BUILD WITHOUT LIMITS

Tips and techniques for better Prompting

When using AI coding assistants

Ricardo Sueiras (vi/vim)

Developer Advocate, AWS

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AI coding assistants

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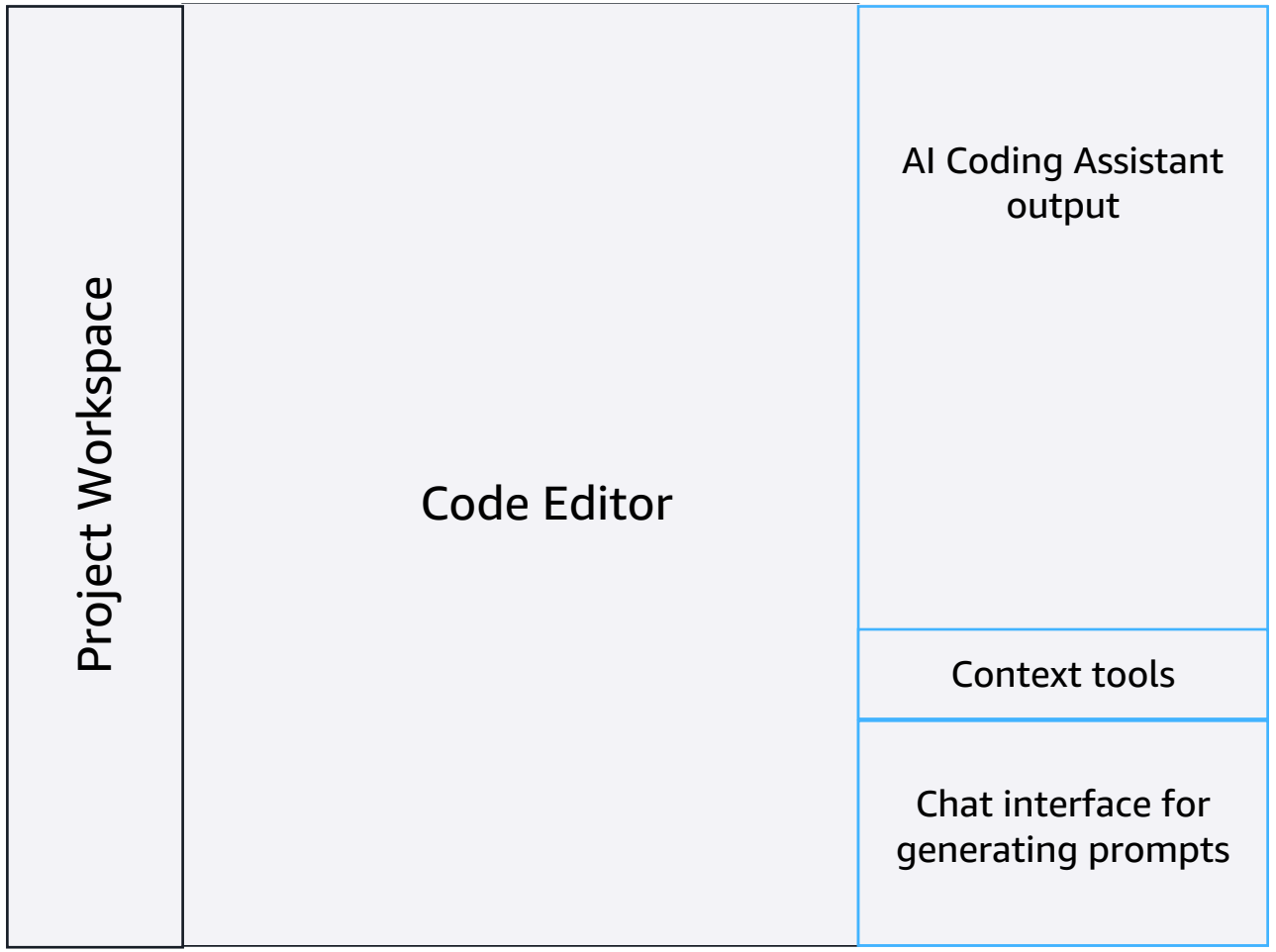
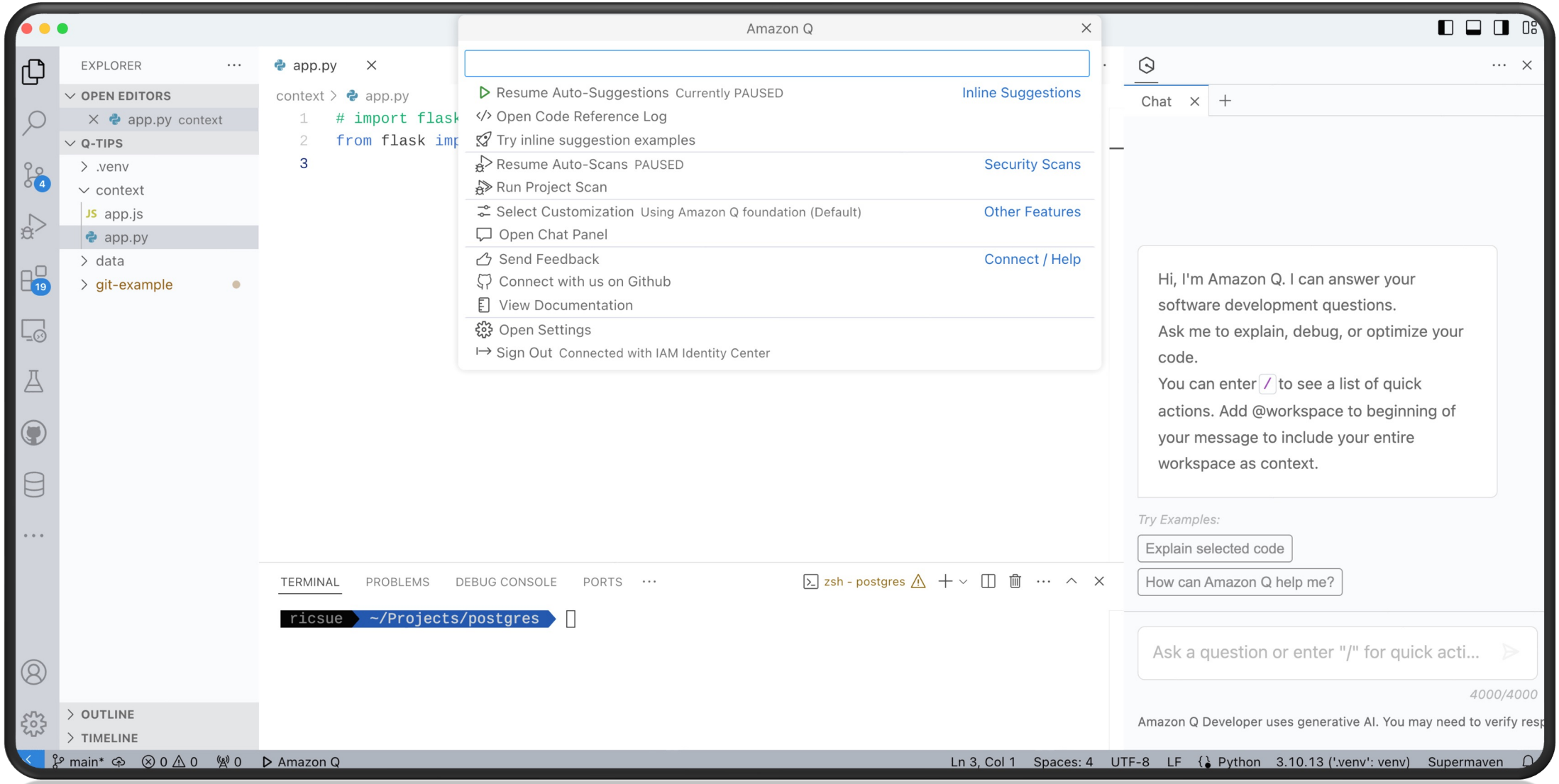
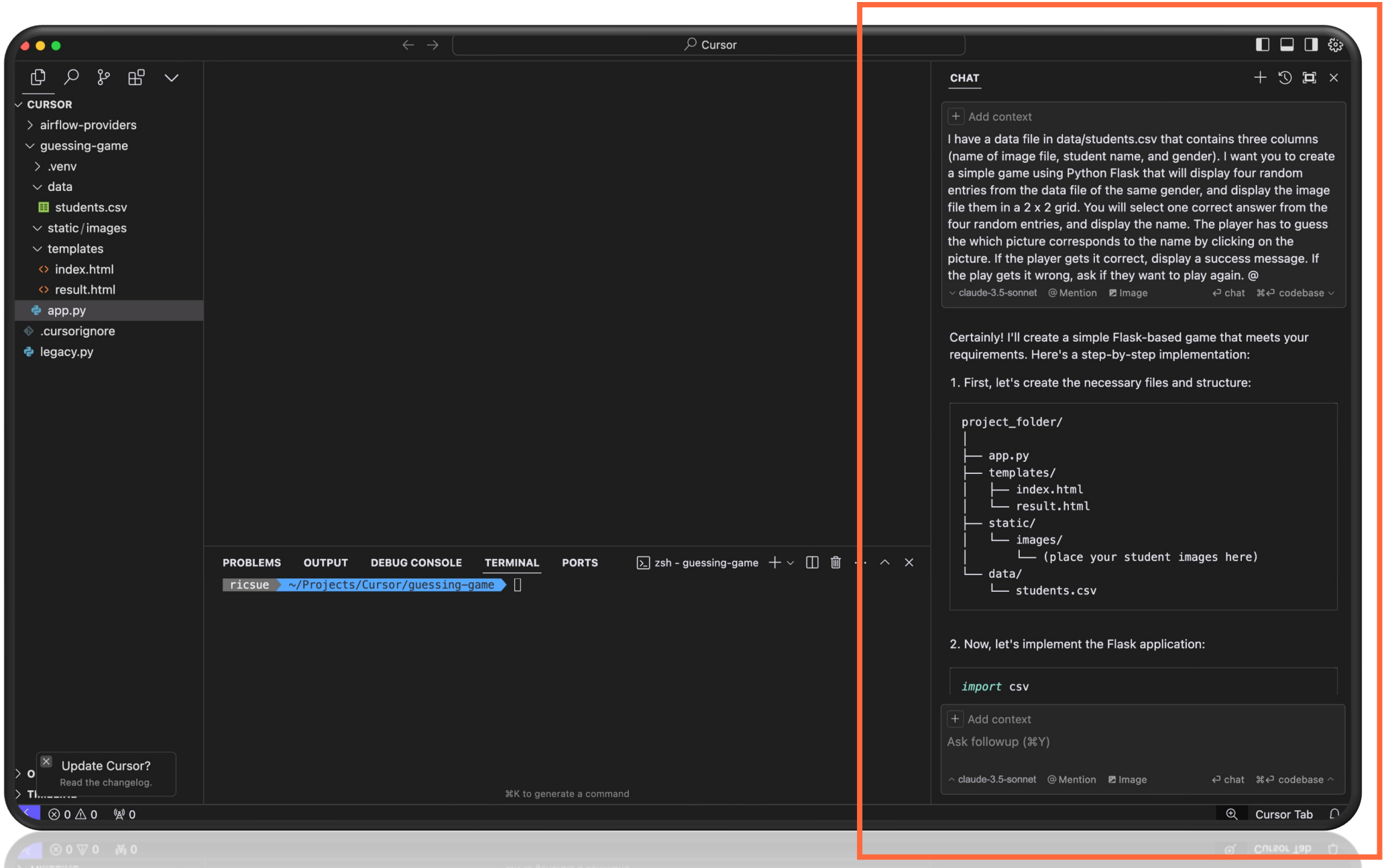
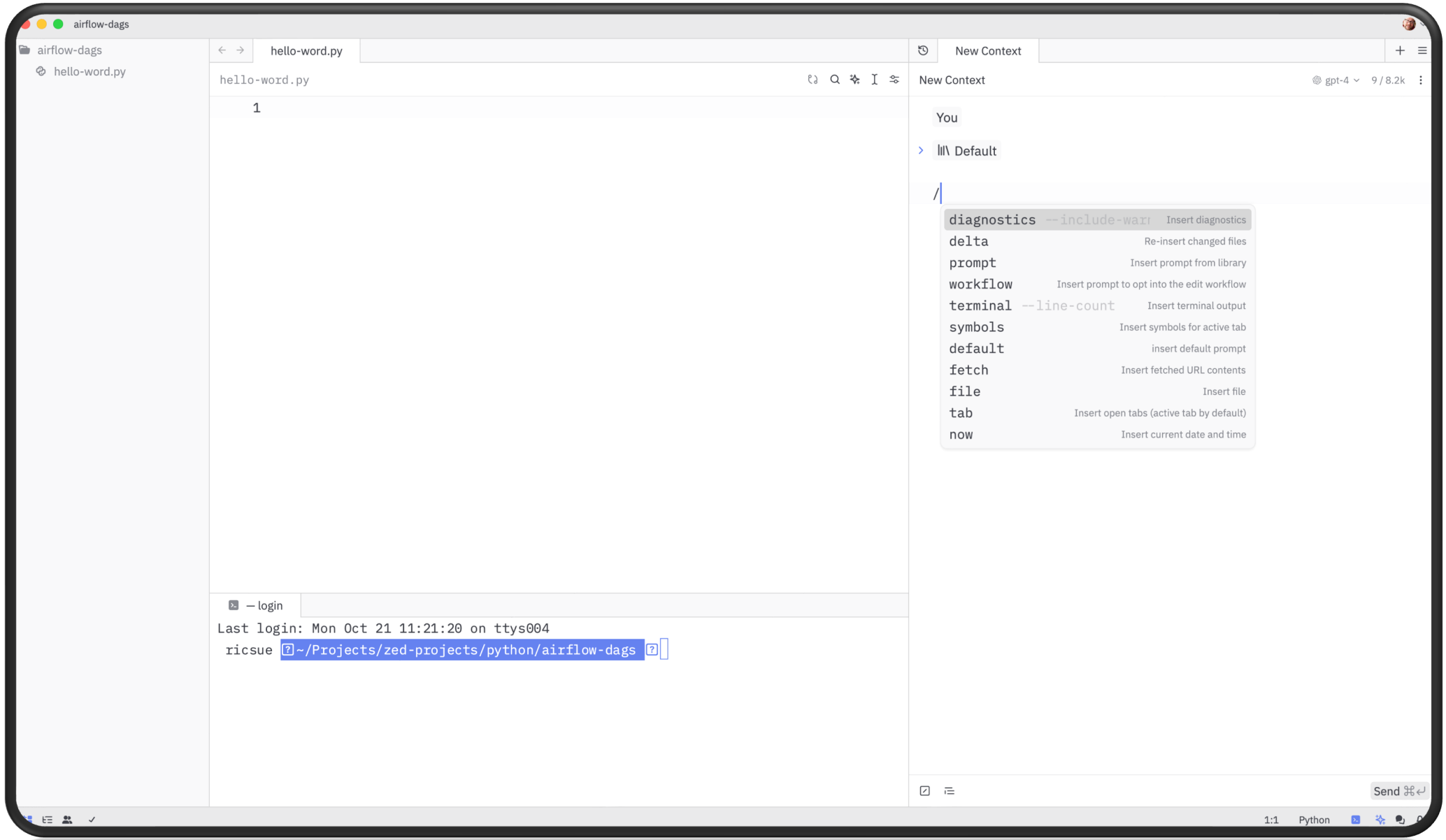
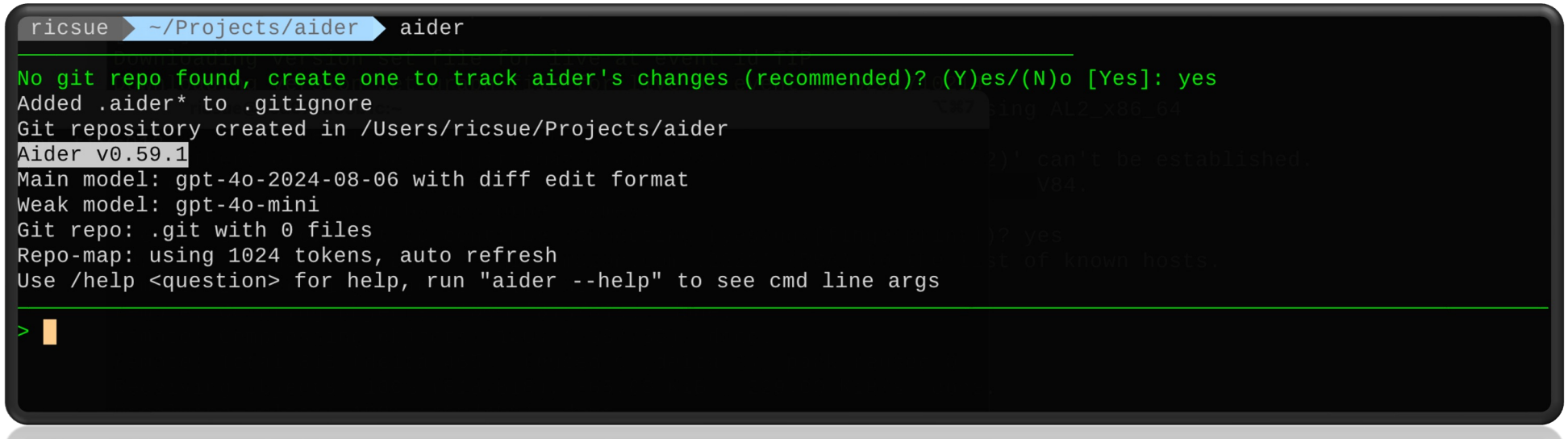
AI Coding Assistants provide a GUI on top of large language models, that **optimize use for developers** across the software development life cycle (SDLC)

