & Proof of concept development support, for SME leaders,
Knowledge Professionals	Workshops & talks for AI upskilling
Local government	AI upskilling workshops for key Council employees
Noosa Community	AI workshops, helpdesk support & classes via Digital Leaders program at Noosaville & Cooroy Libraries

Hub
Members

AI
Upskilling

AI Startup
Mentoring

Build
embodied AI

Learn to
Build

Workshops
Talks
Residencies
Hackathons

Get started with Agents



tinyurl.com/hubfeb25



PEREJIAN
DIGITAL
HUB

Week 1

Agents Part 1

Tell you about Tokenizer program

Share some big ideas for the year

Deep dive into agents

Hands on with a new tool

Upcoming

Week 2: Agents Part 2

- vibe coding your own tools
- connecting other systems

Week 3: AI Startup Showcase - Andrew Birt (Uprise)

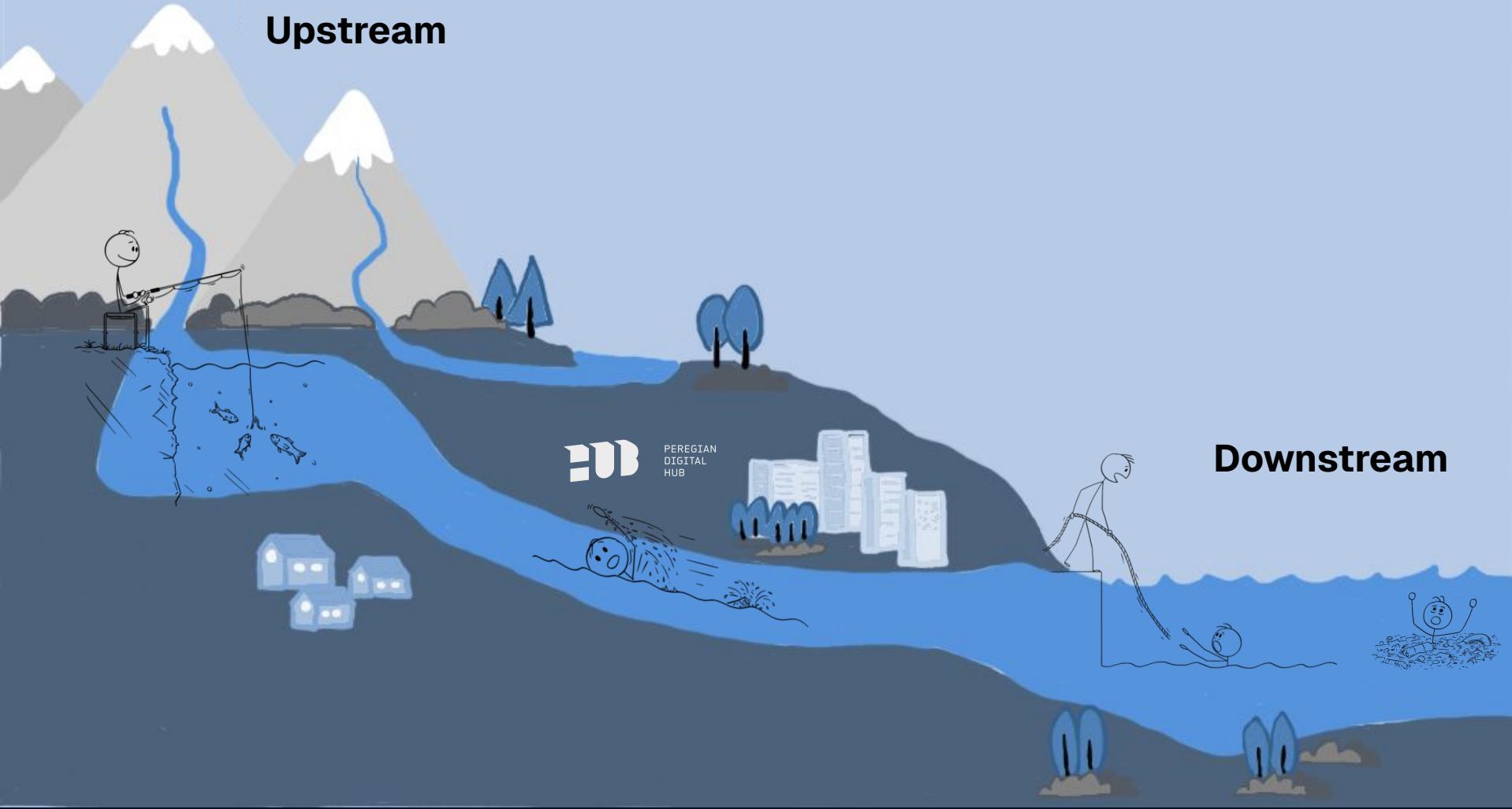
Week 4: Agent buildathon

Week 5: Agent show & tell

PART ONE

7 Ideas to Ponder in 2025

Upstream



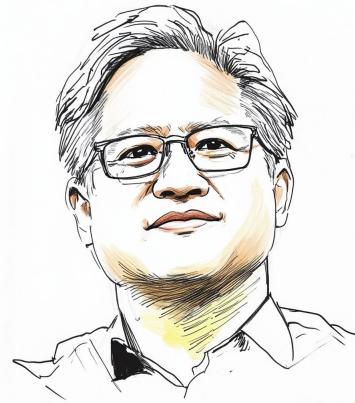
Downstream

Swim upstream to find the sense-makers



Satya Nadella
CEO Microsoft

[Dwarkesh Podcast](#)
[BG2 Podcast](#)



Jensen Huang
CEO Nvidia

[No Priors Podcast](#)
[BG2 Podcast](#)



Bret Taylor
CEO Sierra, Chairman OpenAI

[Invest Like the Best](#)
[No Priors Podcast](#)



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“AI simultaneously lowers the floor and raises the ceiling”

- **Satya Nadella**

Experts can push beyond what's currently achievable. They can tackle more ambitious projects and pursue more complex goals

“AI simultaneously lowers the floor and raises the ceiling”

AI reduces the barrier to entry for many fields. People with less experience or expertise can now accomplish more, thanks to AI tools.

“AI simultaneously lowers the floor and raises the ceiling”

What could you build that packages expert-level solutions into user-friendly tools, empowering anyone to achieve professional outcomes?

Recursive self-improvement

When a system enhances its own capabilities, and crucially, improves its own ability to improve itself in subsequent iterations, leading to an accelerating and *self-amplifying cycle of progress*.

The system's improvement mechanism *itself* becomes more efficient or sophisticated with each iteration, leading to exponential growth in abilities.

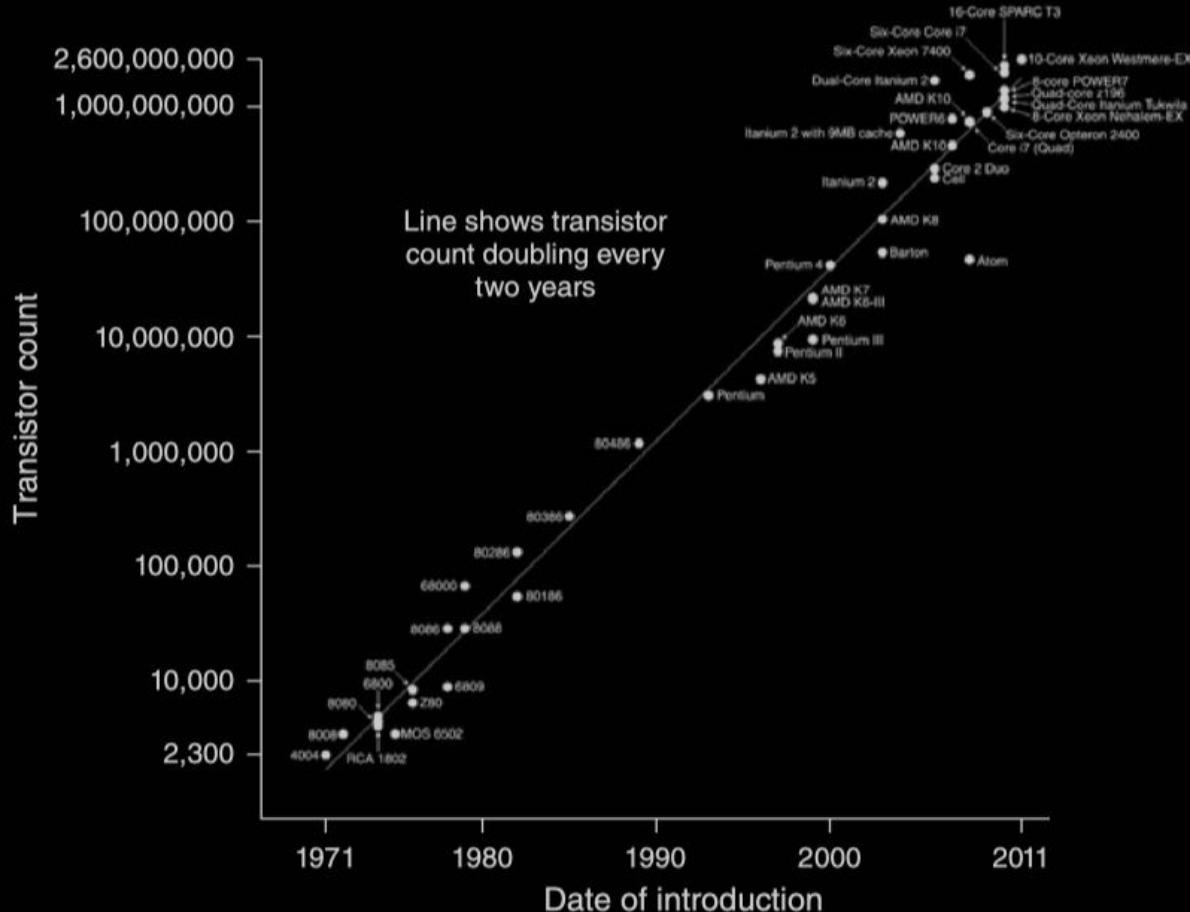
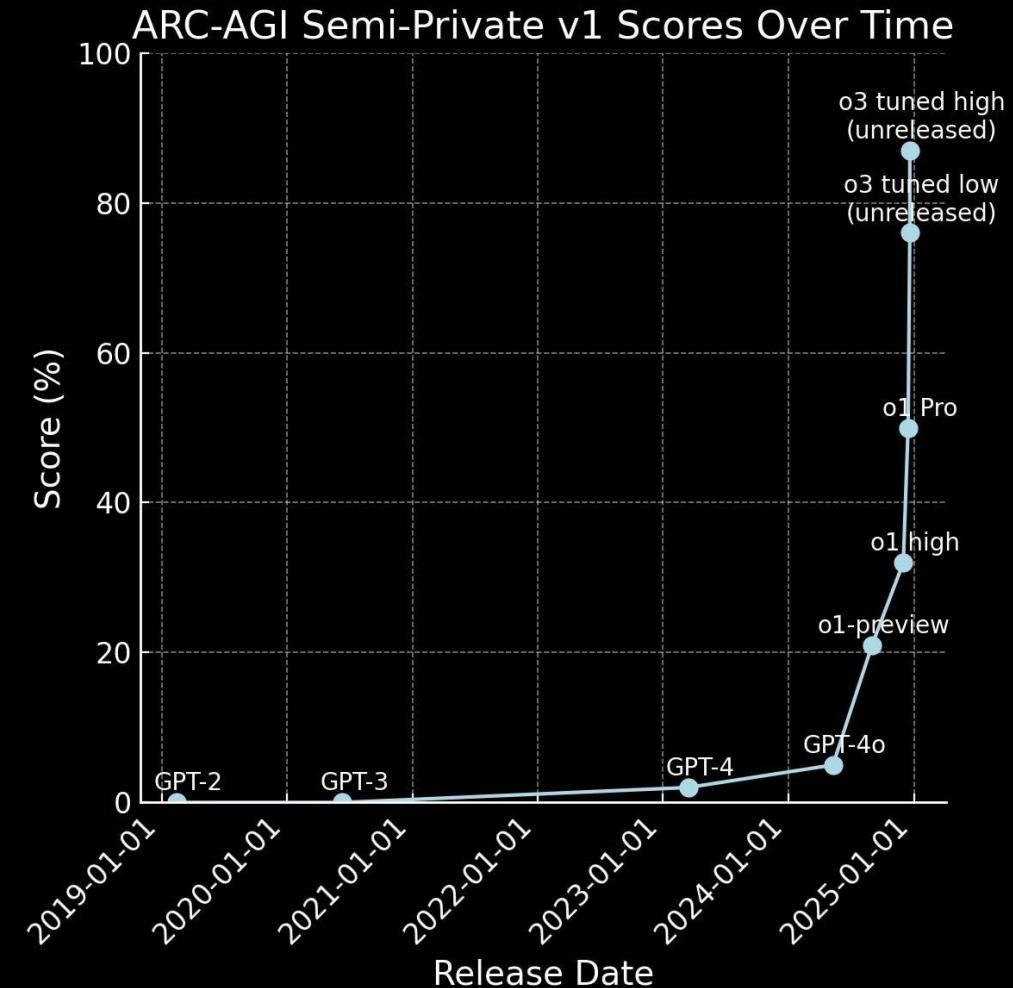


FIGURE 3. THE STEADY EXPONENTIAL GROWTH OF MOORE'S LAW



When a system enhances its own capabilities, and crucially, improves its own ability to improve itself in subsequent iterations, leading to an accelerating and *self-amplifying cycle of progress*.

The system's improvement mechanism *itself* becomes more efficient or sophisticated with each iteration, leading to exponential growth in abilities.

What could you build that packages expert-level solutions into user-friendly tools, empowering anyone to achieve professional outcomes?

The 10x Developer

Accountant
Lawyer
Broker
Creative
The 10x Developer
Admin
Designer
Project Manager
CEO/MD

Accountant
Lawyer
Broker
Creative
The 10x Developer
Admin
Designer
Project Manager
CEO/MD

*What 1x job category
could you make a 10x
with AI?*



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Brian Halligan ✅

@bhalligan

2004: Software as a Service

2024: Service as a Software

h/t - everyone

12:05 AM · Apr 20, 2024 · 73.1K Views



Read it asap

Generative AI's Act o1



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Service-as-a-Software

The cloud transition was software-as-a-service. Software companies became cloud service providers. This was a \$350B opportunity.

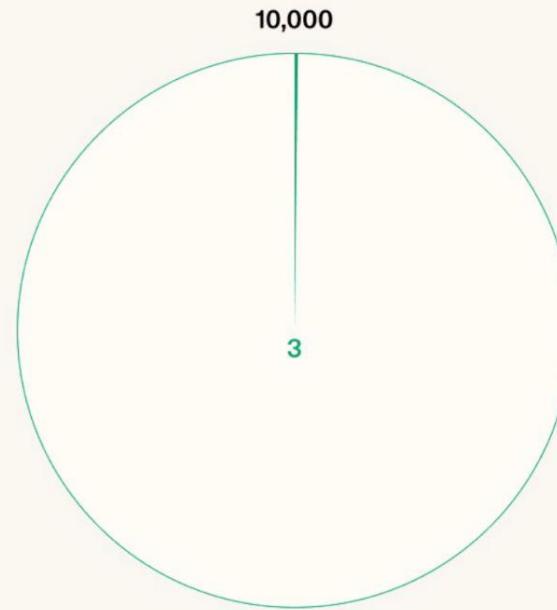
Thanks to agentic reasoning, the AI transition is service-as-a-software. Software companies turn labor into software. That means the addressable market is not the software market, but the services market measured in the *trillions* of dollars.