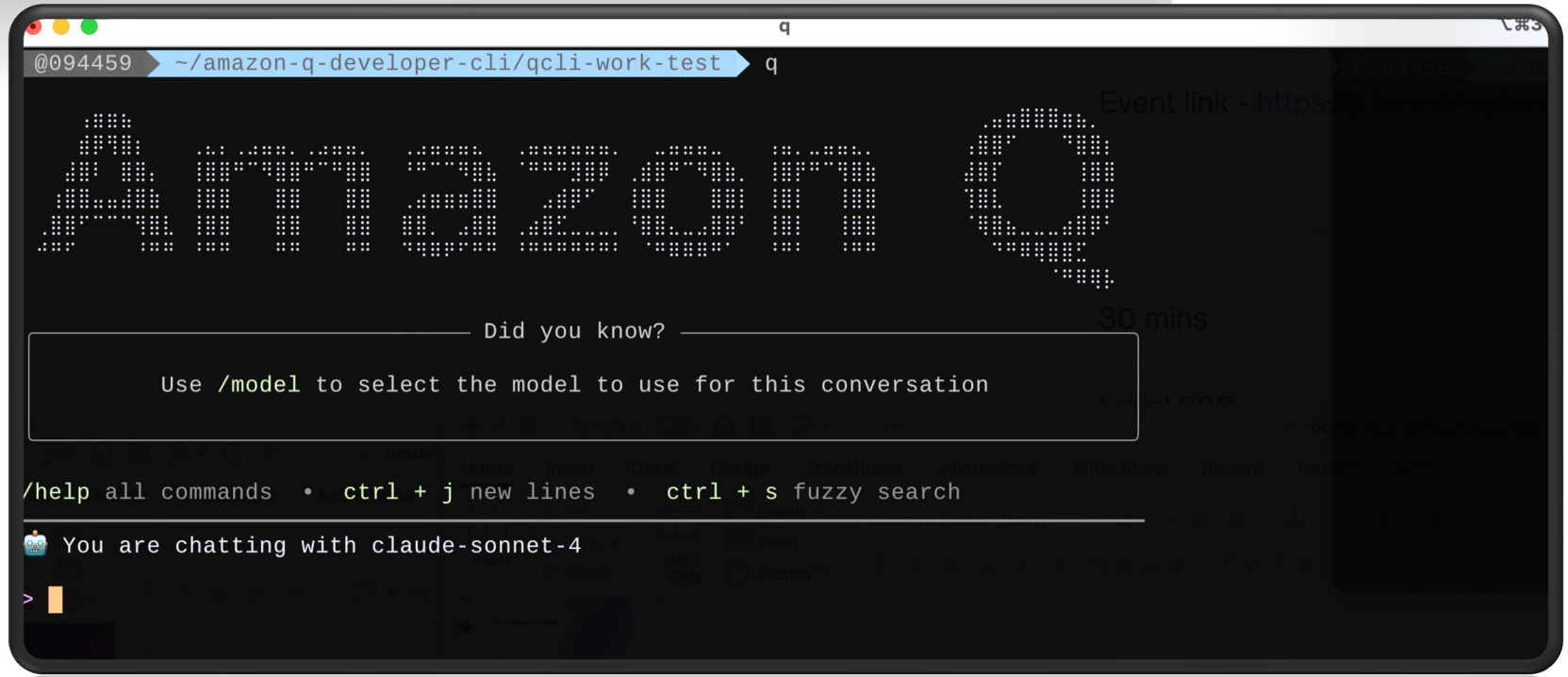



Amazon Q
Resume Auto-Suggestions Currently PAUSED
Inline Suggestions
Open Code Reference Log
Try inline suggestion examples
Resume Auto-Scans PAUSED
Security Scans
Run Project Scan
Select Customization Using Amazon Q foundation (Default)
Other Features
Open Chat Panel
Send Feedback
Connect / Help
Connect with us on Github
View Documentation
Open Settings
Sign Out Connected with IAM Identity Center
EXPLORER
OPEN EDITORS
app.py context
Q-TIPS
.venv
context
app.js
app.py
data
git-example
OUTLINE
TIMELINE
app.py
context > app.py
1 # import flask
2 from flask imp
3
TERMINAL
PROBLEMS
DEBUG CONSOLE
PORTS
zsh - postgres
ricsue ~/Projects/postgres
Chat
Hi, I'm Amazon Q. I can answer your software development questions.
Ask me to explain, debug, or optimize your code.
You can enter / to see a list of quick actions. Add @workspace to beginning of your message to include your entire workspace as context.
Try Examples:
Explain selected code
How can Amazon Q help me?
Ask a question or enter "/" for quick acti...
4000/4000
Amazon Q Developer uses generative AI. You may need to verify resp
main*
0 0 0
Amazon Q
Ln 3, Col 1
Spaces: 4
UTF-8
LF
Python
3.10.13 ('.venv': venv)
Supermaven


Cursor
CURSOR
airflow-providers
guessing-game
.venv
data
students.csv
static / images
templates
index.html
result.html
app.py
.cursorignore
legacy.py
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS
zsh - guessing-game
ricsue ~/Projects/Cursor/guessing-game
⌘K to generate a command
Update Cursor?
Read the changelog.
CHAT
Add context
I have a data file in data/students.csv that contains three columns (name of image file, student name, and gender). I want you to create a simple game using Python Flask that will display four random entries from the data file of the same gender, and display the image file them in a 2 x 2 grid. You will select one correct answer from the four random entries, and display the name. The player has to guess the which picture corresponds to the name by clicking on the picture. If the player gets it correct, display a success message. If the play gets it wrong, ask if they want to play again. @
claude-3.5-sonnet
@ Mention
Image
chat
⌘⏎ codebase
Certainly! I'll create a simple Flask-based game that meets your requirements. Here's a step-by-step implementation:
1. First, let's create the necessary files and structure:
project_folder/
├── app.py
├── templates/
│ ├── index.html
│ └── result.html
├── static/
│ └── images/
│ └── (place your student images here)
└── data/
└── students.csv
2. Now, let's implement the Flask application:
import csv
Add context
Ask followup (⌘Y)
claude-3.5-sonnet
@ Mention
Image
chat
⌘⏎ codebase
Cursor Tab


airflow-dags
airflow-dags
hello-word.py
hello-word.py
hello-word.py
1
New Context
New Context
gpt-4
9 / 8.2k
You
Default
/
diagnostics --include-warı Insert diagnostics
delta Re-insert changed files
prompt Insert prompt from library
workflow Insert prompt to opt into the edit workflow
terminal --line-count Insert terminal output
symbols Insert symbols for active tab
default insert default prompt
fetch Insert fetched URL contents
file Insert file
tab Insert open tabs (active tab by default)
now Insert current date and time
— login
Last login: Mon Oct 21 11:21:20 on ttys004
ricsue ~/Projects/zed-projects/python/airflow-dags
Send ⌘↵
1:1
Python


ricsue ~/Projects/aider aider
No git repo found, create one to track aider's changes (recommended)? (Y)es/(N)o [Yes]: yes
Added .aider* to .gitignore
Git repository created in /Users/ricsue/Projects/aider
Aider v0.59.1
Main model: gpt-4o-2024-08-06 with diff edit format
Weak model: gpt-4o-mini
Git repo: .git with 0 files
Repo-map: using 1024 tokens, auto refresh
Use /help <question> for help, run "aider --help" to see cmd line args
>


q
@094459 ~/amazon-q-developer-cli/qcli-work-test q
Did you know?
Use /model to select the model to use for this conversation
/help all commands • ctrl + j new lines • ctrl + s fuzzy search
You are chatting with claude-sonnet-4
>

Tips and techniques for better prompt sucess

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1. Breaking down complexity
2. Crafting better prompts
3. Context, Context, Context!

1. Breaking down complexity

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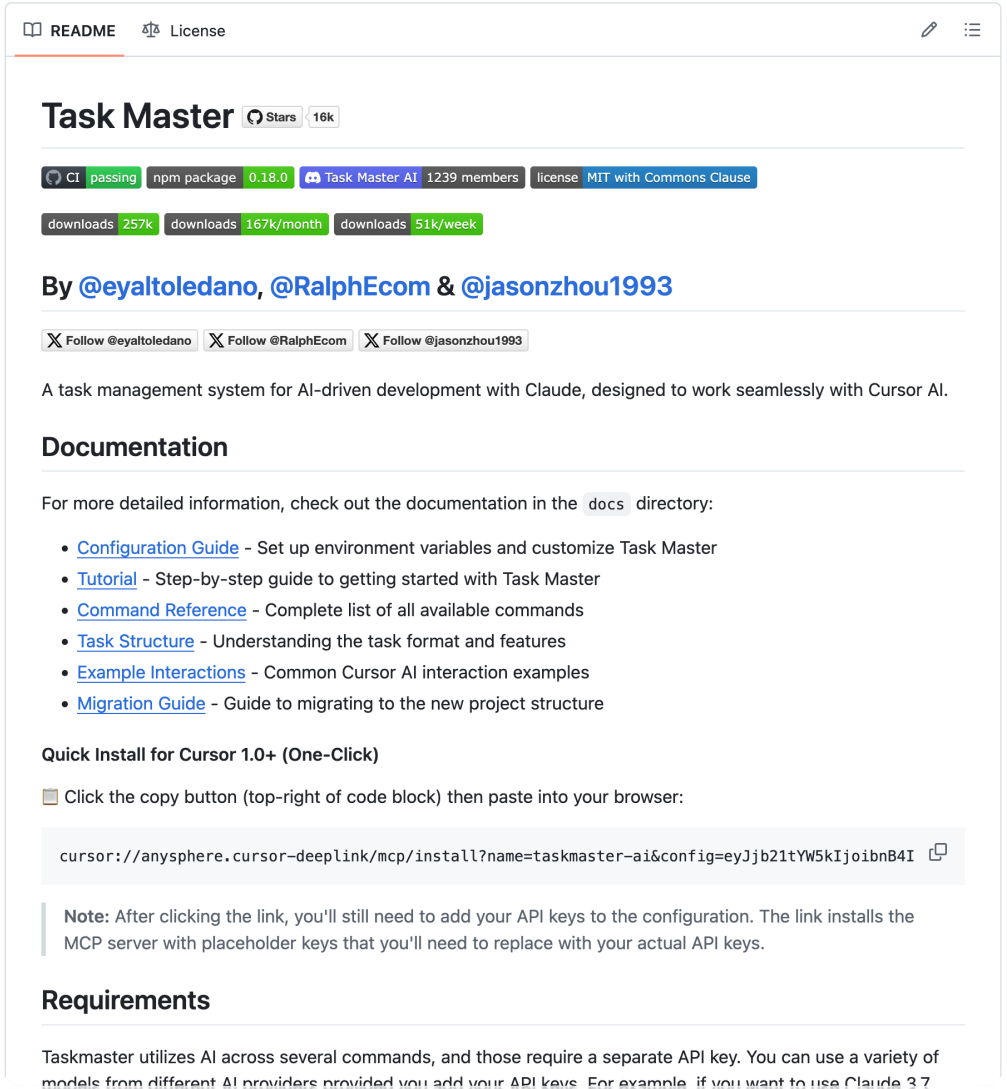
1

Start with **intent**

1

Break down large projects into **smaller tasks**



README License

Task Master Stars 16k

CI passing | npm package 0.18.0 | Task Master AI 1239 members | license MIT with Commons Clause

downloads 257k | downloads 167k/month | downloads 51k/week

By @eyaltoledano, @RalphEcom & @jasonzhou1993

Follow @eyaltoledano | Follow @RalphEcom | Follow @jasonzhou1993

A task management system for AI-driven development with Claude, designed to work seamlessly with Cursor AI.

Documentation

For more detailed information, check out the documentation in the `docs` directory:

- Configuration Guide - Set up environment variables and customize Task Master
- Tutorial - Step-by-step guide to getting started with Task Master
- Command Reference - Complete list of all available commands
- Task Structure - Understanding the task format and features
- Example Interactions - Common Cursor AI interaction examples
- Migration Guide - Guide to migrating to the new project structure

Quick Install for Cursor 1.0+ (One-Click)

Click the copy button (top-right of code block) then paste into your browser:

```
cursor://anysphere.cursor-deeplink/mcp/install?name=taskmaster-ai&config=eyJjb21tYW5kIjoibnB4I
```

> **Note:** After clicking the link, you'll still need to add your API keys to the configuration. The link installs the MCP server with placeholder keys that you'll need to replace with your actual API keys.

Requirements

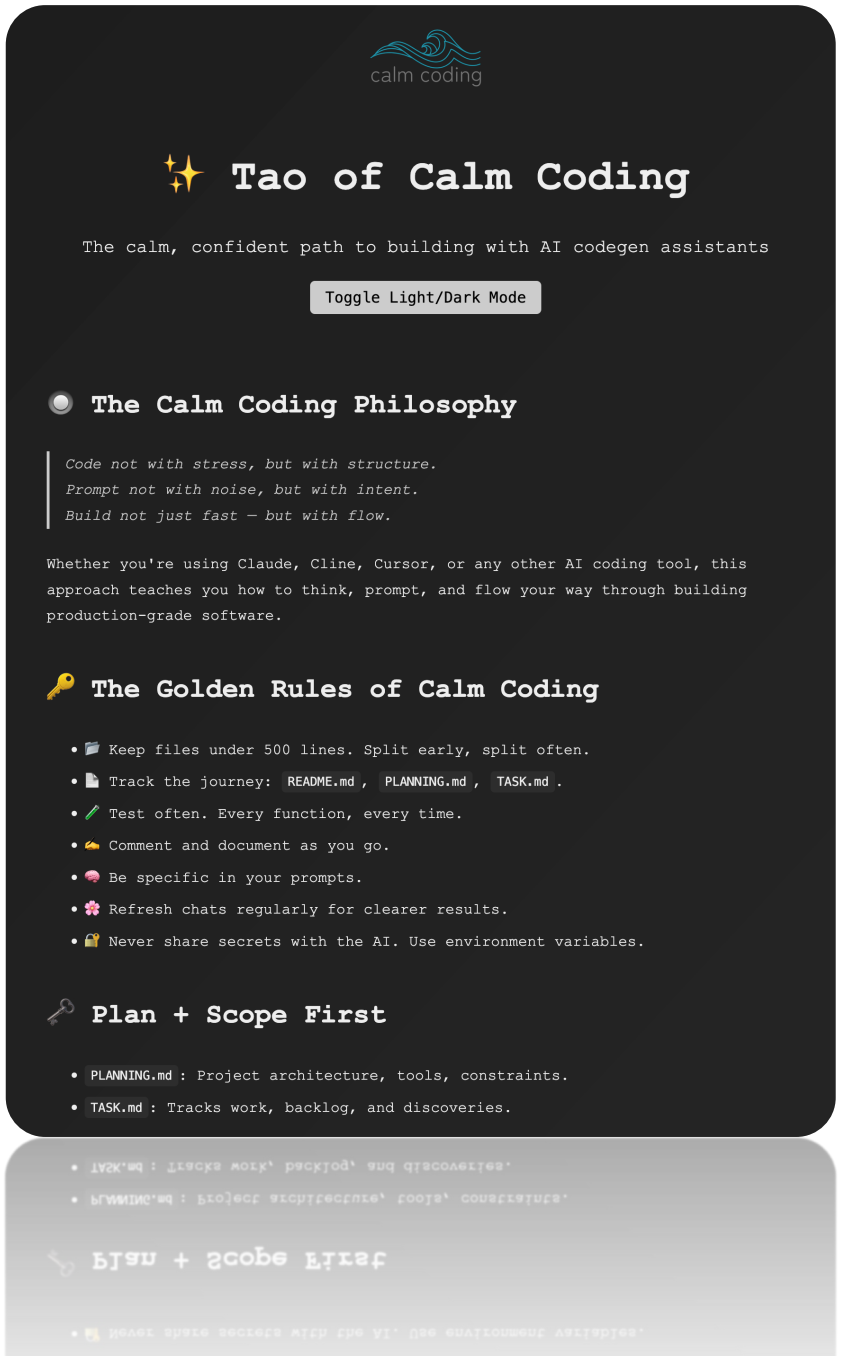
Taskmaster utilizes AI across several commands, and those require a separate API key. You can use a variety of models from different AI providers provided you add your API keys. For example, if you want to use Claude 3.7

1

By **breaking big goals into discrete tasks**, Taskmaster prevents the AI from wandering off-course, letting it tackle projects piecewise.