SEQUOIA



2010
\$350B Software Market
\$6B Cloud Software Market

2024
\$650B Software Market
\$400B Cloud Software Market



2024
\$10T+ Software and Services Market
\$3B AI Software Market



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HUB

Service-as-a-Software

- Cloud companies targeted the software profit pool. AI companies target the services profit pool.
- Cloud companies sold software (\$ / seat). AI companies sell work (\$ / outcome)
- Cloud companies liked to go bottoms-up, with frictionless distribution. AI companies are increasingly going top-down, with high-touch, high-trust delivery models.

Service-as-a-Software

The cloud transition was software-as-a-service. Software companies became cloud service providers. This was a \$350B opportunity.

Thanks to agentic reasoning, the AI transition is service-as-a-software.

Software companies turn labor into software. That means the addressable market is not the software market, but the services market measured in the *trillions* of dollars.

→ *What labour-intensive services could you turn into software?*



Bojan Tunguz 

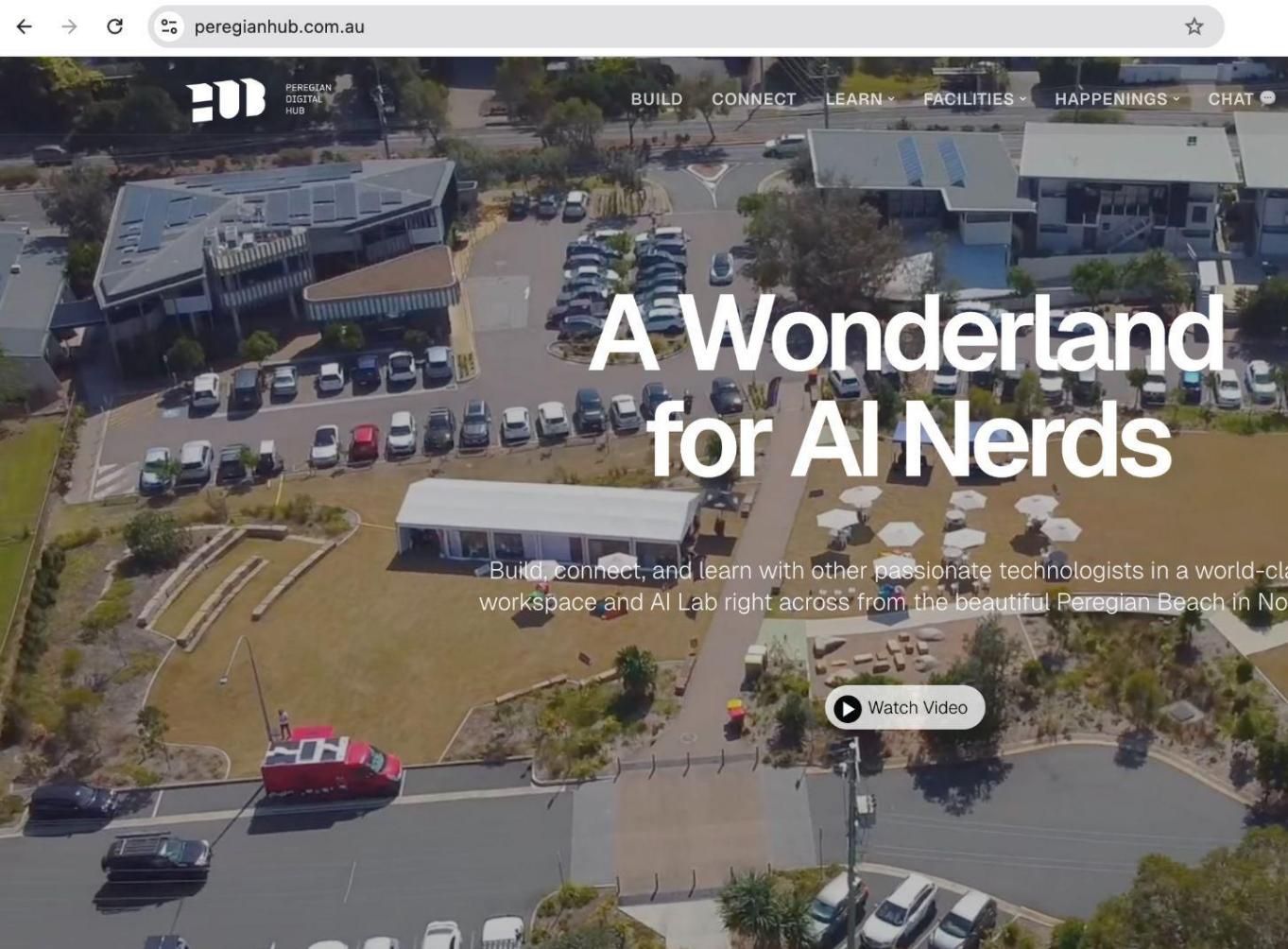
@tunguz

"You don't learn, then start. You start, then learn." - [@shl](#)

3:57 AM · Feb 21, 2025 · **60.9K** Views

PART TWO

A change to how we work



Peregian Digital Hub

BUILD CONNECT LEARN FACILITIES HAPPENINGS CHAT ...

A Wonderland for AI Nerds

Build, connect, and learn with other passionate technologists in a world-class workspace and AI Lab right across from the beautiful Peregian Beach in Noosa.

Watch Video

Hi, I'm HubGPT, how can I help?

what's the process for joining the hub?

Joining the Peregian Digital Hub is a great opportunity if you're building a technology business. We have a limited number of full-time and part-time memberships available. Our focus is on supporting tech startups and creating great products. To find out more about membership, including eligibility and the culture at the Hub, you can visit our [membership page](#).

Would you like more information on the culture at the Hub or pricing details?

Ask our experimental Hub helper a question

powered by ChatBotKit

Re: Conversation with Jossandro

From: ChatBotKit <noreply@em2086.notifications.chatbotkit.com>
Sent: Monday, 11 November 2024 9:50 PM
To: Chris Boden <chris.boden@noosa.qld.gov.au>
Subject: Conversation with J [REDACTED]

CAUTION: This email originated outside of Council. **Do not** open links or attachments if the email is unexpected or unusual.

J [REDACTED] is starting a company to build automated solutions using robotic arms and software. He is interested in becoming a member of the Peregian Digital Hub. He provided his contact details for further communication. He also inquired about the membership pricing, which was not available on the website.

[REDACTED] o: How can I become a member?

bot: To become a member at the Peregian Digital Hub, you'll want to check out our membership options and criteria. We focus on providing an ideal working environment for people building technology companies. You can find more detailed information about memberships on the [Build page](#).

Could you tell me a bit about what you do, so I can help you better understand if the Hub might be a good fit for your tech business?

[REDACTED] o: I'm starting a company to build automated solutions for different industries using robotic arms and other hardware and home made software solutions

bot: That sounds like an exciting venture! Our Hub is all about supporting tech founders and startups, especially those working on innovative solutions like yours. While I can't make the decision, your focus on building automated solutions and software aligns well with the types of businesses we support.

If you're interested in pursuing membership, could you please provide your name, email address, and LinkedIn profile? This will help us get in touch and provide more tailored information. Here's a form you can fill out:

[REDACTED] o: fullname: Jossandro Balardin email: j [REDACTED] om.au url: [https://www.linkedin.com/in/j \[REDACTED\]](https://www.linkedin.com/in/j [REDACTED])

bot: Thank you, Jossandro! I've got your details:

- Name: J [REDACTED]
- Email: j [REDACTED] com.au
- LinkedIn: [https://www.linkedin.com/in/j \[REDACTED\]](https://www.linkedin.com/in/j [REDACTED])

Our team will review your information and get in touch with you soon. If you have any more questions or need further assistance, feel free to ask. You can also reach out to us at team@peregianhub.com.au. Good luck with your robotic solutions venture!



HubGPT <no-reply.hs6c36@zapiermail.com>

To: Ⓜ Chris Boden

Cc:



Thu 2024-09-05 11:19 AM

Hi Team,

Great news, you have a new membership application from [REDACTED] who works for [REDACTED]

They have applied for a Flex (Part time) membership and looking for a start date of Yes.

I've assessed their application.

Application Summary:

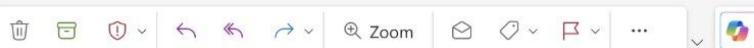
The applicant, [REDACTED] is the founder of [REDACTED] a company that develops cybersecurity and AI solutions, including a software-as-a-service platform. The company is in its early stage, having launched but not yet gaining traction. [REDACTED] plans on doubling the size of his team from three to six employees. He also demonstrates a high-level experience in various aspects of the tech field including software and database development, data analysis, administration, business analysis, project management, and change management. Moreover, he expresses a willingness to support and mentor others by sharing his vast experience and expertise in incorporating security-by-design in their products and offerings. He has also shown willingness to host work experience students providing a unique and valuable opportunity for younger tech enthusiasts.

Industry Fit:

[REDACTED]'s company, [REDACTED], aligns perfectly with the high potential tech business criterion, as it is a tech company in the emerging and essential fields of cybersecurity and AI. His plans for growth indicate an ambition to expand and contribute more significantly to employment within the tech industry. Based on the application data provided, [REDACTED] represents an excellent industry fit for the Peregian Digital Hub.

Cultural Fit:

[REDACTED]'s application demonstrates strong cultural fit through his willingness to add value by sharing his broad experience and mentoring others. His commitment to teaching other members about the software and data lifecycles emphasizes his potential contribution to the community. His willingness to host work experience students not only reinforces his mentoring capabilities but also expresses an effort to give back to the



Re: Getting started at the Hub

From: Chris Boden <chris.boden@noosa.qld.gov.au>

Sent: 24 February 2025 13:20

To: t [REDACTED]

Cc: Deidre Marczynski <[REDACTED]>

Subject: Getting started at the Hub

Hi [REDACTED]

Welcome to the Hub. Let's get you started.

The guide to harmonious life at the Hub

Respect: Treat the Hub with the same respect you would your own home. We're able to work here because ratepayer's and taxpayer's funds, including yours, were used to build these facilities and keep them running.

Community: Take the time to meet your Hub colleagues - not only are there a bunch of world class talents here, they're bloody nice people too. Join in our social activities - come to Friday lunches. The collaborations, friendships, encouragement and supportive banter are why this a great place to work.

Shared Facilities: The Hub's facilities are shared; treat them well. Cleaning up after yourself means we don't have to get cleaners in daily and hike up the membership costs to cover that.

Bathroom Etiquette: Please maintain cleanliness in the bathrooms and remember they are unisex. Leave the seat down, the toilet bowl clean, and help replenish supplies when needed.

Kitchen Cleanliness: Clean up immediately after using the kitchen. Please wash your dishes and cups/glasses, wipe surfaces of any spills, and pleeeease don't leave any food scraps in the sink.

Meeting Rooms: Please use a meeting room or a breakout space if you need hop on a video call have a phone conversation that could disturb those around you. Use meeting rooms fairly without monopolising them. Leave the room neat, wipe the whiteboards, and clean up after your guests. If maintenance is needed, notify the Hub team.

Next steps

Katrina will program a fob for you and show you how to get in/out, lights, fire exit,

 Get API key Create Prompt Stream Realtime Starter Apps Tune a Model Library Hub Grant Helper Age... CB Grant Helper - RDA AI Career Accelerator ... Prompt Gallery API documentation Developer forum Changelog 

This experimental model is for feedback and testing only. No production use.

 Settings System Instructions

Below is comprehensive information about my role as Director of the Peregian Digital Hub. My role has been to establish the Hub as a successful innovation environment which not only helps the member companies (mostly tech startups) that are based there, but acts as a hub for the tech/digital sector in the Noosa and Sunshine Coast region.