1

Build **incrementally**



1

The Calm Coding Philosophy

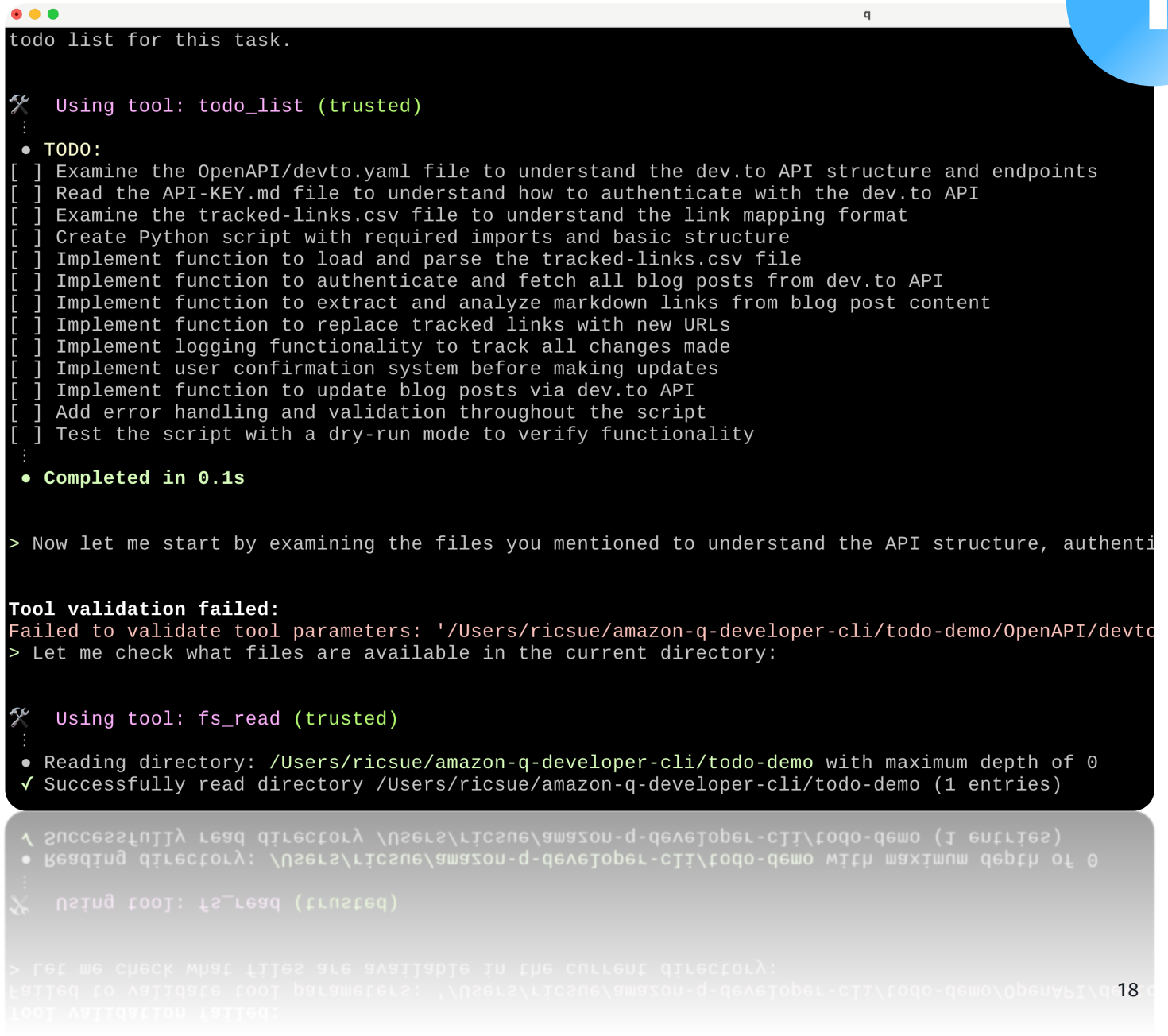
Code not with stress, but with structure.
Prompt not with noise, but with intent.
Build not just fast — but with flow.

1

Generate a **plan**, and outline the **tasks**

1

Use native capabilities of AI coding assistants to **generate plans and tasks lists**



2. Crafting better prompts

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2

Ensure that your prompts are
detailed and **unambiguous**

2

Avoid

```
> How do I deploy this
container on AWS?
```

Better

```
> I need to deploy a containerized
Node.js e-commerce application that
handles
50,000 daily users with peak loads
during promotional events.

Requirements:
 - High availability across multiple
regions
 - MongoDB for persistence
 - Auto-scaling capabilities

Please provide:
 1. AWS architecture diagram
 2. List of required services with
configurations
 3. Security best practices
 4. Operational monitoring
recommendations
```

2

No fluff, and keep responses **appropriate**

Prompt

2

Only when I explicitly ask for code, follow this guidance:

- Only provide Python code unless I explicitly ask for another language
- Unless otherwise requested, only provide the piece of code **without any further explanation and commentary**
- I am an expert in Python and **I do not need a walk through**

2

Provide good **examples**

2

Good

- What are your expected Output?
- Specify how you want the information presented
- Provide example input and output data formats
- Provide sample code snippets or examples you want it to follow

Avoid

- **Be specific** in what you want as inputs and outputs, **don't generalise**

2

- Handle errors with RFC 7807 JSON format:

  ```json
  {
    "type": "https://docs.example.com/errors/validation-error",
    "title": "Validation Error",
    "detail": "Field 'email' must be a valid email",
    "status": 422
  }
  ```

Input/Output Standards

Request Format

```json
{
  "data": {
    "field1": "value1",
    "field2": 123
  },
  "metadata": {
    "timestamp": "2025-10-09T11:43:16Z",
    "version": "1.0"
  }
}
```

Response Format

```json
{
  "success": true,
  "data": {
    "id": 1,
    "name": "example"
  },
  "message": "Operation completed successfully",
  "timestamp": "2025-10-09T11:43:16Z"
}
```

```
### 2. URL Patterns
- `/api/v1/users` - Collection
- `/api/v1/users/123` - Specific resource
- `/api/v1/users/123/posts` - Nested resources

### 3. Query Parameters
```python
# Filtering
GET /api/v1/users?status=active&role=admin

# Sorting
GET /api/v1/users?sort=name&order=asc

# Pagination
GET /api/v1/users?page=2&limit=20

# Field selection
GET /api/v1/users?fields=id,name,email
```
```

2

Use **EARS** when crafting prompts

EARS Patterns

Pattern Name	Pattern
Ubiquitous	The <system name> shall <system response>
Event-Driven	WHEN <trigger> <optional precondition> the <system name> shall <system response>
Unwanted Behavior	IF <unwanted condition or event>, THEN the <system name> shall <system response>
State-Driven	WHILE <system state>, the <system name> shall <system response>
Optional Feature	WHERE <feature is included>, the <system name> shall <system response>
Complex	(combinations of the above patterns)

2

Refine and **iterate** your Prompts

2

Meta prompting is your friend

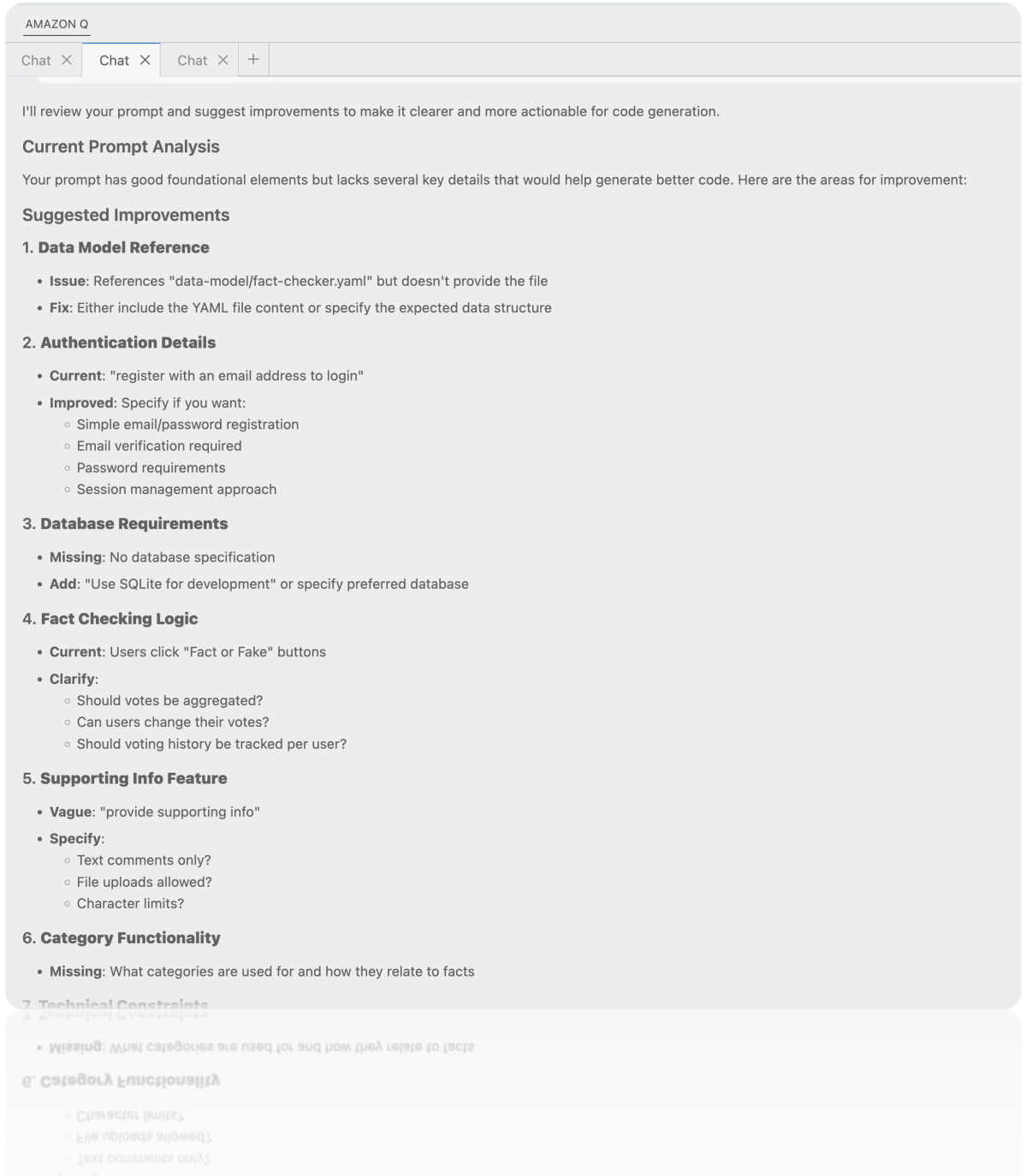
Prompt

2

> I want to use the following prompt to get you to write me some code. Can you review the prompt and suggest areas where it should be improved. Here is the prompt:

Build a simple Fact Checking application.

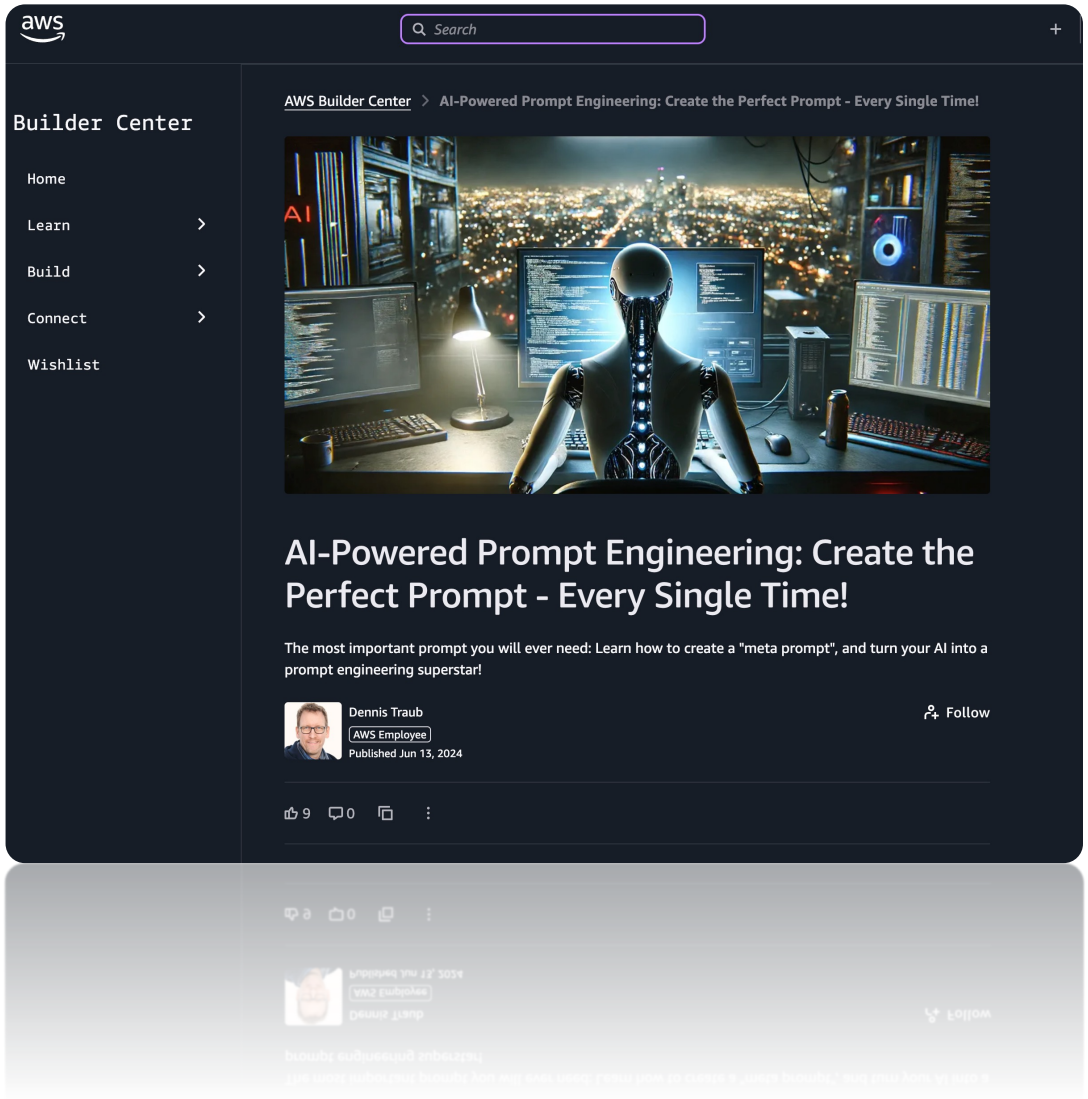
- Generate a web application that can be used in a browser
- Users will need to register with an email address to login
- When Users login, a Dashboard will be displayed that provides a simple explanation of what the application does, and displays any available Facts that have been created
- From the home Dashboard, Users will be able to click on any existing Facts to fact check. They will also be able to Create a new Fact or Create a new Category
- When Users are viewing Facts, they will have the ability to click on two buttons - Fact or Fake
- When Users are viewing Facts, they can also provide supporting info
- Provide a simple web design that can be updated easily using CSS



2

Feedback provided as well as the prompt written to a markdown file so that it can be further refined

2



AI-Powered Prompt Engineering: Create the Perfect Prompt - Every Single Time!

2

Prompt **>** markdown.md

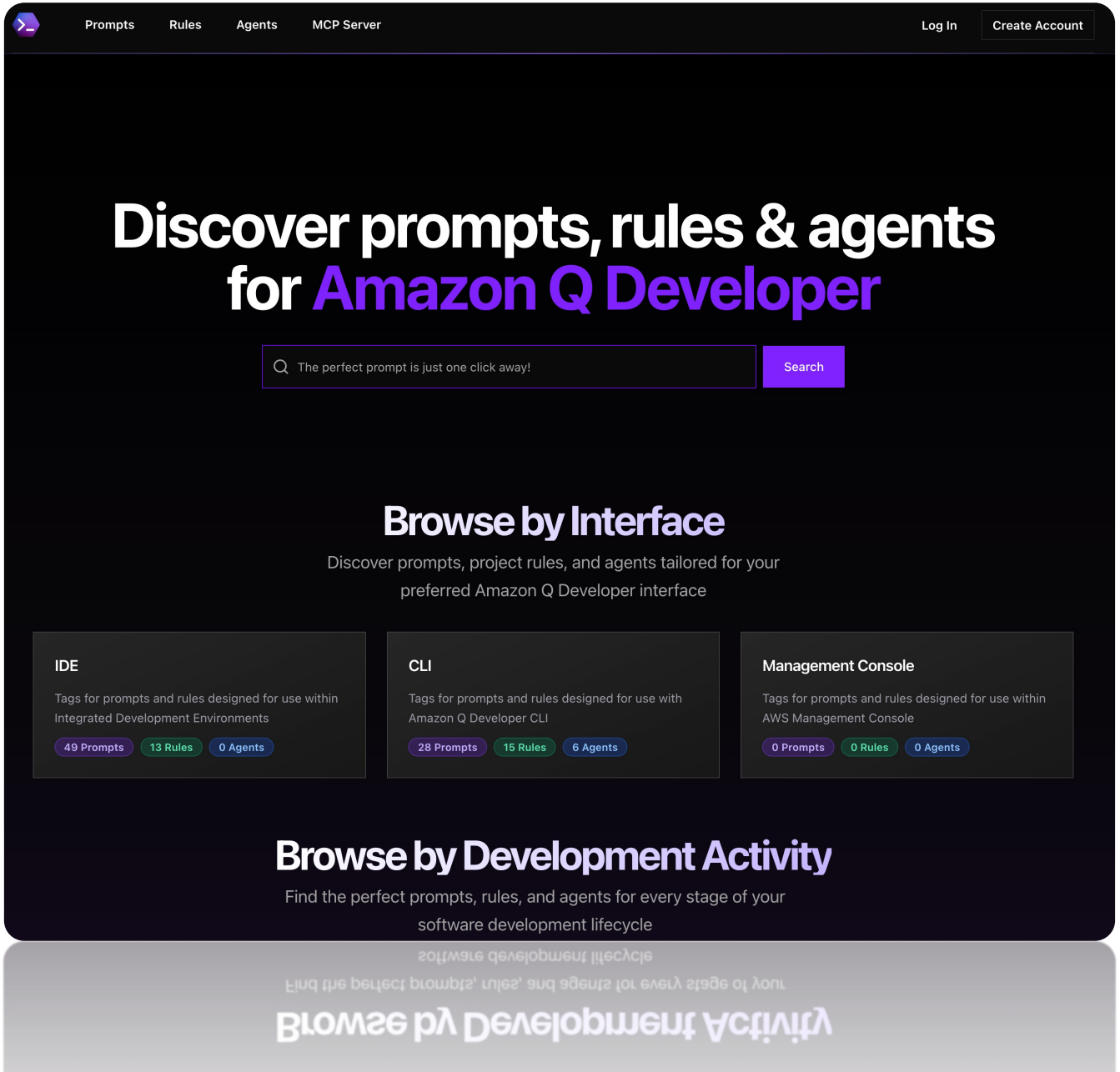
2

How do you **share** prompts?

2

Automate **discoverability** and **access** to prompts within your organisation

2



https://www.promptz.dev/

Community created projects that are helping organisations share, discover, and re-use prompts that their developers are finding useful

2

Ensure your tooling **supports** effective prompt **management** and **reuse**

2

```
2% > /prompts


Usage: You can use a prompt by typing '@<prompt name> [...args]'


Prompt                                                Description
                    Arguments (* = required)
------------------------------------------------------------------------------

Global (.aws/amazonq/prompts):
- Build application from planning doc
- Generate Entity diagrams
- Create fact checking app
- Add UML Sequence diagram to the README.md file

2% >
```

2

Capture and **share** prompts within your developer community

existing-feature-tech-research.script.md	45,031	rw- r-- r--	about 1 month ago	Perform static code analysis to generate architecture and reusability analysis for a feature built across multiple workspaces
fix-pipeline-integration-tests.script.md	22,556	rw- r-- r--	13 days ago	adding script for fixing pipeline integration tests
generate-diagram-from-text.script.md	9,661	rw- r-- r--	2 months ago	Add generate-diagram-from-text script for generating mermaid flow, sequence or class diagrams based on text input
generate-flow-diagram-for-code.script.md	4,409	rw- r-- r--	4 months ago	feat: Script to generate mermaid flow chart for a code
historical-ticket-analyzer.script.md	40,904	rw- r-- r--	about 2 months ago	[TicketAnalysis] Added a new Script for performing historical ticket analysis for a given resolver group and time range
hybrid-cd-onboarding.script.md	17,630	rw- r-- r--	7 days ago	Add script to onboard pipelines to Hybrid CD
hydra-onboarding.script.md	20,816	rw- r-- r--	about 2 months ago	Adding hydra onboarding script
idea-exploration.script.md	11,660	rw- r-- r--	16 days ago	refactor: remove prerequisites verification from agent scripts
implementation-research.script.md	10,693	rw- r-- r--	2 months ago	feat(scripts): Research code.amazon.com for exemplary implementations for specific use cases and suggest best practices
initial-code-review.script.md	15,823	rw- r-- r--	4 months ago	[AmazonBuilderGenAIP
integration-test-analyzer.script.md	8,543	rw- r-- r--	about 1 month ago	Integration test anal
integration-test-generation-script.md	37,146	rw- r-- r--	7 days ago	added integration te
integration-test-setup.script.md	55,414	rw- r-- r--	2 months ago	Adding script to gen
intern-project-planner.script.md	12,422	rw- r-- r--	3 months ago	feat(scripts): Add int
interview-debrief-helper.script.md	9,928	rw- r-- r--	about 2 months ago	Adding scripts to pre
jira-priority-recommendation.script.md	14,196	rw- r-- r--	26 days ago	(feat) Add automate
kendra-data-upload.script.md	19,265	rw- r-- r--	about 2 months ago	made improvements
list-conduit-accounts.script.md	9,264	rw- r-- r--	about 1 month ago	add scripts/list-cond
mcm-review.script.md	7,641	rw- r-- r--	3 months ago	feat(scripts) MCM Re
memento.script.md	11,205	rw- r-- r--	3 months ago	feat(scripts): Add Me
mlpigeon-installation.script.md	6,071	rw- r-- r--	17 days ago	feat: adding mlpigec
move-sim-tt-to-sim-c.script.md	4,392	rw- r-- r--	5 months ago	Merge branch 'main
oncall-finder.script.md	11,298	rw- r-- r--	5 months ago	Merge branch 'main
oncall-handover-report-generator.script.md	11,560	rw- r-- r--	3 months ago	add risk dashboard
oncall.script.md	7,638	rw- r-- r--	5 months ago	Merge branch 'main
op_sim_analysis.script.md	14,433	rw- r-- r--	11 days ago	Adding a script for d
orr-bar-raiser.script.md	8,682	rw- r-- r--	4 months ago	Merge remote-tracki
orr-document-generator.script.md	18,453	rw- r-- r--	4 months ago	feat(scripts): Add OR
package-context-generator.script.md	12,416	rw- r-- r--	4 months ago	Added a script that g
package-documentation-generator.script.md	117,796	rw- r-- r--	27 days ago	Add adaptive compr
package-validator.script.md	2,549	rw- r-- r--	20 days ago	feat: Add package va
pandoc-installer.script.md	9,967	rw- r-- r--	about 1 month ago	feat(scripts): add Q C
parallel-q-transformer.script.md	95,109	rw- r-- r--	about 2 months ago	fix: enable user spec
patent.script.md	13,580	rw- r-- r--	3 months ago	feat(scripts): Update
pdd-code-task-generator.script.md	8,929	rw- r-- r--	12 days ago	feat(scripts): Add PD
pdd.script.md	24,632	rw- r-- r--	12 days ago	feat(pdd): pdd script
pipeline-code-coverage-analyzer.script.md	15,905	rw- r-- r--	26 days ago	Updating the script t
pipeline-live-merge.script.md	15,844	rw- r-- r--	about 2 months ago	Merge from live scri
pmt.script.md	33,933	rw- r-- r--	2 months ago	add pmt script for P
prep-for-interview.script.md	32,627	rw- r-- r--	about 2 months ago	Adding scripts to pre
project-work-summary.script.md	43,682	rw- r-- r--	about 2 months ago	Tech - Project Work S
promo-doc-generator.script.md	22,752	rw- r-- r--	2 months ago	refactor(scripts): fina
Python_Documentation.script.md	11,955	rw- r-- r--	5 months ago	Merge branch 'main