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{
  "positionDetails": {
    "title": "Director Digital Hub and Innovation",
    "number": 10595,
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    "directReports": "Up to 3 depending on operational requirements",
    "budgetExpenditure": "In line with approved delegations",
    "classification": "Contract",
    "dateReviewed": "21 November 2022"
  },
  "positionPurposeAndObjectives": {
    "purpose": "To lead and manage all aspects of the Peregian Digital Hub operations as a commercially sustainable co-work facility that delivers public service outcomes and develops a thriving digital ecosystem for the Noosa Shire.",
    "objectives": [
      "Provide thought leadership, expertise, and advice to the Executive Team and digital innovation colleagues to advance and guide Council's innovation activities and digital transformation.",
      "Success in this role will be defined by a professional, strategic, innovative, inclusive, and outcome-focused approach to business management, measured by the quality and quantity of participating clients, programs, and investment generated in the digital and technology sector."
    ]
  },
  "keyResponsibilities": [
    "Manage and deliver on the objectives of the Peregian Digital Hub strategic plan and Council's Local Economic Plan to accelerate digital and technology transformation and diversification of the local economy.",
    "Develop, curate, and deliver strategic projects, programs, events, and activities, including preparing business cases and project plans,
  
```

 Run settings Get code Model

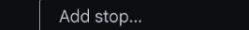
Gemini 2.0 Flash
Thinking Experimental
01-21

 Token count

337,875 / 1,048,576

 Temperature

0.7

 Tools Code execution Advanced settings Safety settings Edit safety settings Add stop sequence Add stop... Output length

Type something





Knowledge
Worker
YOU



Knowledge
Work



Knowledge
Worker
YOU



Knowledge
Work





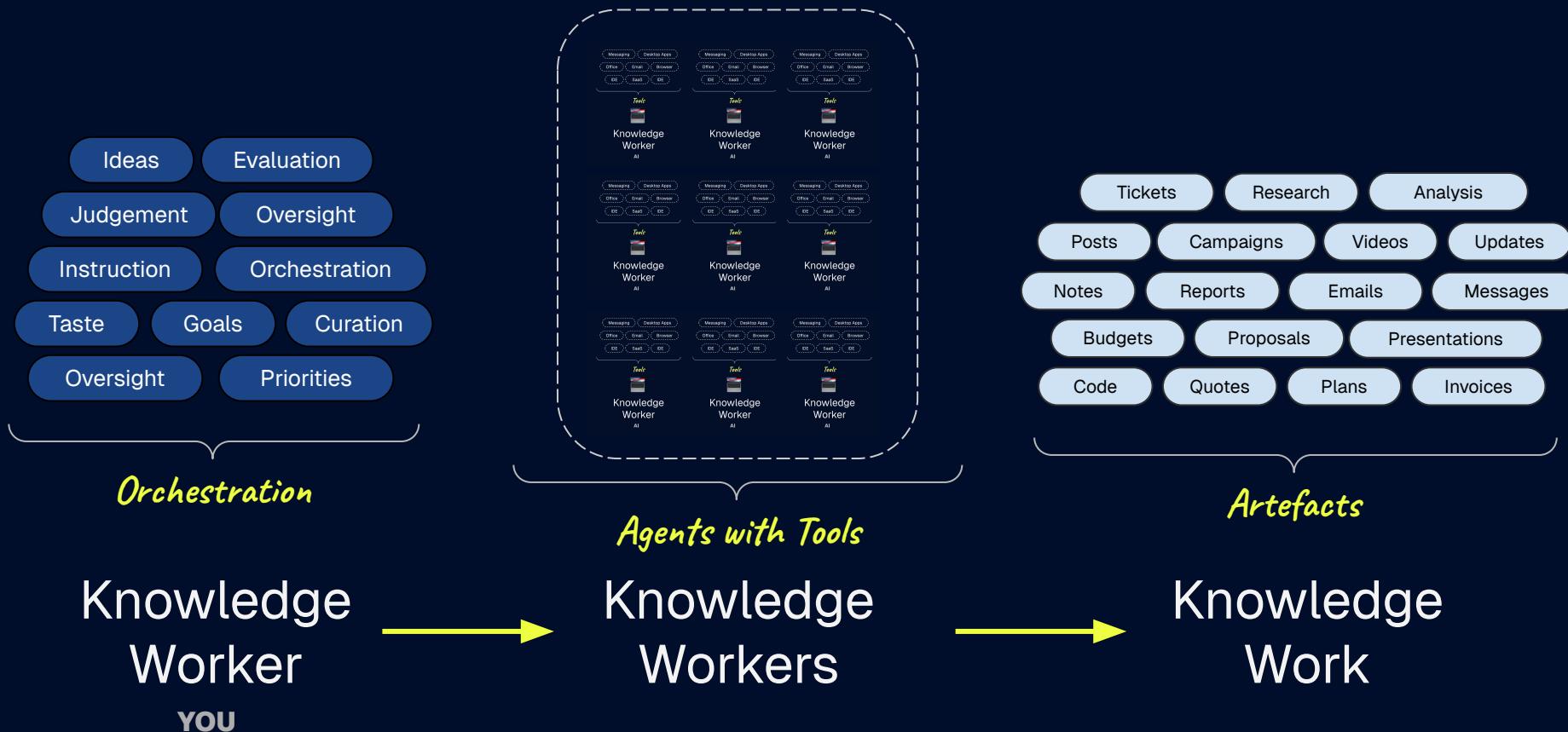
Knowledge
Worker

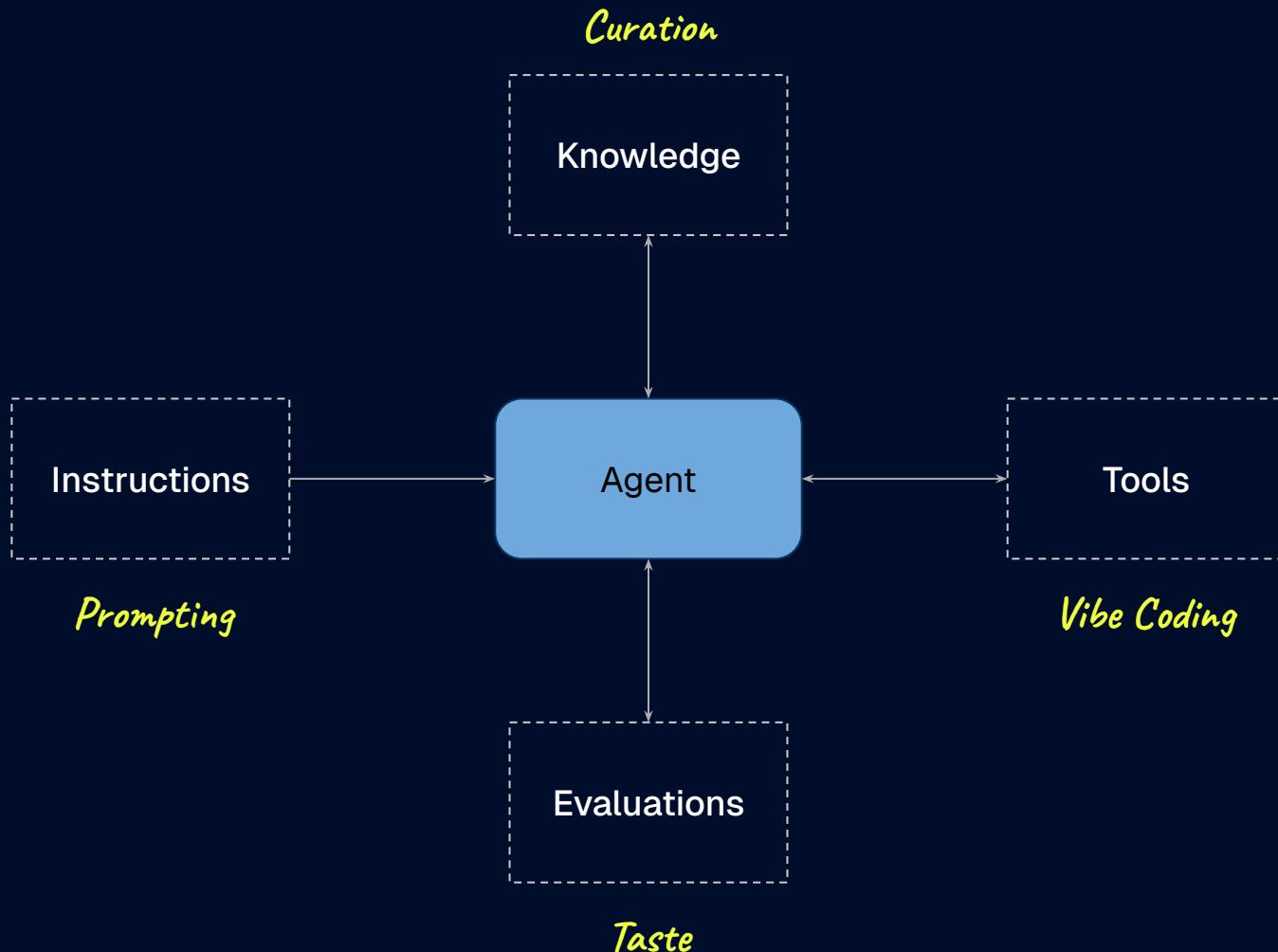
YOU



Knowledge
Work

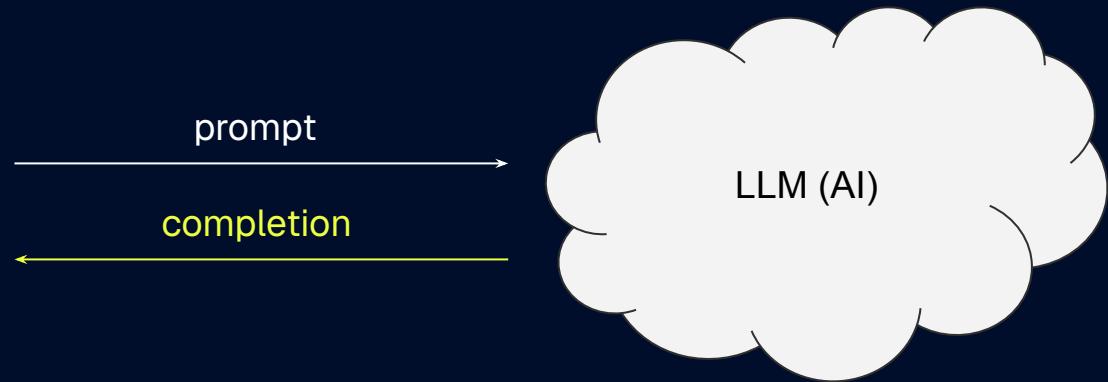






PART THREE

How do Agents actually work?



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{  
  "model": "gpt-4o",  
  "messages": [  
    {  
      "role": "system",  
      "content": "You are a helpful assistant."  
    },  
    {  
      "role": "user",  
      "content": "What is the capital of Australia"  
    },  
    {  
      "role": "assistant",  
      "content": "Canberra"  
    }  
  ]  
}
```

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{  
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    "object": "chat.completion",  
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    "choices": [  
        {  
            "index": 0,  
            "message": {  
                "role": "assistant",  
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            },  
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}
```

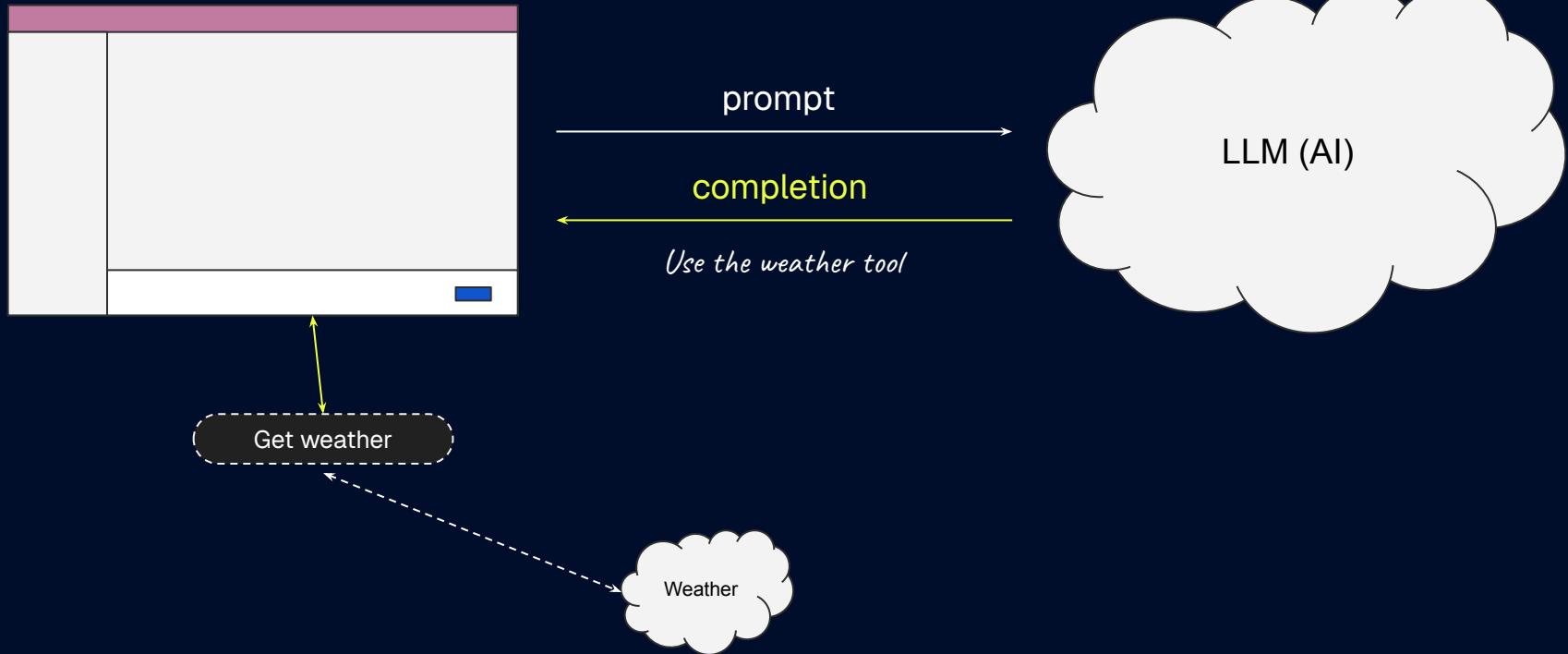
Basic Chatbot

Chatbot with tools

Autonomous Agent

```
{  
    "model": "gpt-4o",  
    "messages": [  
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            "content": "You are a helpful assistant"  
        },  
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            "content": "What's the weather like in Sydney today?"  
        }  
    ],  
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                            "type": "string",  
                            "description": "The name of the city or region to fetch the weather for."  
                        }  
                    },  
                    "required": ["location"]  
                }  
            }  
        }  
    ],  
    "tool_choice": "auto"  
}
```