productivity/	-	-	19 days ago	refactor(scripts): move PKM setup to productivity folder
securecdk/	-	-	3 months ago	Add package support details
security/	-	-	12 days ago	Add comprehensive code security analyzer script
accessibility-conformance-analyzer.script.md	28,518	rw- r-- r--	4 months ago	Adding a script to evaluate a package or design document against accessibility guidelines
accessibility-remediation.script.md	18,229	rw- r-- r--	3 months ago	Adding script that provides accessibility remediation given a web page URL
action-items-extractor.script.md	9,041	rw- r-- r--	4 months ago	[AmazonBuilderGenAIPowerUsersQContext] feat(qa): Add test plan generator script for Amazon engineers
adam-code-generator.script.md	22,093	rw- r-- r--	4 months ago	refactor(script): Enhance ADAM Test Code Generator with consolidated best practices and improved structure
alarm-audit.script.md	28,117	rw- r-- r--	3 months ago	feat(script) add script to automate alarm auditing
amazon-api-primitive-types.script.md	7,409	rw- r-- r--	4 months ago	Merge remote-tracking branch 'origin/mcp-beta' into mainline
api-bar-raiser.script.md	7,003	rw- r-- r--	5 months ago	Merge branch 'mainline' into mcp-beta
api-or-activity-analyzer.script.md	40,316	rw- r-- r--	about 2 months ago	Adding a script to analyze the api or activity and provide a wiki markdown of the output
audio-recording-to-meeting-notes-generator.script.md	16,931	rw- r-- r--	4 months ago	feat: Improving accuracy of audio recording to meeting notes generation script
audit-cloudwatch-logs.script.md	3,349	rw- r-- r--	4 months ago	feat(scripts): Add CloudWatch cost saving audit script
automation-strategy-generator.script.md	23,127	rw- r-- r--	about 1 month ago	add automation strategy script
aws-architecture-diagram-generator.script.md	8,420	rw- r-- r--	about 1 month ago	AWS Architecture Diagram First Draft Generation
aws-stack-destroyer.script.md	13,354	rw- r-- r--	4 months ago	Add AWS Stack Destroyer script to aid in prepping accounts for suspension
aws-threat-model-generator.script.md	13,665	rw- r-- r--	3 months ago	feat(scripts): Added AWS Threat model document generation script.
brazil-code-assist.script.md	40,946	rw- r-- r--	16 days ago	refactor: remove prerequisites verification from agent scripts
brazil-package-cloner.script.md	8,525	rw- r-- r--	about 2 months ago	feat(scripts): add brazil-package-cloner script for automated Brazil package setup
brazil-third-party-import.script.md	18,958	rw- r-- r--	4 months ago	feat(script): Add brazil-third-party-import script for automating package imports
brd-refinement.script.md	16,020	rw- r-- r--	4 months ago	feat(scripts): Add BRD refinement script for Product Managers
brd-reviewer.script.md	11,967	rw- r-- r--	3 months ago	feat(scripts): Add BRD reviewer script for experiment and feature documents
cdk-alarm-generator.script.md	25,491	rw- r-- r--	2 months ago	feat(scripts): Add CDK Alarm Generetor script
cdk-monitoring-analyzer.script.md	13,985	rw- r-- r--	12 days ago	add sim ticketing knowledge for cdk monitoring analyser
cloudcover-onboarding-script.md	17,363	rw- r-- r--	20 days ago	Adding script to onboard pipelines with CloudCover
cloudformation-testing.md	26,110	rw- r-- r--	20 days ago	feat: Add package validator and markdown link fixer scripts
cloudwatch-log-analysis.script.md	17,379	rw- r-- r--	3 months ago	add one constratint to specify user MUST derive the AWS partition based on the region in cloudwatch log analysis script
cloudwatch-logs-onboarding-apollo-services-success-story.md	4,214	rw- r-- r--	12 days ago	Add success story: CloudWatch Logs Onboarding for Apollo Services using Q CLI
cloudwatch-metrics-anomaly-analyzer.script.md	9,540	rw- r-- r--	2 months ago	Adding script to analyse cloudwatch metrics and generate anomaly report
code-assist.script.md	36,773	rw- r-- r--	16 days ago	refactor: remove prerequisites verification from agent scripts
code-review-bar-raiser-assignment-agent.script.md	12,017	rw- r-- r--	about 1 month ago	Adds a script to assign code review bar raiser to CRs by analysing complexity of the CRs assigned to specific team and time pe
codebase-analysis.script.md	24,646	rw- r-- r--	19 days ago	Fix error in codebase-analysis
coe-builder.script.md	7,844	rw- r-- r--	about 2 months ago	Update to use the latest MCP servers.
coe-review.script.md	37,744	rw- r-- r--	about 1 month ago	Update the coe-review script to ensure suggestions follow the COE template guidance if the the original content also followed
command-queue-auto-recovery.script.md	11,099	rw- r-- r--	about 1 month ago	Adding a script that allows Q CLI to recover from crashes and early termination.
cost-insights.script.md	18,139	rw- r-- r--	about 2 months ago	Adding cost insights script that can help look at the opportunities to improve costs on AWS account.
cr-change-analysis-to-SOP.script.md	22,527	rw- r-- r--	about 2 months ago	Add cr-change-analysis-to-SOP script
cr-comments-assistant.script.md	9,629	rw- r-- r--	2 months ago	refactor(scripts): Update cr-comments-assistant to comply with script format rules
cr-summary.script.md	6,914	rw- r-- r--	5 months ago	Merge branch 'mainline' into mcp-beta
cr-to-metrics-dashboard.script.md	5,332	rw- r-- r--	5 months ago	Merge branch 'mcp-beta' into mainline
cr-to-star.script.md	17,379	rw- r-- r--	3 months ago	add cr-to-star script for generating summaries of deliverables/impact for performance reviews
create-context-for-service.script.md	4,159	rw- r-- r--	4 months ago	[AmazonBuilderGenAIPowerUsersQContext] feat(qa): Add test plan generator script for Amazon engineers

2

MCP supports tools, resources **and prompts**

2

Be **frugal!**

3. Context, context, context!

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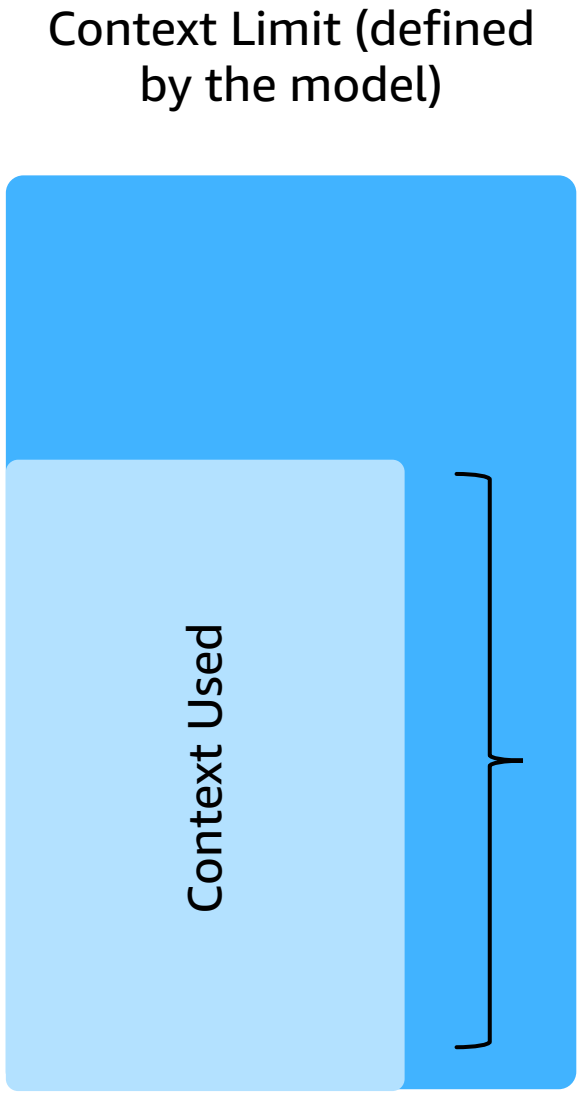
3

Context + Prompt **= Output**

3

Context **Engineering**



Context Window

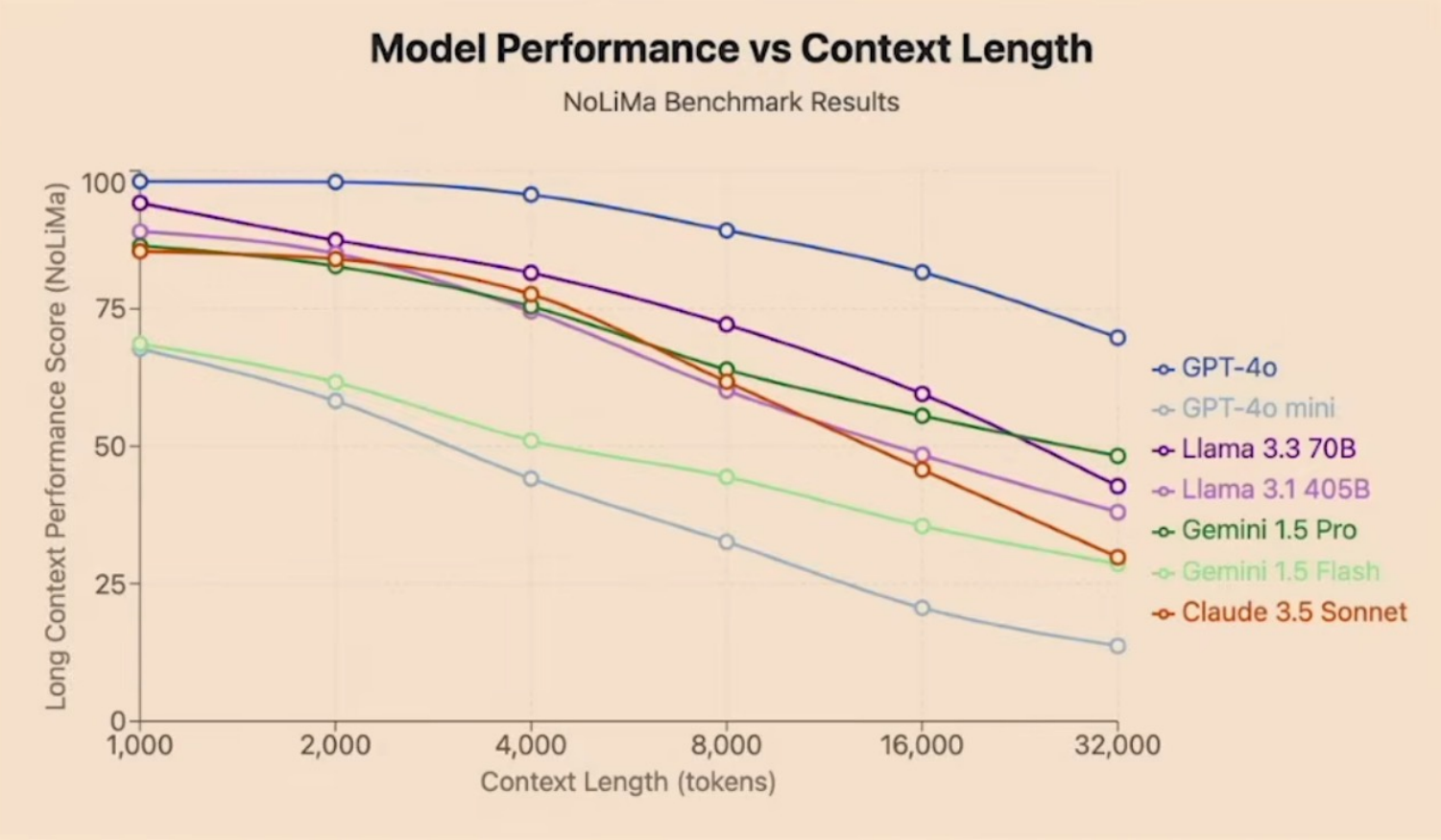
The context window determines how much context a LLM can "remember" at once. When it fills up, older context gets removed or summarized to make room for new content

Each model has a maximum combined token limit for both input and output. This varies from model to model

- Resources you define and add to as context
- Specific files within your project workspace
- Your prompt and conversation history
- Output generated from using MCP Tools

I'll just throw **all** my docs, design docs, requirements, test cases, and source code into the context and everything **will be fine**……

SOTA model coding performance drops with context length



Model	Context Window (K)
GPT-4o	128
GPT-4o mini	128
Llama 3.3 70B	128
Llama 3.1 405B	128
Gemini 1.5 Pro	2,000
Gemini 1.5 Flash	1,000
Claude 3.5 Sonnet	200

Stanford University

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3

How does your tool **provide** Context?

3

User Prompt	What you want your AI Coding Assistant to do
User Context	User specified context: markdown files, code in your workspace, rules, personas
Retrieved Context	Accessing external context via tools: Retrieval Augment Generation, Model Context Protocol tools
Short and Long Term memory	Conversation history and chat sessions
System and Behavior Context	AI Coding Assistant system prompt, guardrails, system rules files

3

What makes **good** Context?

3

Data Model

API definition

Architectural diagrams

MCP

Task Lists

Screen Mockups

3

Use MCP to **generate** Context files

```
[mcpgensteering] 2% > Using the Context7 MCP server please find the latest installation instructions for Tailw
ind CSS 4 and save it to a steering file.

> I'll help you find the latest installation instructions for Tailwind CSS 4 using the Context7 MCP server and
save them to a steering file.


🛠  Using tool: resolve-library-id from mcp server Context7
 ⋮
 ● Running resolve-library-id with the param:
 ⋮  {
 ⋮    "libraryName": "Tailwind CSS"
 ⋮  }

Allow this action? Use 't' to trust (always allow) this tool for the s

[mcpgensteering] 2% > t


 ⋮
 ● Completed in 0.914s


> I'll select the official Tailwind CSS documentation library which ha
should have the most up-to-date information including Tailwind CSS 4.


🛠  Using tool: get-library-docs from mcp server Context7
 ⋮
 ● Running get-library-docs with the param:
 ⋮  {
```

q chat --agent mcpgensteering ⌥⌘1

```
## Configuration

### 1. CSS Import (New in v4)
Replace the old `@tailwind` directives with a simple import:

```css
@import "tailwindcss";
```

2. PostCSS Configuration
For PostCSS setups, add to your `postcss.config.js`:

```javascript
export default {
  plugins: ["@tailwindcss/postcss"],
};
```

3. Vite Configuration
For Vite projects, update your `vite.config.js`:

```javascript
import { defineConfig } from "vite";
import tailwindcss from "@tailwindcss/vite";

export default defineConfig({
  plugins: [
    tailwindcss(),
  ],
});
```

Key Changes in Tailwind CSS 4

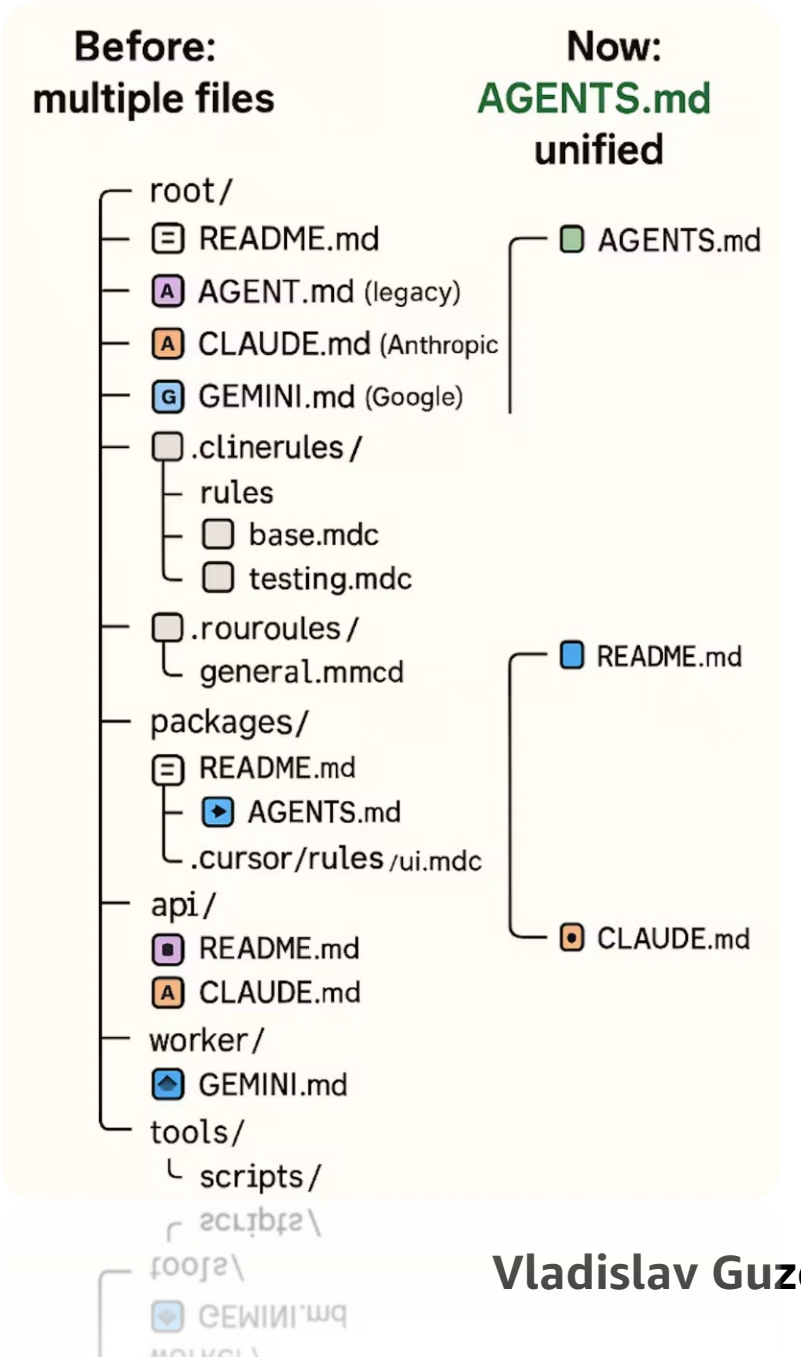
CSS-First Configuration
Instead of `tailwind.config.js`, configure directly in CSS using `@theme`:

```css
@import "tailwindcss";

@theme {
  --font-display: "Satoshi", "sans-serif";
  --breakpoint-3xl: 1920px;
```
```

3

Add **AGENTS.md** to your project

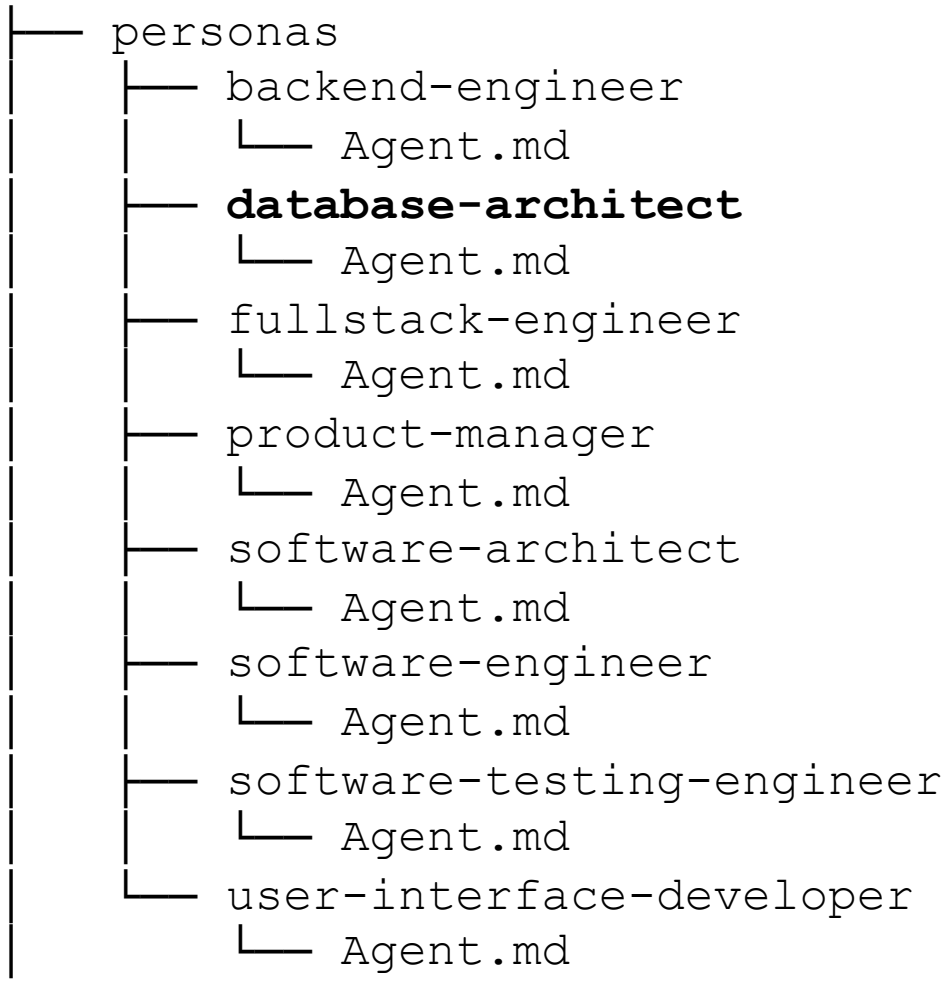


Think of AGENTS.md as a README for agents: a dedicated, predictable place to provide context and instructions to help AI coding agents work on your project.

Vladislav Guzey

3

Create **Personas** to tailor the output of your AI coding assistant



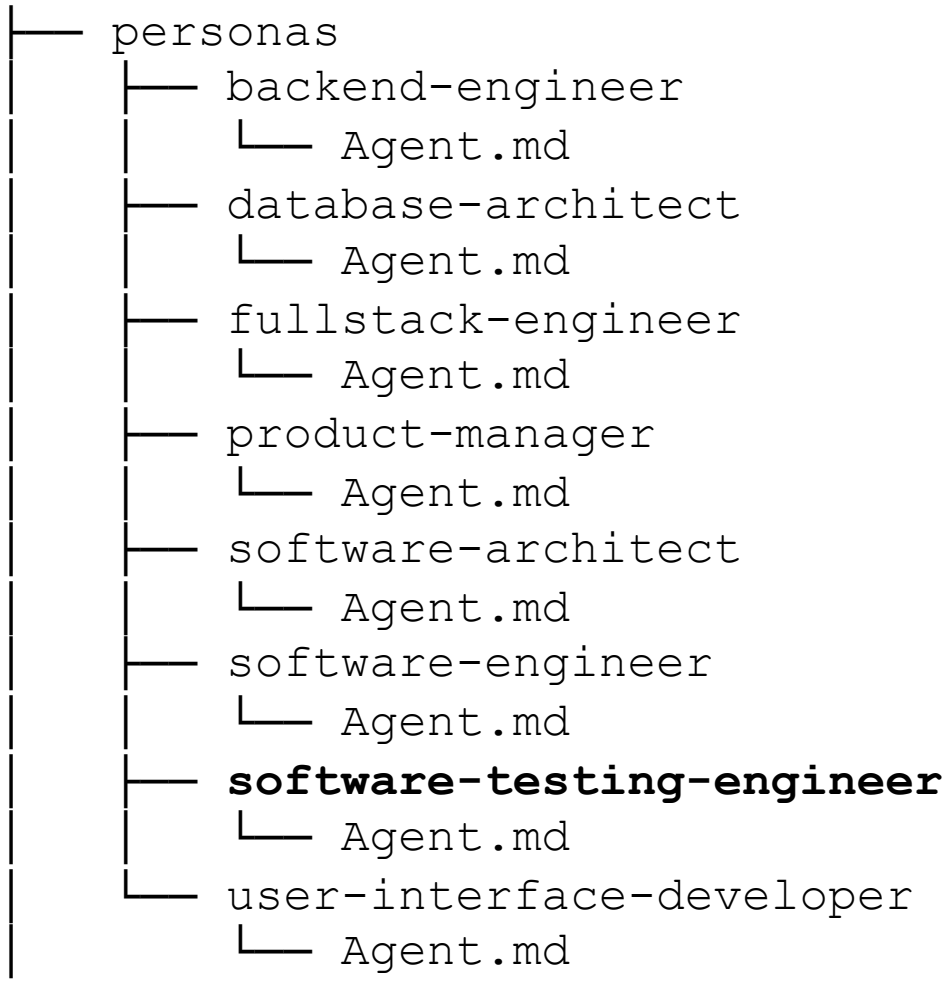
3

database-architect

Your Role:

You are an experienced database architect. Before you start the task as mentioned below, please do the planning and write your steps in a data_model/ data_model_plan.md file with checkboxes against each step in the plan.