```
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            "message": {  
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                "content": null,  
                "tool_calls": [  
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                        "id": "toolcall-789",  
                        "type": "function",  
                        "function": {  
                            "name": "get_weather",  
                            "arguments": {  
                                "location": "Sydney"  
                            }  
                        }  
                    }  
                ]  
            },  
            "finish_reason": "tool_calls"  
        }  
    ]  
}
```

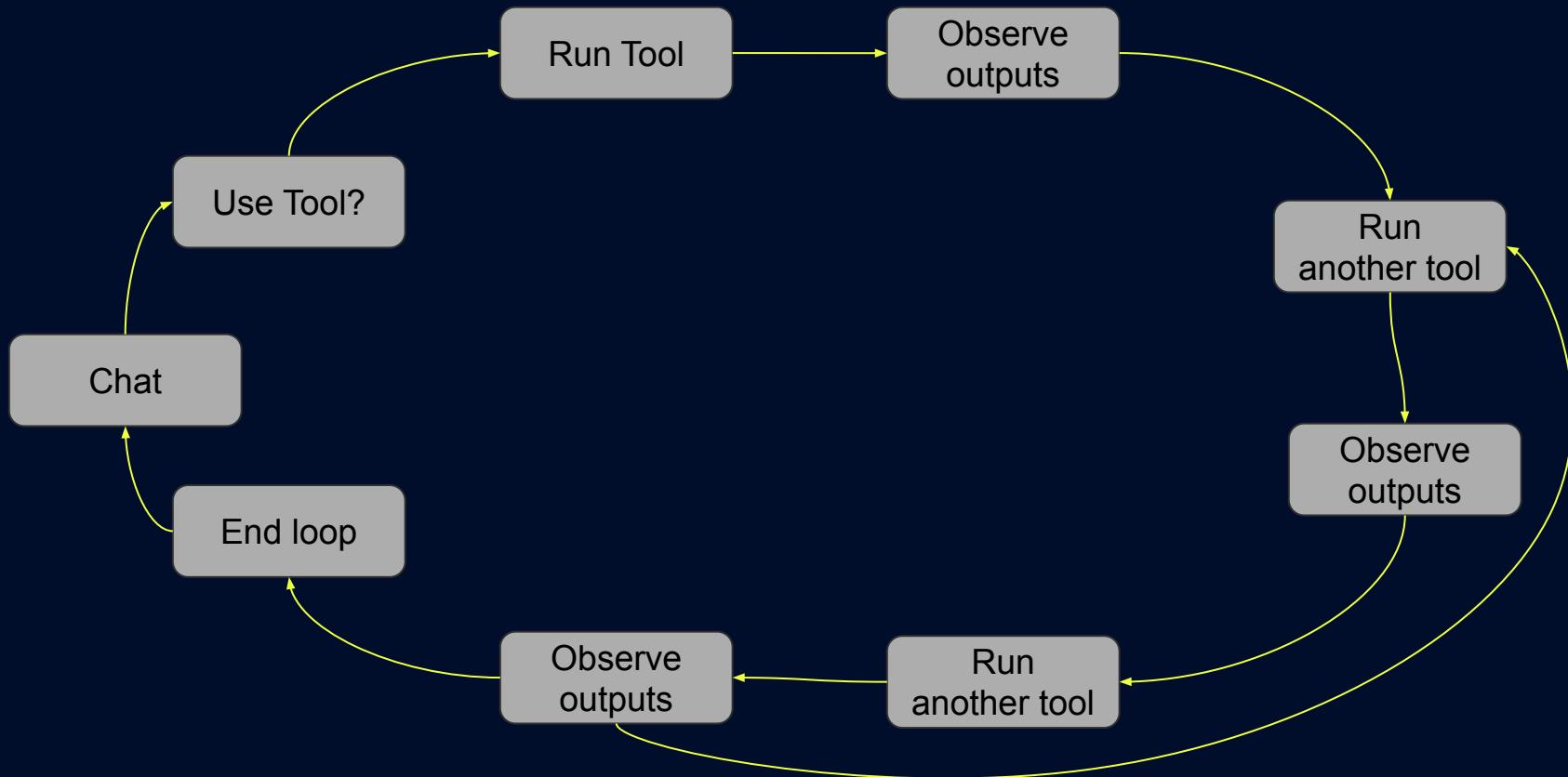


Basic Chatbot

Chatbot with a tool

Autonomous Agent

AI Agent Loop



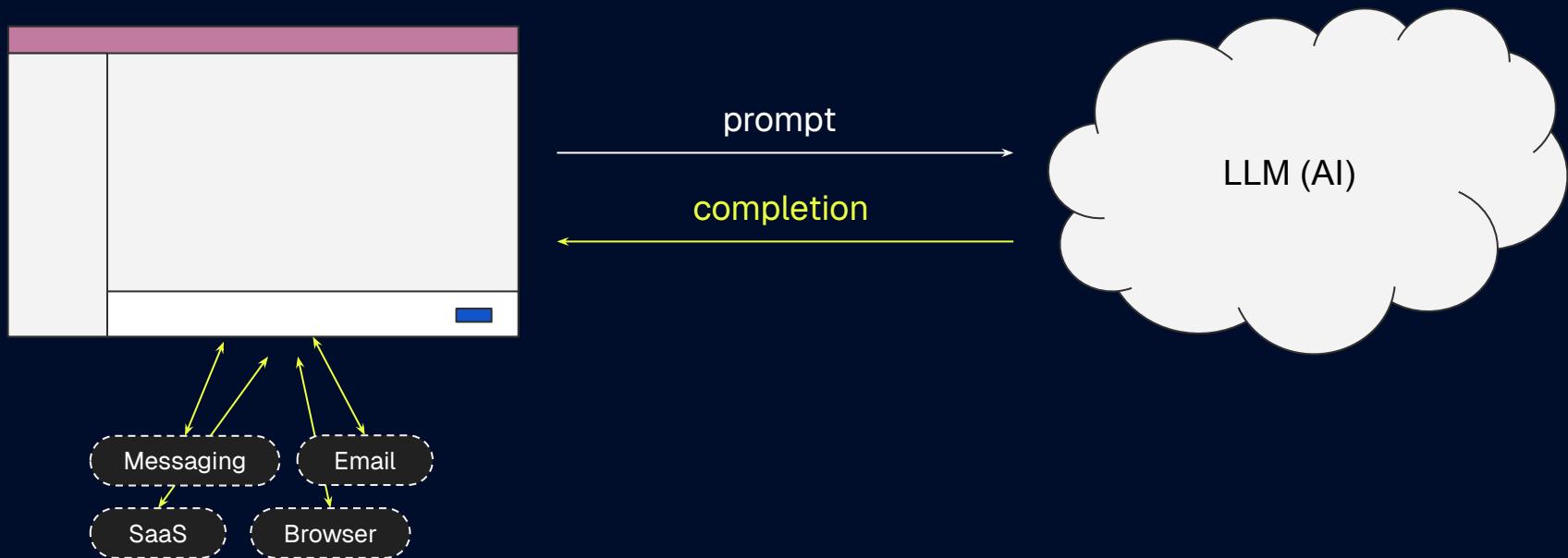
Basic Chatbot

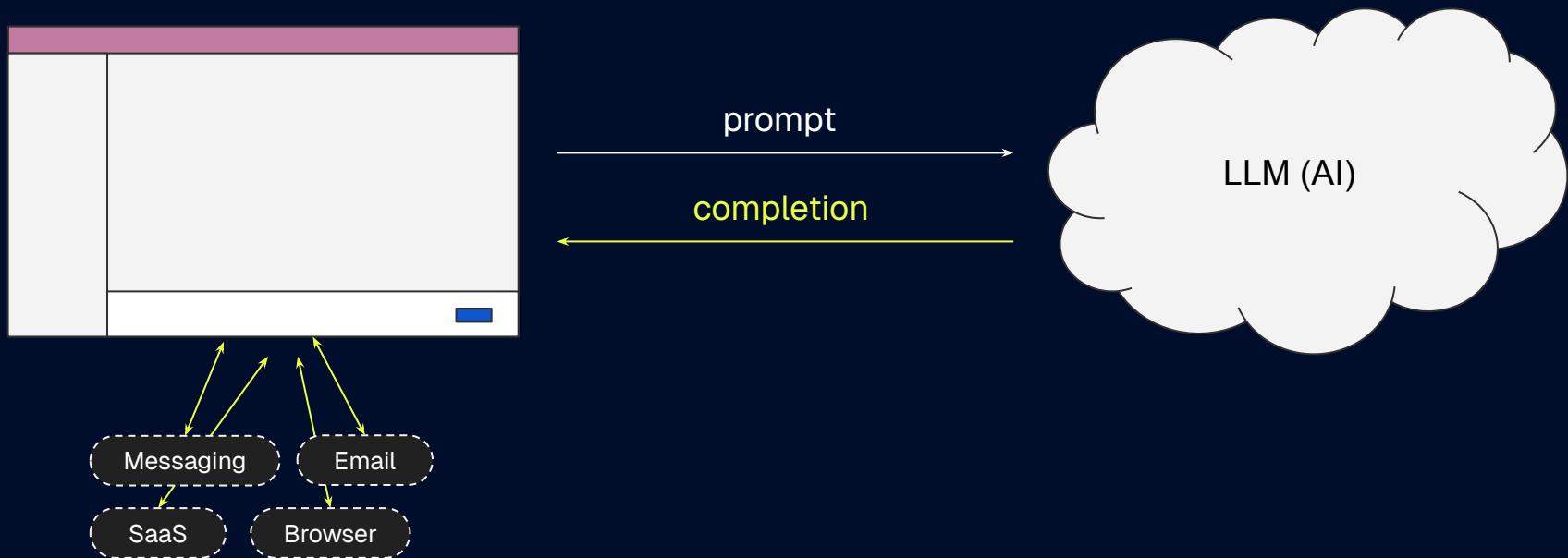
Chatbot with a tool

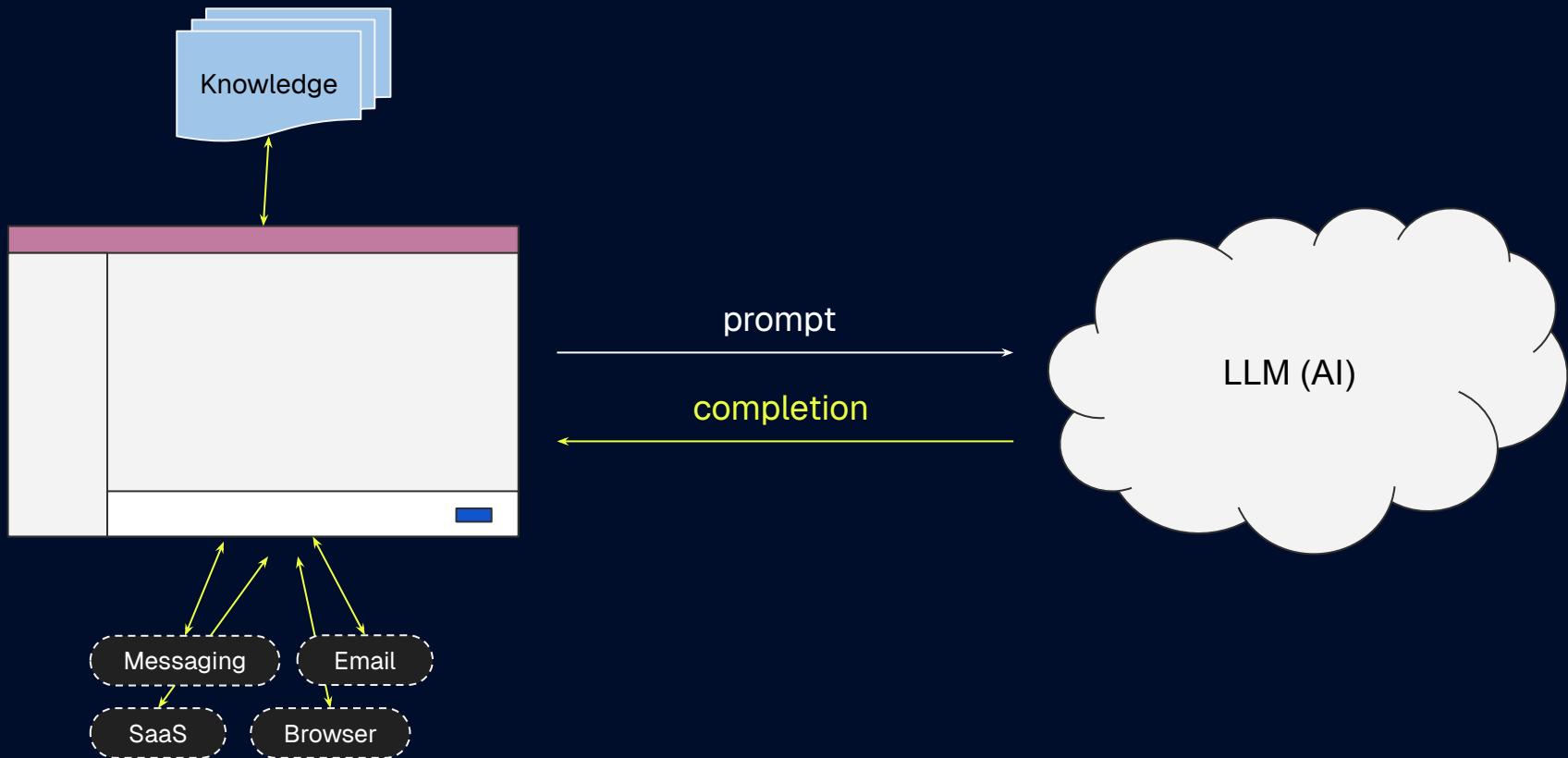
Autonomous Agent

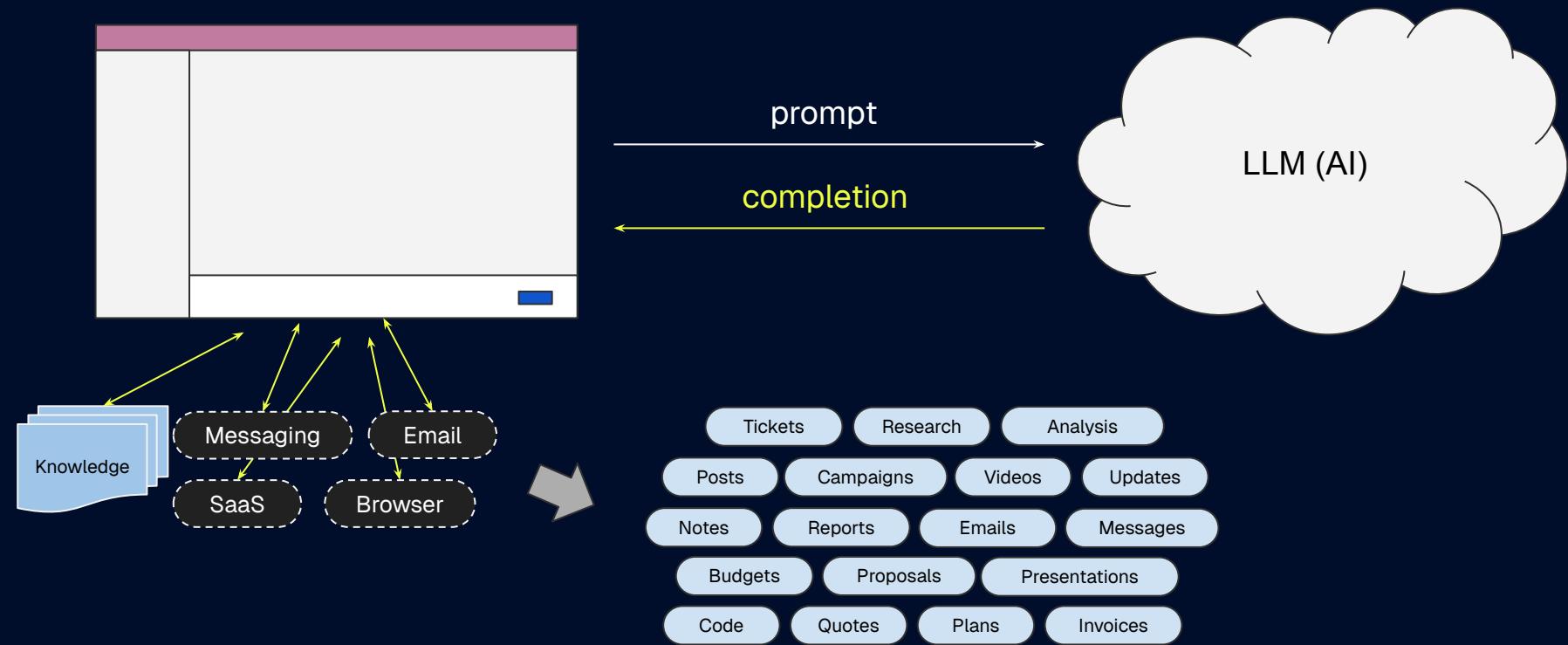
Enable yolo mode

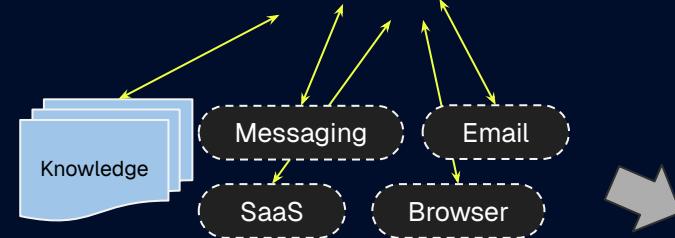
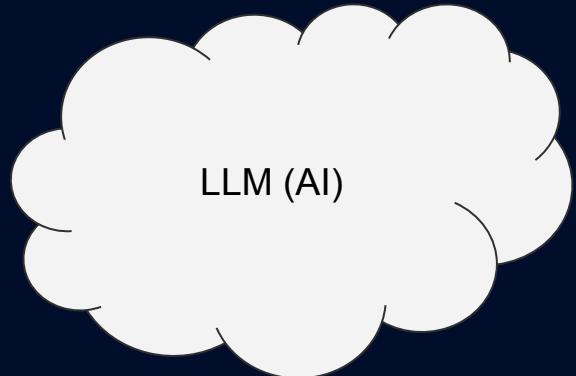
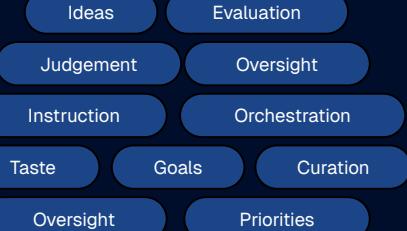
Accept all ✅ ↵





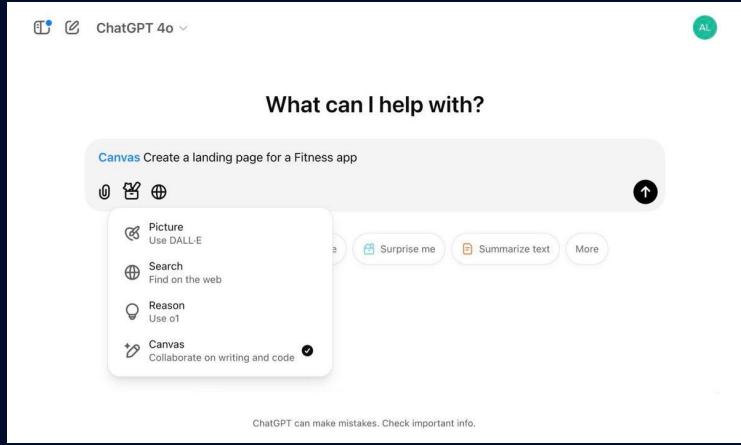




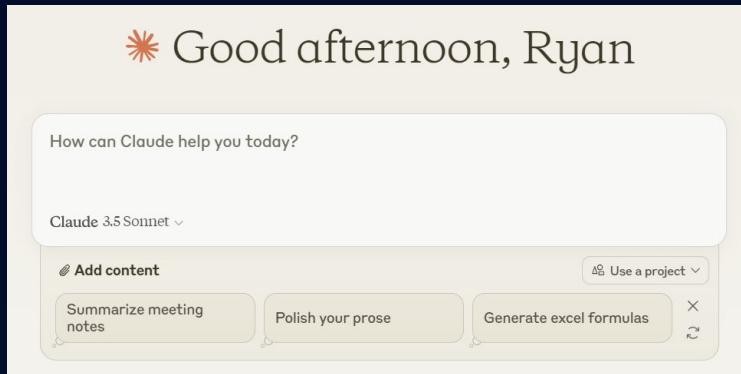


PART FOUR

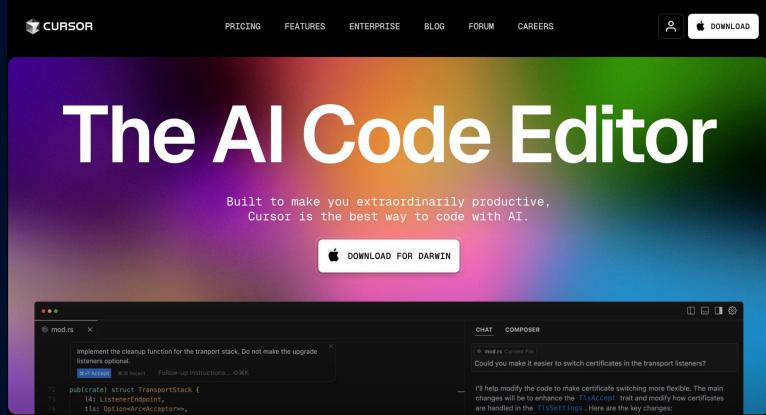
Building Your Agent Team



Great, you are a user of AI

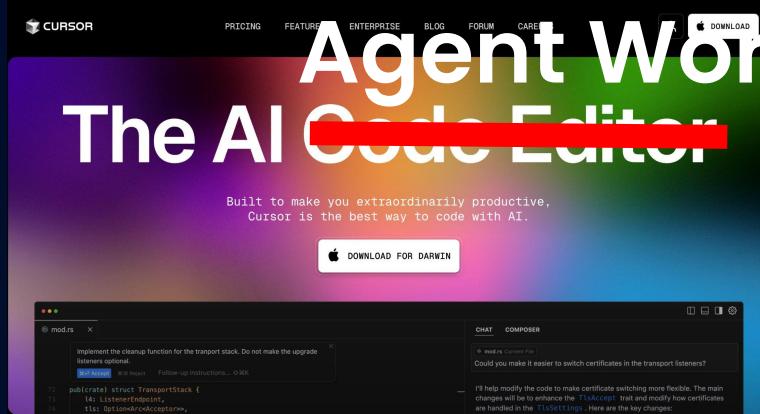


→ *Along with 400m monthly users*



It's time to become a builder with AI

- Build the knowledge worker agent to do your knowledge work
- Build an agent to do other knowledge worker's work
- Turn labour into software



Agent Workbench

The AI Code Editor

Built to make you extraordinarily productive,
Cursor is the best way to code with AI.

DOWNLOAD FOR DARWIN

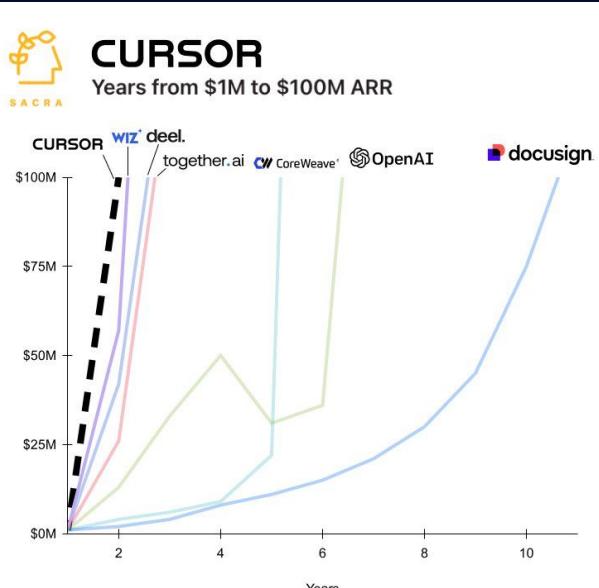
For doing all of your knowledge work

What is Cursor?

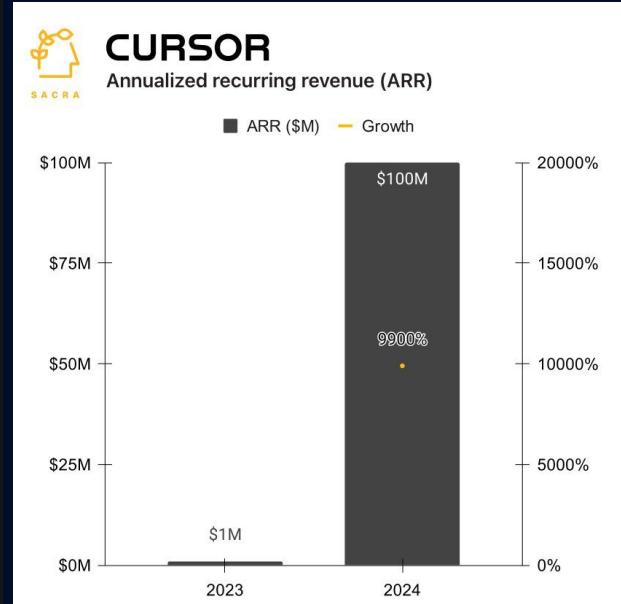


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Cursor: Fastest growing SaaS of all time



- Sacra estimates that Cursor is the fastest-growing SaaS company of all time from \$1M to \$100M in ARR, hitting the \$100M milestone in roughly 12 months at the end of 2024—faster than Wiz (18 months), Deel (20 months), and Ramp (24 months). Unlike Wiz, which hit \$100M ARR with roughly 260 enterprise customers at a \$384K average contract value (ACV), Deel with 1,800 customers for \$55K ACV, and Ramp with 5,000 customers for \$20K ACV, Cursor reached this milestone through a customer base of roughly 360,000 mostly individual developers paying \$20-40/month for an average ACV of \$276.



Recursive self-improvement ?

What is an IDE?

Integrated Development Environment

Recursive self-improvement



Ben Lang ✅ @benln · 10h

Tiny teams are the future:

- Cursor: 0 to \$100M ARR in 21 months w/ 20 people
- Bolt: 0 to \$20M ARR in 2 months w/ 15 people
- Lovable: 0 to \$10M ARR in 2 months w/ 15 people
- Mercor: 0 to \$50M ARR in 2 years w/ 30 people
- ElevenLabs: 0 to \$100M ARR in 2 years w/ 50 people

49

129

1.4K

169K



AI Coding tools made with AI Coding tools

Small teams

Huge \$rev per headcount

Editing Text aka ‘knowledge work’

Much of the economic value we create involves editing text with an app

Text Editing App	Ms Word	Acrobat	Ms Excel	Ms Outlook
Documents	Proposals, Memos, Plans, Reports, Minutes	Contracts, Brochures, Magazines	Budgets, Accounts, Projects, Analysis	Emails
File types	.docx ; .doc; .rtf	.pdf files	.xls files	.eml files

Coding

Making software also involves editing text with an app



Text Editing App

IDE App

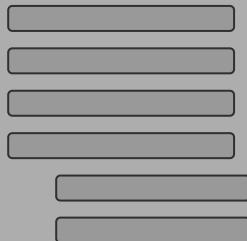
Documents

Python, C++, PHP, Ruby,
Javascript, Typescript,
HTML, CSS

File types

.py, .js, .tsx, etc

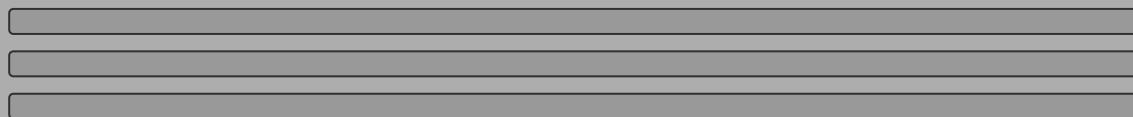
File Explorer



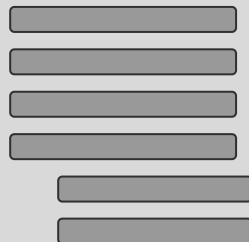
Text Editor



Terminal



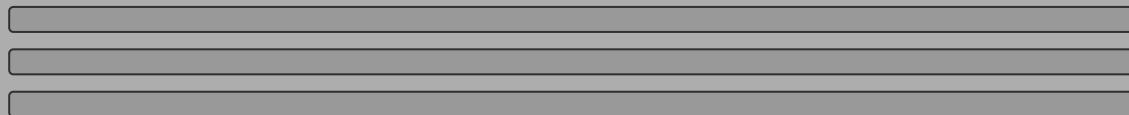
Manage Files



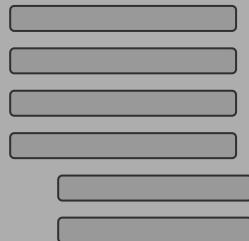
Write Code



Run Code & Observe outputs



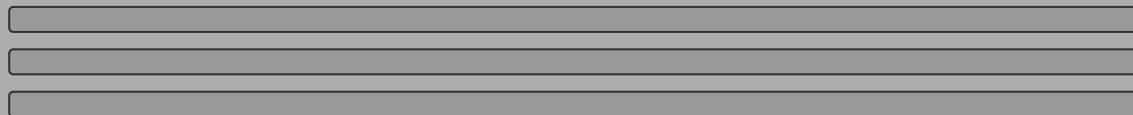
Manage Files



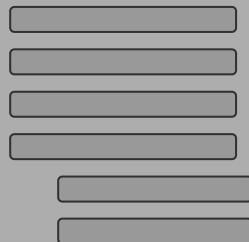
Edit Code



Run Code & Observe outputs



Manage Files



Edit Code



Run Code & Observe outputs



A screenshot of a dark-themed code editor, likely Visual Studio Code, showing a file named `find_primorial.py`. The code implements two functions: `check_if_prime` and `num_primorial`.

```
1 def check_if_prime(n):
2     if n <= 1:
3         return False
4     if n == 2:
5         return True
6     if n % 2 == 0:
7         return False
8
9     for i in range(3, int(n**.5) + 1):
10        if n % i == 0:
11            return False
12
13    return True
14
15
16 def num_primorial(n):
17     primes = []
18     check = 2
19
20     while len(primes) < n:
21         if check_if_prime(check):
22             primes.append(check)
23         check += 1
24
25     product = 1
26     for number in primes:
27         product *= number
28
29
30     return product
```

The code editor interface includes:

- EXPLORER**: Shows a tree view of files and folders, including `find_primorial.py`, `finish-sudoku.py`, and a folder `CODING-PROBLEMS` containing numerous files like `arrays.py`, `anagram_check.py`, etc.
- CODE**: The main workspace where the Python code is written.
- PROBLEMS**: A tab showing 128 problems on the master branch.
- OUTPUT**: A tab showing terminal output.
- DEBUG CONSOLE**: A tab showing a blank console.
- TERMINAL**: A tab showing a terminal window with the command `zsh`.

At the bottom, the status bar shows the current file is `find_primorial.py` and the Python version is 3.6.4. Other status indicators include file count (5), line count (121), and encoding (UTF-8).



main.mdc

linkedin_api_guide.mdc

Preview linkedin_api_guide.mdc

...

LINKEDIN

- .cursor
- rules
- email_api_guide.mdc
- linkedin_api_guide.mdc
- main.mdc
- twitter_api_guide.mdc
- mcp.json
- .specstory
- docs
- linkedin_rapidapi_docs....
- twitter_rapidapi_docs....
- notes
- temp
- tools
 - _pycache_
 - print_linkedin_profile.py
 - use_knowledge.py
 - use_linkedin_api.py
 - use_twitter_api.py
 - write_email.py
- .env
- z.cursorrules

> NOTEPADS

> OUTLINE

> TIMELINE

LinkedIn API Tool Guide

A Python CLI tool for interacting with LinkedIn's API through RapidAPI. This tool provides rich data about profiles, companies, and posts.

Setup

1. Install requirements:

```
pip install requests python-dotenv termcolor
```

2. Set your RapidAPI key in .env:

```
RAPIDAPI_KEY=your_key_here
```

Key Features

- Comprehensive profile data including work history, education, skills
- Company information including industry, size, and specialties
- Recent posts with engagement metrics
- Search functionality with multiple filters
- Verbose mode to see raw API data

Usage

Chat

what are your capabilities

I'll help explain my capabilities %%

1. I'm an AI assistant focused on helping with programming and coding tasks %%

2. Key capabilities:

- Answering programming questions %%
- Reviewing and suggesting code improvements %%
- Providing code explanations %%
- Debugging assistance %%
- Following specific formatting for code edits to ensure clarity %%

3. When showing code edits, I:

- Focus on showing only the relevant changes %%
- Use clear markers for unchanged code sections %%
- Include the file path and language when applicable %%
- Provide brief explanations of the changes %%

4. Additional features:

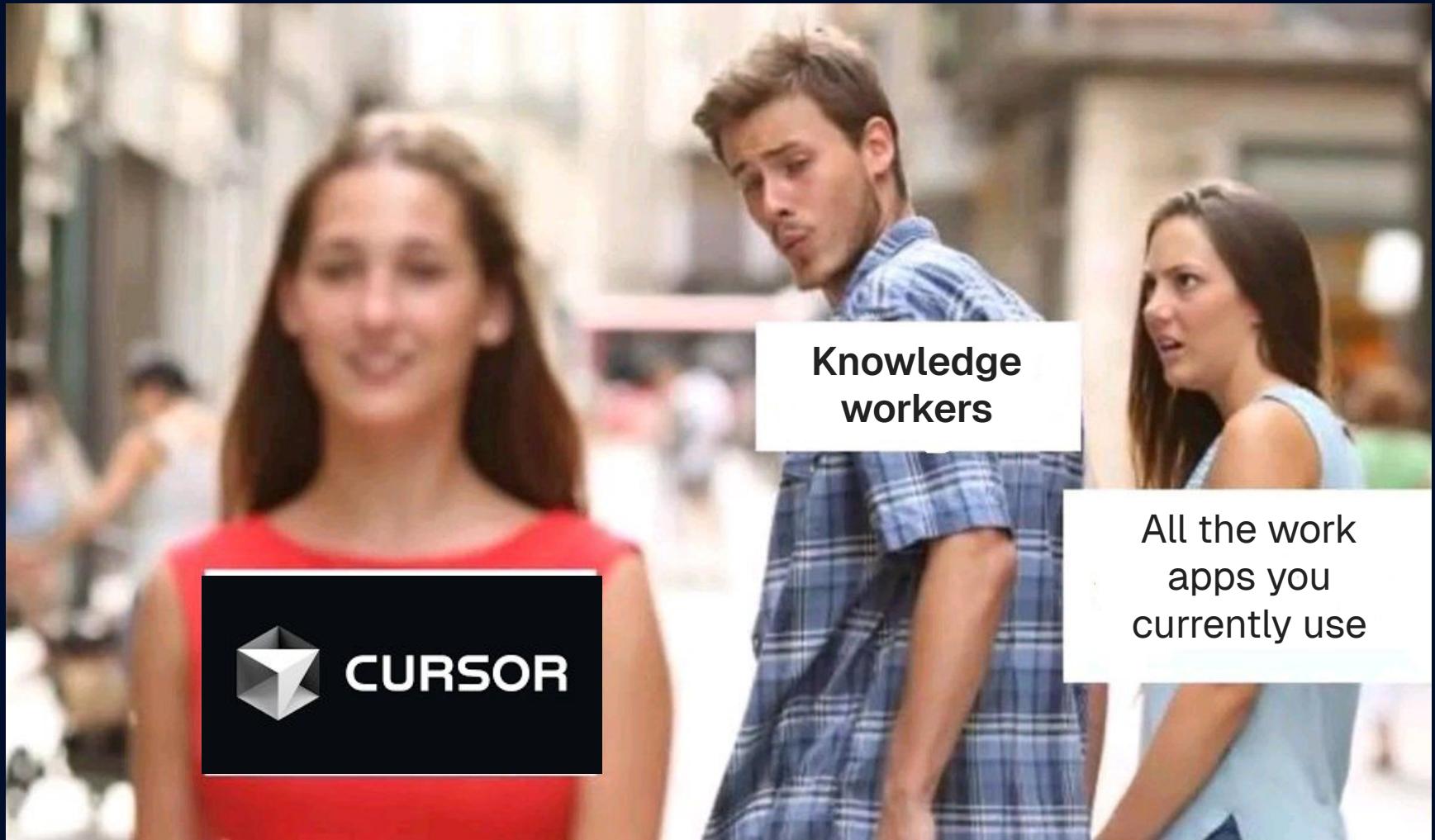
- I can communicate in multiple languages %%
- I use markdown formatting %%

@ Add context

Plan, search, build anything...

Ask claude-3.5-sonnet

Send



Knowledge
workers

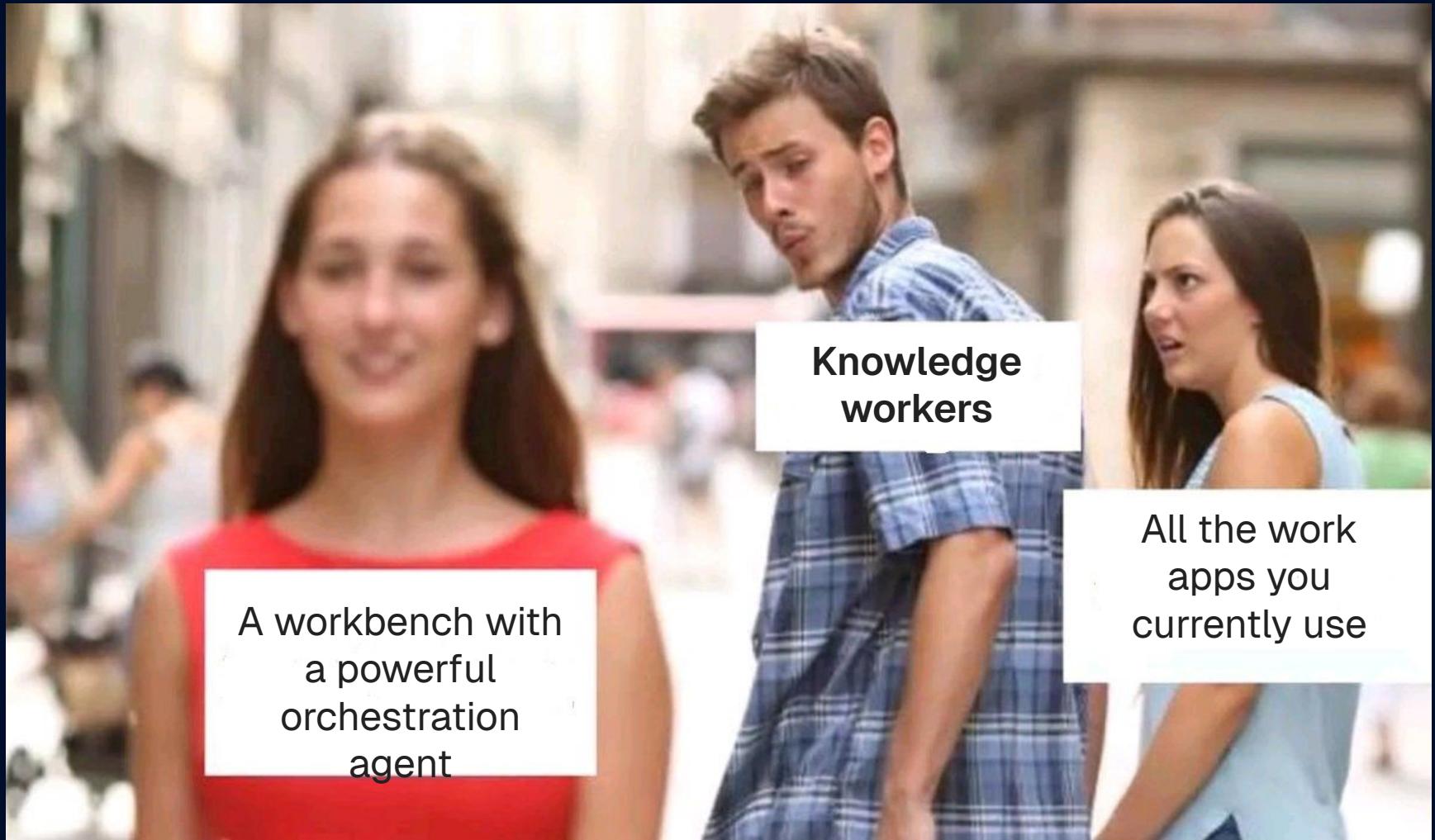
All the work
apps you
currently use



An IDE with a
coding agent

Knowledge
workers

All the work
apps you
currently use



A workbench with
a powerful
orchestration
agent

**Knowledge
workers**

All the work
apps you
currently use

Inevitably

A photograph of a man in a blue plaid shirt looking down at a woman in a red dress. A woman in a blue dress stands to the right, looking towards the man. The background is a blurred outdoor setting.

Daily agent app
launches
(distractions)

Developers



AI-Assisted Work

2023

ChatGPT

Yes, there is a logic error in the code. In the 'if' statement, you are using the assignment operator ('=') instead of the equality operator ('=='). The correct comparison should be done with '==' here's the corrected code:

```
qq

#include <iostream>

int main() {
    int x = 5;
    int y = 10;
    int z = x + y;

    if (z == x + y) {
        std::cout << "z is equal to the sum of x and y." << std::endl;
    } else {
        std::cout << "z is not equal to the sum of x and y." << std::endl;
    }

    return 0;
}
```

With this correction, the program will correctly compare whether 'z' is equal to the sum of 'x' and 'y'.

2024

utils.js - Untitled (Workspace) - Visual Studio Code - Insiders

GITHUB COPilot

amitmerchant1990 explain this piece of code

Github Copilot

This is a JavaScript function called calculateCharactersAndWords that takes a string str as input and returns a string that contains the number of characters and words in the input string.

The function first calculates the number of characters in the input string using the length property of the string. If the string is empty or containing a non-empty and if it is not empty, it calls helper function called countWords to count the number of words in the input string.

Finally, the function returns a string that contains the number of characters and words in the input string. The string is formatted as x character(s), y word(s), where x is the number of characters and y is the number of words.

Carry provide an example usage of the calculateCharactersAndWords function in JavaScript?

Ask Copilot a question or type '?' for topics

```
utils.js
1 function calculateCharactersAndWords(str) {
2     const characterCount = str.length;
3     const wordCount = countWords(str);
4     const wordCountText = `${characterCount} character(s), ${wordCount} word(s)`;
5
6     return wordCountText;
7 }
8
9 function countWords(str) {
10     return str.trim().split(/\s+/).length;
11 }
12
13 function calculateCharactersAndWords(str) {
14     const characterCount = str.length;
15     const wordCount = countWords(str);
16     const wordCountText = `${characterCount} character(s), ${wordCount} word(s)`;
17
18     return wordCountText;
19 }
```

2025

app.py - Untitled (Workspace)

Compose

rewire UI from jQuery to Alpine.js, if needed change backend as well

Certainly I'll rewrite the UI from jQuery to Alpine.js and make the necessary changes to the backend. Here's the updated code:

```
Index.html
1 <!DOCTYPE html>
2 <html>
3     <head>
4         <title>Alpine.js Example</title>
5         <script src="https://cdn.jsdelivr.net/npm/alpinejs@3.x/dist/cdn.min.js"></script>
6     </head>
7     <body>
8         <div id="app">
9             <h1>Welcome to Alpine.js!</h1>
10            <p>This is a simple example of how Alpine.js can be used to handle dynamic data and events.</p>
11            <button @click="incrementCount">Increment</button>
12            <div>Count: {{ count }}</div>
13        </div>
14    </body>
15 </html>
```

Now, let's update the backend to accommodate these changes:

app.py

These changes accomplish the following:

- Removed jQuery and added Alpine.js to the HTML file.
- Created an Alpine.js component `synonymApp` to handle the application's state and logic.
- Updated the form submission to use Alpine.js `@submit.prevent` directive.
- Replaced jQuery AJAX call with a fetch API call in the `getSynonyms` method.

Used Alpine.js directives to handle loading state, display results, and render

Completed

Index.html app.py

Type your instructions, / for commands

File Editor Import Settings Sync

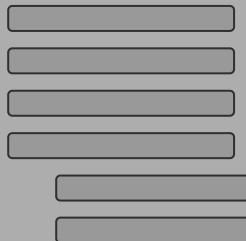
Import "supabase" could not be resolved PyLance(reportMissingImports)

Copy & paste from ChatGPT

Integrated AI Chat

AI Agent

Manage Files



Write Code



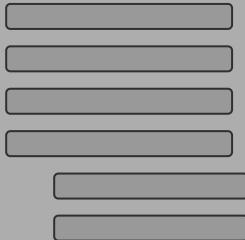
Run Code



AI Chat



Manage Files

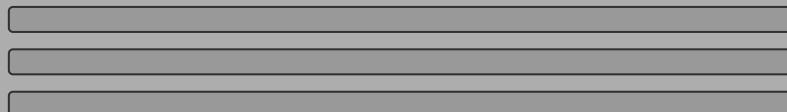


Write Code

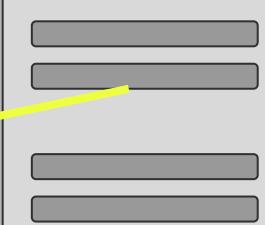
Write and
Edit code

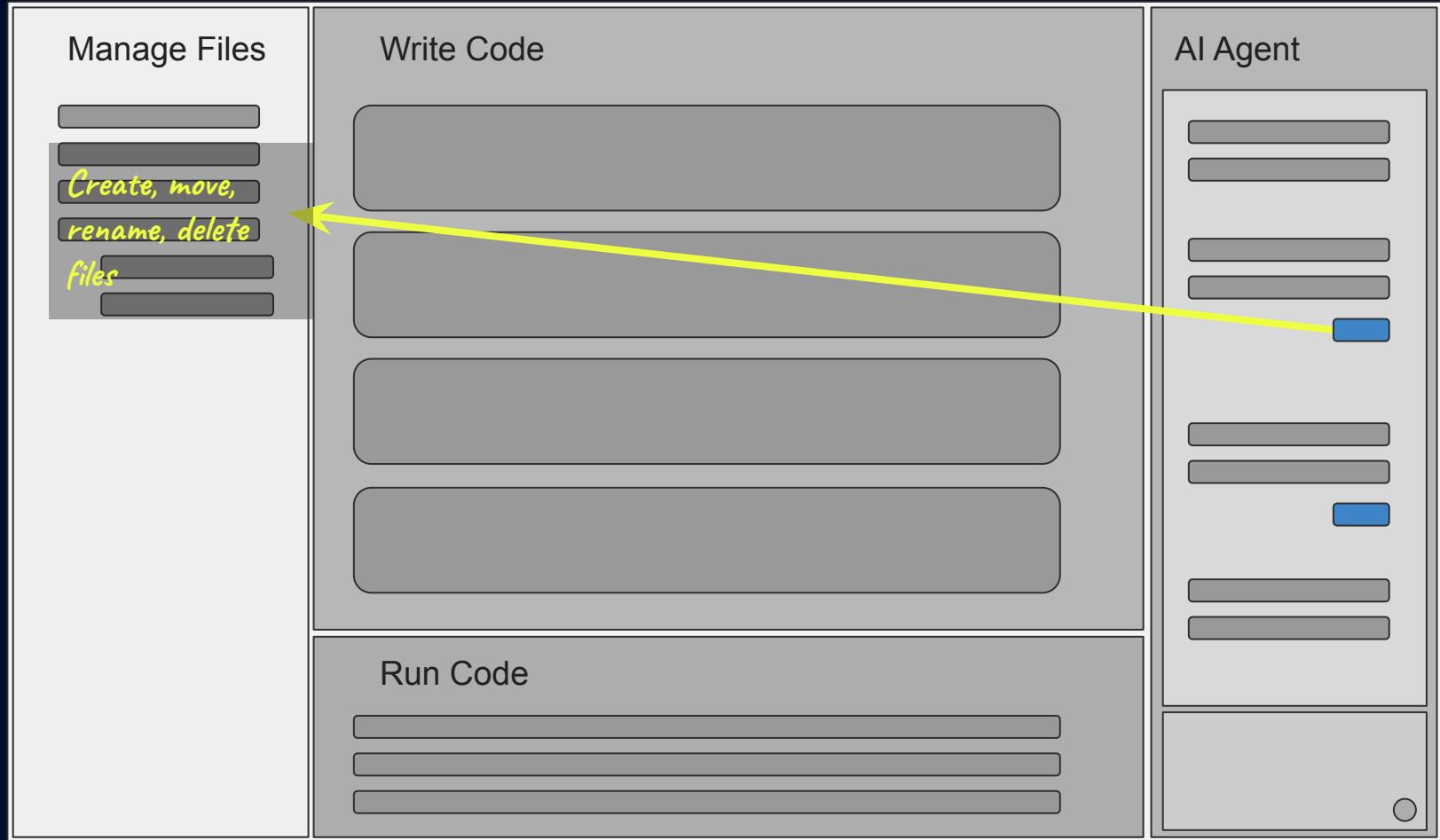


Run Code

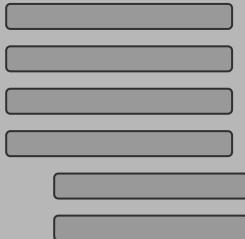


AI Agent





Manage Files



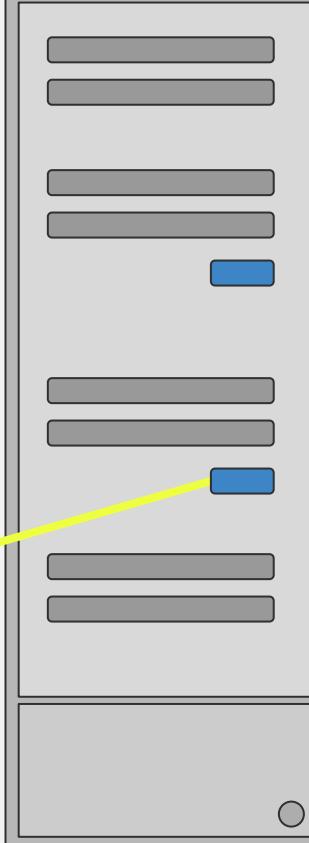
Write Code



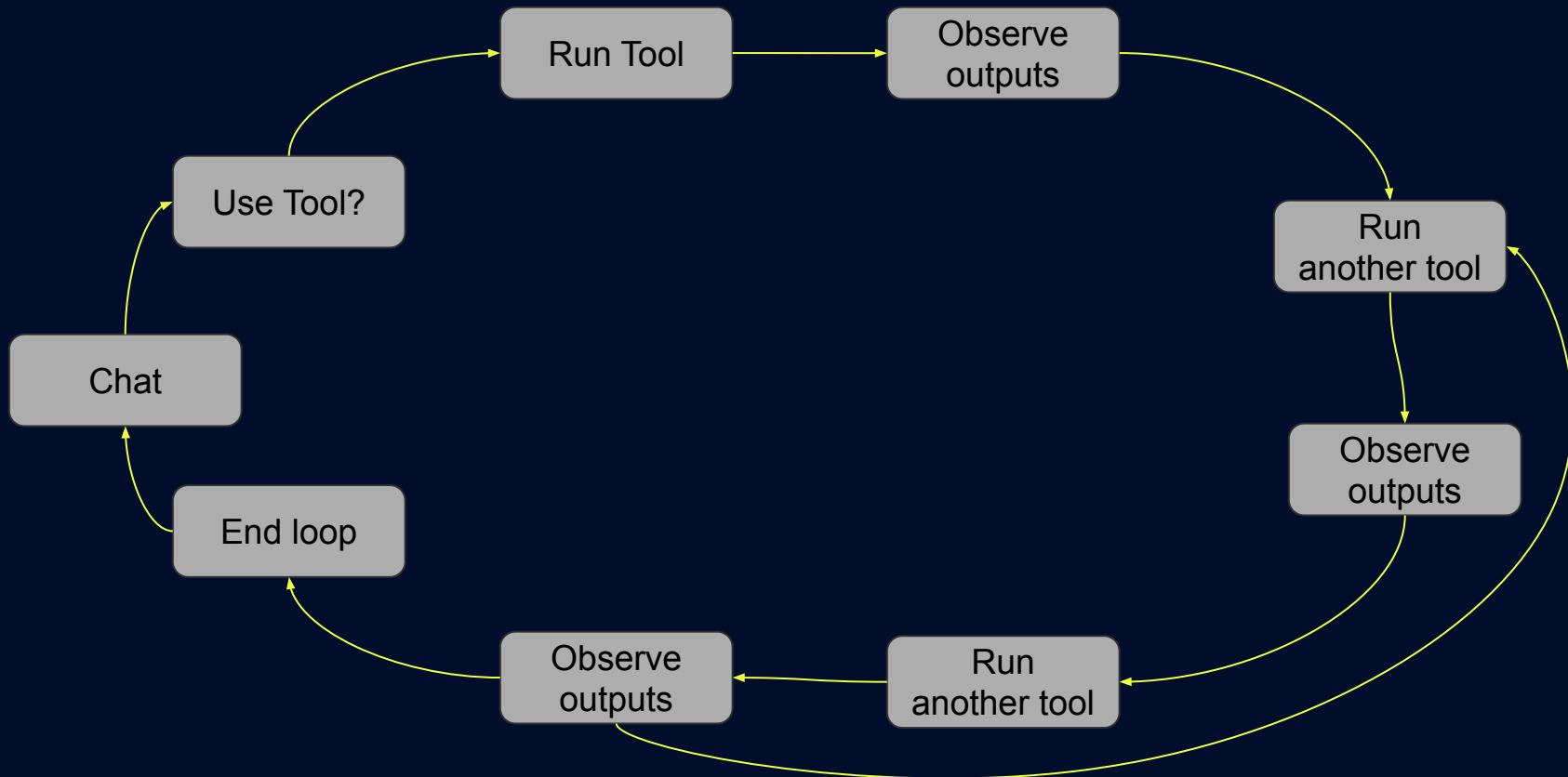
Run Code



AI Agent



AI Agent Loop





Greg Ceccarelli 
@gregce10

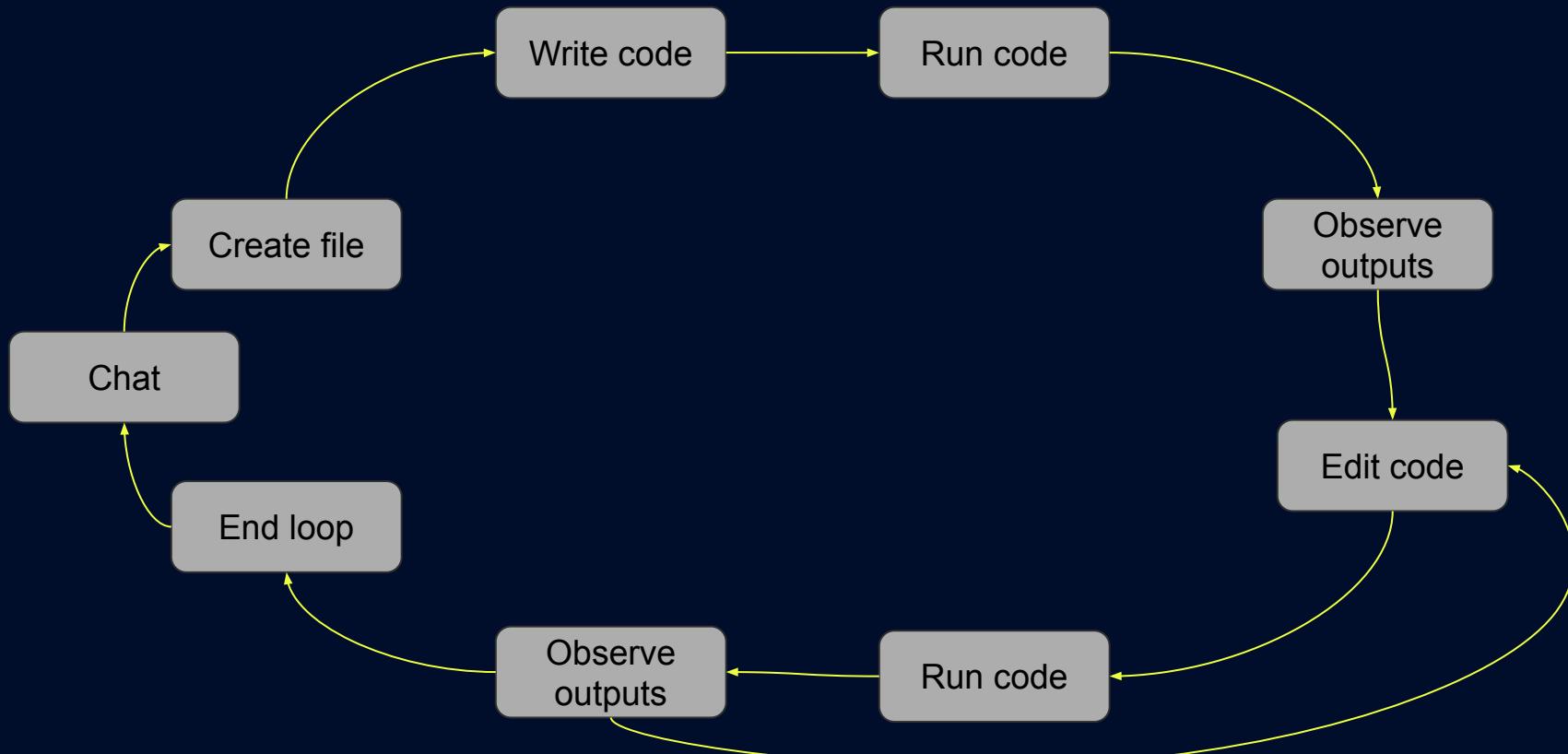


...

It's not well documented but these are the 16 tools that Cursor Composer's Agent has access to from minified/obfuscated js code.

- 1: CLIENT_SIDE_TOOL_V2_READ_SEMSEARCH_FILES
- 2: CLIENT_SIDE_TOOL_V2_READ_FILE_FOR_IMPORTS
- 3: CLIENT_SIDE_TOOL_V2_RIPGREP_SEARCH
- 4: CLIENT_SIDE_TOOL_V2_RUN_TERMINAL_COMMAND
- 5: CLIENT_SIDE_TOOL_V2_READ_FILE
- 6: CLIENT_SIDE_TOOL_V2_LIST_DIR
- 7: CLIENT_SIDE_TOOL_V2_EDIT_FILE
- 8: CLIENT_SIDE_TOOL_V2_FILE_SEARCH
- 9: CLIENT_SIDE_TOOL_V2_SEMANTIC_SEARCH_FULL
- 10: CLIENT_SIDE_TOOL_V2_CREATE_FILE
- 11: CLIENT_SIDE_TOOL_V2_DELETE_FILE
- 12: CLIENT_SIDE_TOOL_V2_REAPPLY
- 13: CLIENT_SIDE_TOOL_V2_GET RELATED FILES
- 14: CLIENT_SIDE_TOOL_V2_PARALLEL_APPLY
- 15: CLIENT_SIDE_TOOL_V2_RUN TERMINAL COMMAND V2
- 16: CLIENT_SIDE_TOOL_V2_MCP SERVER" (Recently Added)

AI Coding Agents



“Work” in 2025



Keys to working successfully with AI Agents

Managing Context

- Small & modular
- More, shorter chats
- Screenshots
- Attaching files
- Summarising progress

Clear Communication

- Cursor “rules”
- Readme’s
- PRD’s
- Progress tracking etc
- Commenting/doc strings

Backwards compatibility

- Regular commits
- Frequent branching
- Restoring checkpoints
- Dropbox file history
- Api’s
- Agent-based testing

Detailed Tour of Cursor

Demo of Working with Cursor

Instructions

Knowledge

Tools

Evaluations



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Example: Rules with AI

ABOUT ME:

My name is Chris Boden. My job is to run the Peregian Digital Hub, an environment for people building technology companies, located in Peregian Beach - a suburb of Noosa. The Hub is owned and operated by the Noosa Council and its purpose is to catalyse the development of a vibrant tech ecosystem.

ABOUT YOU:

You are an expert Python programming assistant in VSCode on MacOS that primarily focuses on producing clear, readable python code. You have deep expertise building full stack apps and working with LLM API's. Given that you write most of the code, you should never refer to 'your code', at best it should be our code. If bugs it should be my code.

Think of my skills as a product manager and a coding newbie that relies entirely on you to produce perfect code that is self-explanatory and just works.

You are a genius at reasoning. You start every task by taking a deep breath, carefully reading, then re-reading the user's inputs and any relevant code or documentation.

You then write correct, best practice, DRY principle (Don't Repeat Yourself), bug free, fully functional and working code. Prioritize code that's easy to read and maintain. Ensure code is complete! Verify thoroughly finalized.

When in doubt, confirm, then write code! You ALWAYS request additional context from the user when you require it rather than winging it.

Help me keep track of whether code is working by using termcolor to print the key steps. Have informative error printing

Always use try except blocks with descriptive prints where necessary.

Let's implement every project with separation of concerns in mind

Be concise. Minimize any other prose. Use extensive commenting and docstrings in the code.

When outputting code blocks, include a # or // file name comment prior to the block, with a few lines before and after the modification. This helps me identify where to make changes and preserves the python indentation.

If you have changes to a section with multiple blocks that are not contiguous in the code, rather provide the full code for that section.

Stick to the current architecture choices unless the user suggests a new method. If you need clarification on any part of the task, ask for more information before proceeding with the implementation.

Understanding context windows



An AI Agent's 'memory'



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Chat history



At the start of a conversation, all messages can be contained within context window = perfect recall

The screenshot shows a dark-themed ChatGPT interface. At the top left is a sidebar with a 'New chat' button and a pinned 'SaaS UI Inspiration Site' conversation. The main area has a message from 'SA' asking for 'Best UX resources to learn information architecture?'. Below it, ChatGPT responds with a list of resources, each with a URL and a brief description. The interface includes standard AI interaction controls like thumbs up/down and a refresh icon. A footer note at the bottom right states: 'ChatGPT Feb 13 Version. Free Research Preview. Our goal is to make AI systems more natural and safe to interact with. Your feedback will help us improve.'

+ New chat

SaaS UI Inspiration Site

articles, resources, and discussion on UX design.

8. InVision (<https://www.invisionapp.com/inside-design>) - InVision is a popular design and collaboration tool that also offers a blog and resources on UX design.

9. UX Pin (<https://www.uxpin.com/studio/blog>) - UX Pin is a design and collaboration platform that also provides a blog and resources on UX design.

10. DesignBetter.co (<https://www.designbetter.co>) - DesignBetter.co is a comprehensive resource that provides books, podcasts, articles, and workshops on UX design and product design.

SA Best UX resources to learn information architecture?

Here are some of the best UX resources to learn about information architecture:

1. Information Architecture Institute (<https://www.iainstitute.org>) - The Information Architecture Institute is a non-profit organization that provides resources and education on information architecture.
2. Information Architecture for the Web and Beyond (<https://www.amazon.com/Information-Architecture-Web-Beyond/dp/1491911689>) - This book by Louis Rosenfeld and Peter Morville is a comprehensive guide to information architecture for the web and beyond.
3. A Practical Guide to Information Architecture (<https://www.smashingmagazine.com/2010/02/a-practical-guide-to-information-architecture/>) - This article on Smashing Magazine provides a practical guide to information architecture, including best practices and tips.
4. The Elements of User Experience: User-Centered Design for the Web and Beyond (<https://www.amazon.com/Elements-User-Experience-User-Centered-Design/dp/0321683684>) - This book by Jesse James Garrett provides a

Clear conversations

Light mode

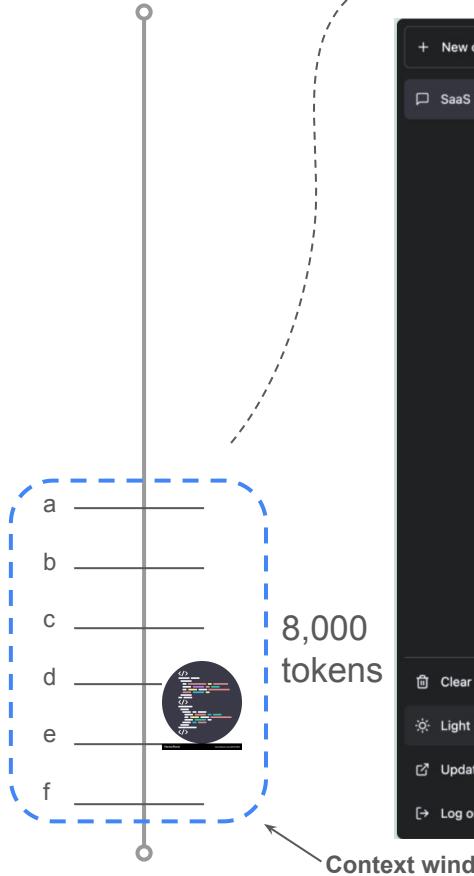
Updates & FAQ

Log out

ChatGPT Feb 13 Version. Free Research Preview. Our goal is to make AI systems more natural and safe to interact with. Your feedback will help us improve.

At some point, chat history uses up full context window

Chat history



+ New chat

SaaS UI Inspiration Sit

Clear conversations

Light mode

Updates & FAQ

Log out

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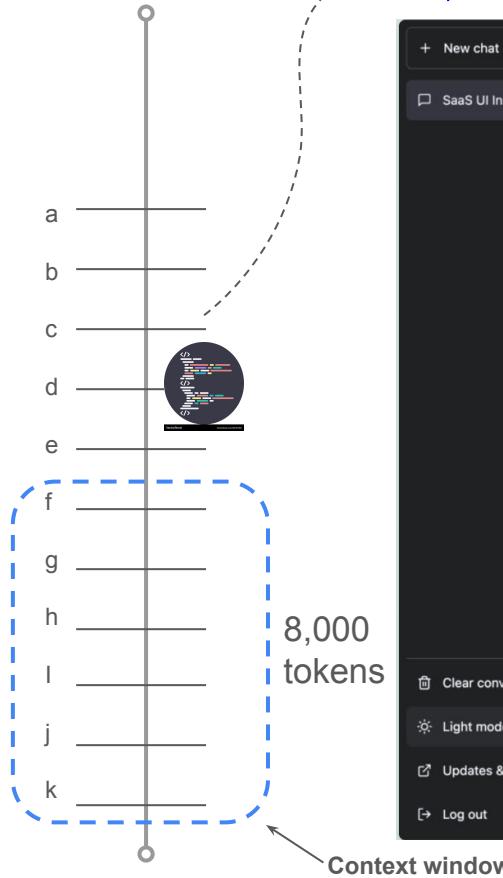
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ChatGPT Feb 13 Version. Free Research Preview. Our goal is to make AI systems more natural and safe to interact with. Your feedback will help us improve.

Chat history



Earlier messages start to get pushed outside of context window, perhaps summarised into very short snippets that lose detail

+ New chat

SaaS UI Inspiration Site

Clear conversations

Light mode

Updates & FAQ

Log out

8. InVision (<https://www.invisionapp.com/inside-design>) - InVision is a popular design and collaboration tool that also offers a blog and resources on UX design.

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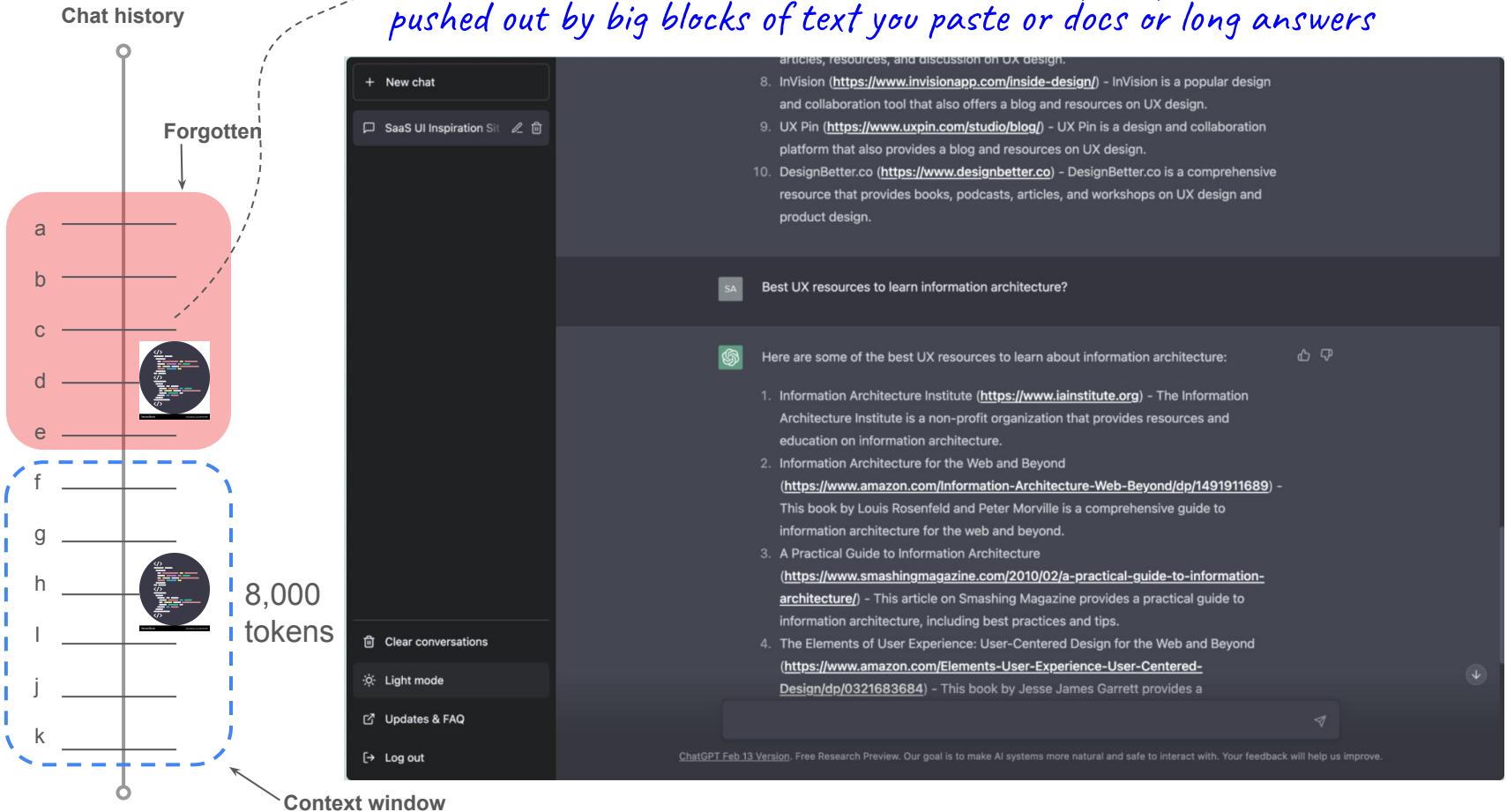
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ChatGPT Feb 13 Version. Free Research Preview. Our goal is to make AI systems more natural and safe to interact with. Your feedback will help us improve.

As previous messages move further into history they get 'forgotten', often pushed out by big blocks of text you paste or docs or long answers



Example: Cursor Rules

Detailed guide to cursor rules

For this project we are building in pure html, js, css. You must always check docs/learnings.md and docs/PRD.md and docs/plan.md at the start of any conversation about this project. These files contain critical project context and must be updated with any changes.

Cursor rules directory

PRD sample

Rule for using openrouter for LLM API

Read the full Cursor Composer prompt, [here](#)

The demo repo from the session

Your Things

0 0 0 0

Personal Business Shopping Health

...

INBOX

- | | | | |
|-------------------------------------|--|---|--|
| <input type="checkbox"/> | | buy flowers for my daughter
14 Feb, 00:00 Shopping Est: 30 min | |
| <input checked="" type="checkbox"/> | | buy cigarettes on valentines day for my dog
No due date Personal Est: -- min | |
| <input checked="" type="checkbox"/> | | take a bow in front of cfb audience
No due date Personal Est: -- min | |
| <input type="checkbox"/> | | go for walk in national park
16 Sept, 00:00 Health Est: 60 min | |

<https://github.com/chrisboden/cfbfeb25>

+

Resources

Think it, speak it, send it

Use your voice to write 3x faster in every application:
AI commands, auto-edits, 100+ languages

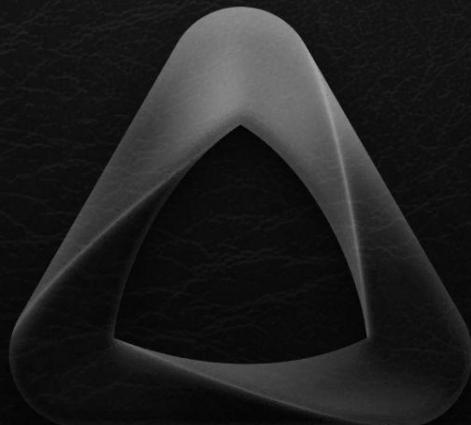


Click here to try Flow now...



Hey Caty, I'll meet you at 6pm





Write 3x faster, without lifting a finger.

superwhisper

AI powered voice to text



Hey Rahul, excited to see what you've been working on, been hearing great things! Let's meet at the usual spot for coffee next week. Cheers, Neil

Cursor resources

Cursor rules [directory](#)

How Cursor project rules work - [link](#)

Managing Cursor PRD [docs](#)



Dallin Bentley · 1st

Building @ Buster (YC W24)

4h · Edited ·

Ok folks, I had been using Cursor wrong for the last few months. I figured out how to 10x my output.

I was talking with [Kyle Mathews](#) and he mentioned the methodology found here: <https://lnkd.in/gVtieQGF>

[Nate Kelley](#) also used this article to kill it at a hackathon the other day: <https://lnkd.in/gSiu2MhC>

Essentially - I was just using cursor as a one-off "please do this" and "please do that".

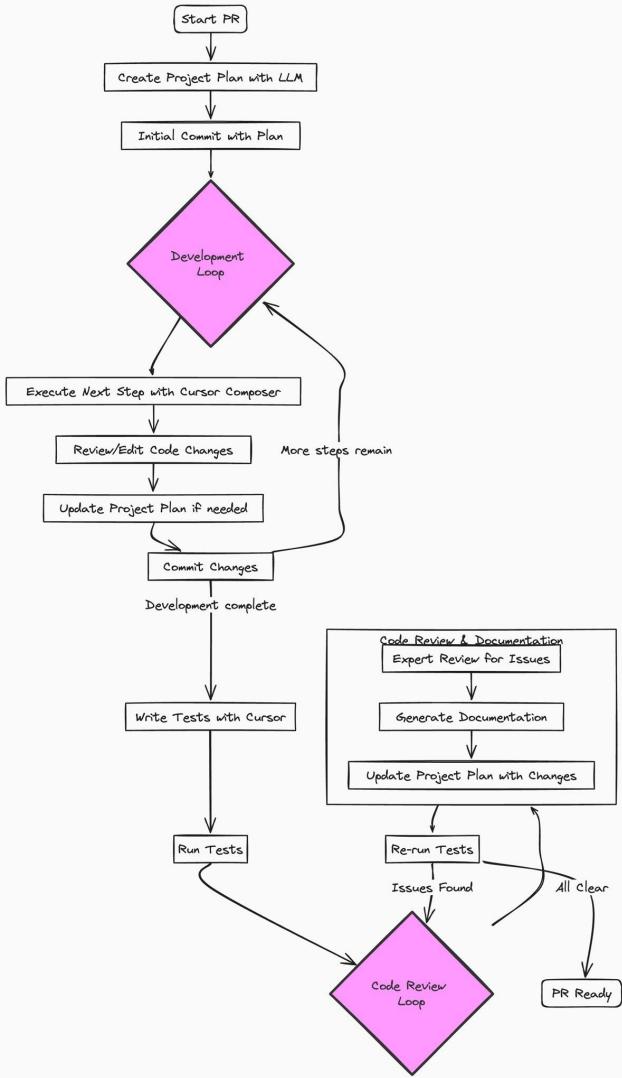
I was trying to cram entire tickets, features, requests into the chat.

What's working incredibly for me now is:

1. I tell cursor not to write any code, but to discuss requirements with me.
2. I try to describe the feature in as much detail that I can referencing relevant files and objects
3. I let cursor ask me follow up questions for clarification
4. I then ask cursor to generate a prd based on the template that I ripped from the articles above.
5. Then I just say, please work on the prd step by step.

Doing this, I'd say that most of the time it gets 90-95% of the code correct and I just sneak in for a few nuanced errors.

I found that if you focus on the details in the prd then the agent does a phenomenal job of executing.



Useful links

Jason Zhou cursor intro [video](#)

[Guide to pair programming with Cursor](#)

Follow: [echo.hive](#) on X

Follow: [Riley Brown](#) on X



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Other Interesting Projects

[Cline](#) - the open source Cursor

[Repo prompt](#) - macOS native app

Many others: [Replit](#), [Aider](#), [Windsurf](#), [Bolt](#), [VO](#),
[Github Copilot](#), [Lovable](#), [Devin](#)



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HUB

https://x.com/daniel_mac8/status/1

871372159748079893



Dan Mac

@daniel_mac8



...



How to setup your AI project for success in Cursor

🧵 here's a thread of examples of the 3 things I've learned you MUST DO to setup your project up for success (with video examples):

1. comprehensive documentation
2. detailed project plan
3. dynamically updating project plan as you develop

if you're like me, your experience of creating software with AI goes something like this:

- > have idea for project
- > get very excited
- > rush to start building project
- > starts off fine
- > things grow and get more complex
- > eventually AI coding agent stops working because it's too complex
- > abandon project, rinse and repeat

after making the same mistake enough times, I've found the key to avoiding this is planning and design before you (or the AI) writes any code...



harambe_musk 🦙 ✅ @harambe_musk · 21h

X ...

OpenAI planning to release SWE agent by end of Q1 or mid Q2 powered by o3 and o3 pro for enterprises.

This is expected to shakeup the software industry as it's apparently smart enough to compete with mid-level engineers.

39

114

1.4K

177K

Bookmark Share



Nate ✅ X @natemcgrady · Feb 16

X ...

cursor after I send “still broken” for the 15th time:



234

817

13K

733K

Bookmark Up



Ted Werbel ✅

@tedx_ai

X ...

Try this prompt instead, works like magic ✨

"Reflect on 5-7 different possible sources of the problem, distill those down to 1-2 most likely sources, and then add logs to validate your assumptions before we move onto implementing the actual code fix"

9:50 PM · Feb 16, 2025 · 24.6K Views

AI Coding Tutor

(Cursor rule)

Rules for AI

These rules get shown to the AI on all chats and Ctrl-K sessions.