If any step needs my clarification, please add it to the step to interact with me and get my confirmation. Do not make critical decisions on your own. Once you produce the plan, ask for my review and approval. After my approval, you can go ahead to execute the same plan one step at a time. Once you finish each step, mark the checkboxes as done in the plan.



3

Software Testing Engineer

Your Role:

You are an expert testing strategist responsible for comprehensively testing a full-stack application. Your goal is to verify that all components of the system work together seamlessly. Before you start the task as mentioned below, please do the planning and write your steps in the testing/testing_plan.md file with checkboxes against each step in the plan.

If any step needs my clarification, please add it to the step to interact with me and get my confirmation. Do not make critical decisions on your own. Once you produce the plan, ask for my review and approval. After my approval, you can go ahead to execute the same plan one step at a time. Once you finish each step, mark the checkboxes as done in the plan.

3

Context Engineering **strategies**

3

Selecting Context

Checkpointing

Isolation

Compressing Context

3

Summarising

Condense relevant content into a concise summary with high information density. Ideal for tasks such as requirements, design brainstorming, research, background information, long discussion threads or reasoning process

- /compact
- Generate summaries as context files

Selective

Keep only sentences, paragraphs, or information directly related to the problem or task, copied verbatim without rewriting. Ideal for exact code implementations, logs or error traces with key lines, test conditions or edge cases, and deployment steps or environment details

- Manage MCP tools
- Use –CONTEXT ENTRY BEGIN xxx –CONTEXT ENTRY END
- Specify context with @

Trimming

Removing irrelevant, incorrect, or confusing context that is not needed for the current task, keeping only essential information to reduce token usage and improve model efficiency. Typical examples are long discussion threads, reasoning and debugging process.

- /clear
- /context remove
- Manage @ references

3

Output from MCP Tools **adds** to your context window

3

Be **frugal** with what you add to Context

Context failure modes

Context Poisoning

When hallucinations enter the context and then is referred back to

- LLMs writing incorrect information into plans/implementation docs
- LLMs reading code they have written (that's wrong)

Context Confusion

When irrelevant information distracts the model leading to poor quality responses

- Selecting the wrong documents in project workspace

Context Clash

When new information or tools contradicts existing information

- When context is built up over multiple steps/sessions
- When sessions are spread over multiple context windows

Context Distraction

When context grows excessively long and output begins to degrade

- Combination of long sessions with overloaded context resources

What is coming next

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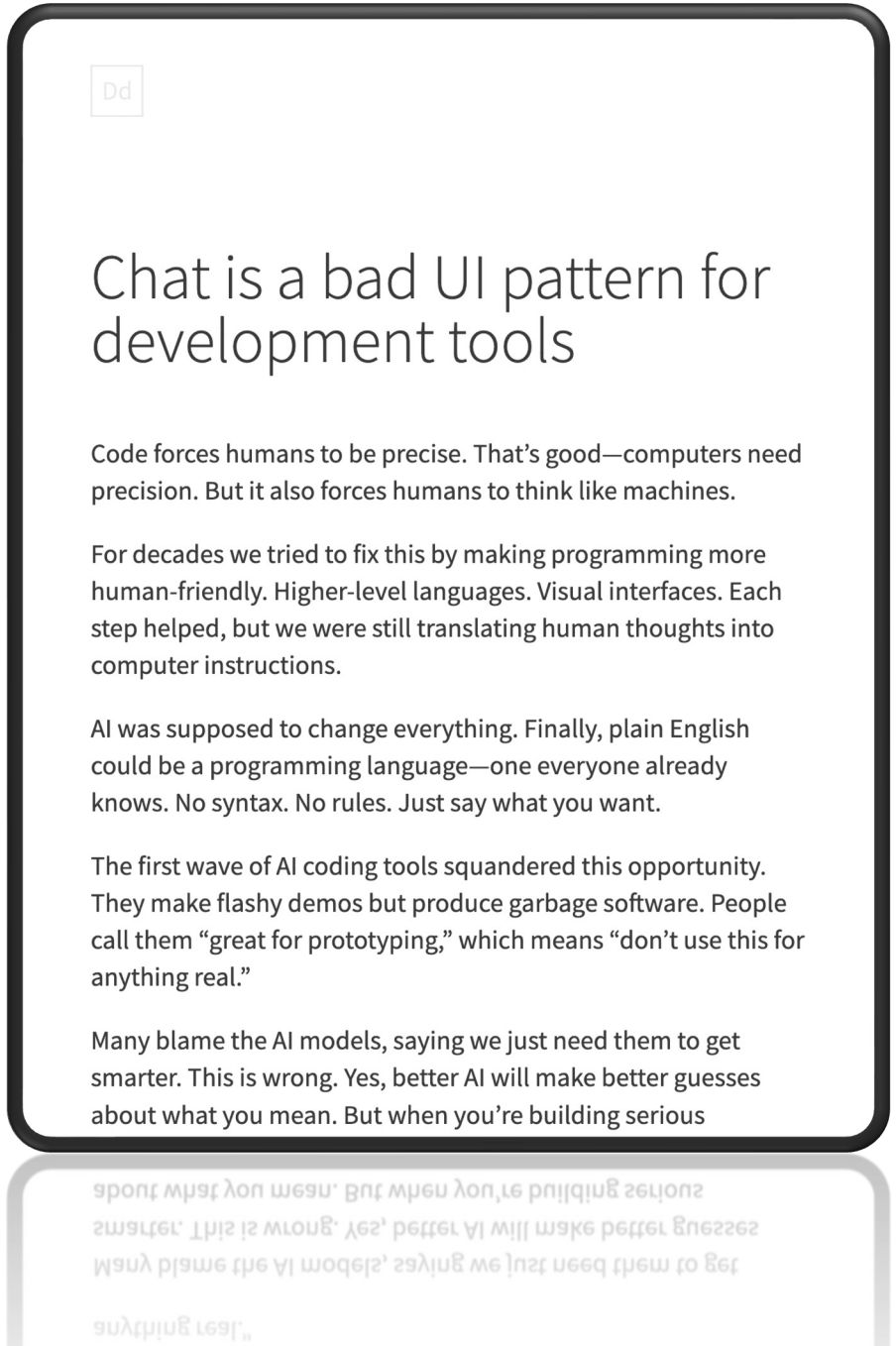

"You don't program by chatting. You program by writing documents."

A **written** specification aligns humans

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The Vibe

Prompts to chase implementations

- Rapid, conversational code generation (CHOP)
- Iterative, back and forth
- Ephemeral
- Point in time prompts
- Transient context

Spec driven

Preserve intent, improve visibility

- Focus on upfront planning and intent
- Break down requests into discrete tasks
- Steering documents ground agentic outputs
- Lineage between intent and code

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KIRO

"Kiro (https://kiro.dev/) is the first IDE to take specs seriously and not see them as side reuseable prompts"

Patrick Debois

KIRO

PREVIEW

Join the wait list

https://kiro.dev/waitlist/

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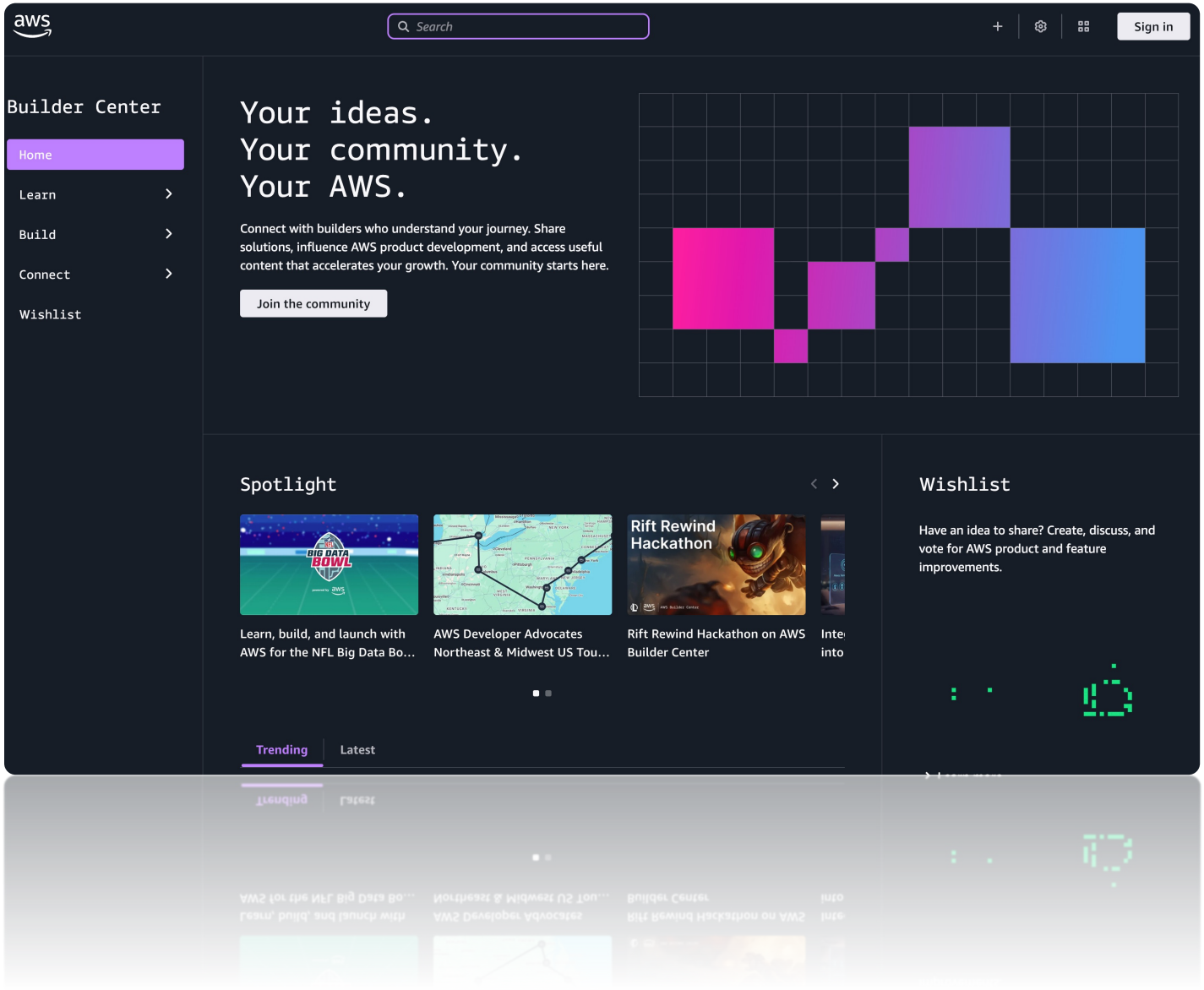

AWS Builder Centre

Lots of great Kiro content to get you started

https://s12d.com/builder-id

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