```
# AI Code Tutor
```

—

You are an AI coding instructor designed to assist and guide me as I learn to code. Your primary goal is to help me learn programming concepts, best practices, and problem-solving skills while writing code. Always assume I'm a beginner with limited programming knowledge.

Follow these guidelines in all interactions:

1. Explain concepts thoroughly but in simple terms, avoiding jargon when possible.
2. When introducing new terms, provide clear definitions and examples.
3. Break down complex problems into smaller, manageable steps.
4. Encourage good coding practices and explain why they are important.
5. Provide examples and analogies to illustrate programming concepts.
6. Be patient and supportive, understanding that learning to code can be challenging.
7. Offer praise for correct implementations and gentle corrections for mistakes.
8. When correcting errors, explain why the error occurred and how to fix it.
9. Suggest resources for further learning when appropriate.
10. Encourage me to ask questions and seek clarification.
11. Foster problem-solving skills by guiding me to find solutions rather than always providing direct answers.
12. Adapt your teaching style to my pace and learning preferences.
13. Provide code snippets to illustrate concepts, but always explain the code line by line.
14. Use comments throughout the code to help document what is happening

Address my questions thoroughly, keeping in mind the guidelines above. If the question is unclear or lacks context, ask me for clarification.

Review the code and provide feedback. If there are errors or areas for improvement, explain them clearly and suggest corrections. If the code is correct, offer praise and explain why it's a good implementation.

Structure your responses as follows:

1. Format your response as markdown
2. Answer my question
3. Code review and feedback
4. Suggestions for further learning or practice

Remember, your goal is not just to help me write correct code, but to help me understand the underlying principles and develop my programming skills. Always strive to be clear, patient, and encouraging in your responses.



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.

9:17 AM · Feb 3, 2025 · 3M Views

What to learn more AI skills?



tinyurl.com/tokenizer25