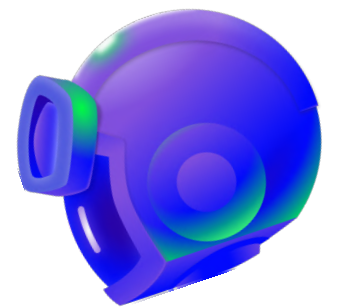


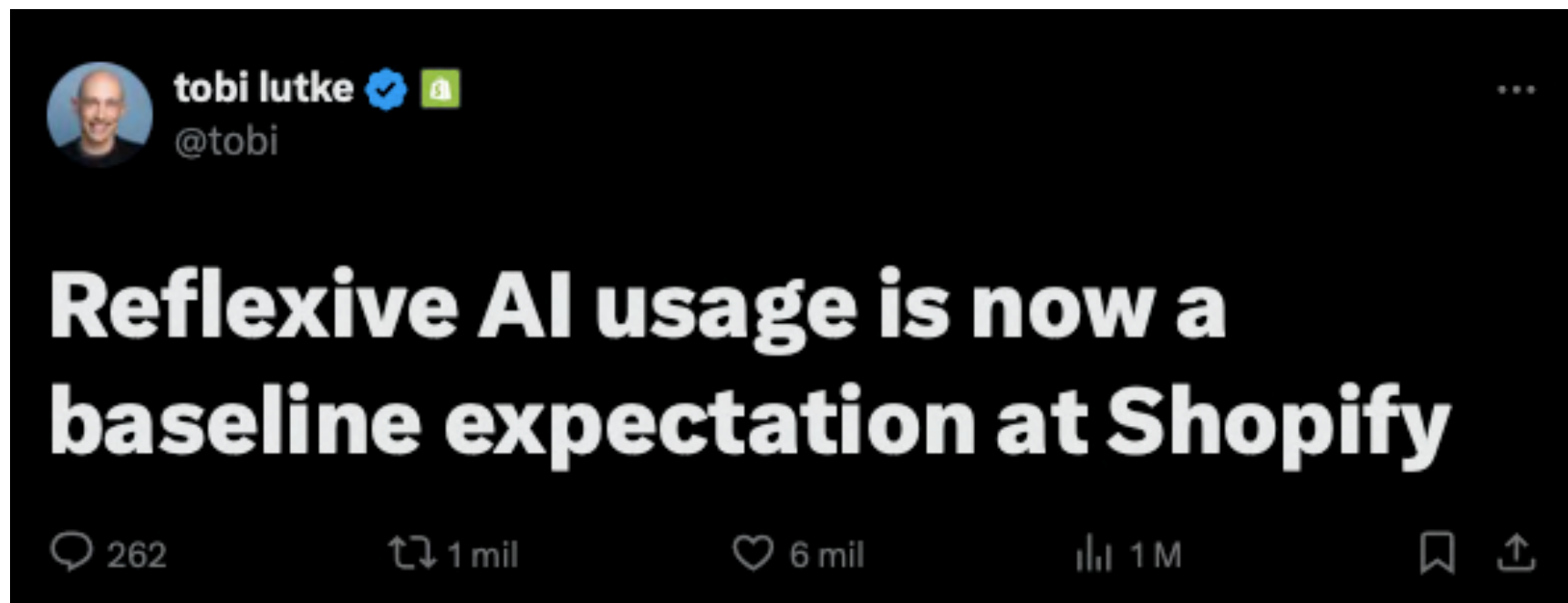
IA para desarrolladores

**Copilot, Modelos locales, IDEs,
MCP y MLOps**



Álvaro García Pizarro

"Using AI effectively is now a fundamental expectation of everyone at **Shopify**"



Time to Reach 100M Users

Months to get to 100 million global Monthly Active Users



ANTES



DESPUÉS



Aprender VS Delegar



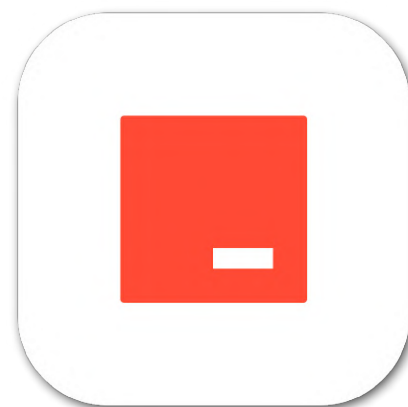
Desarrolla
con IA



IDES



Opciones





Cursor AI

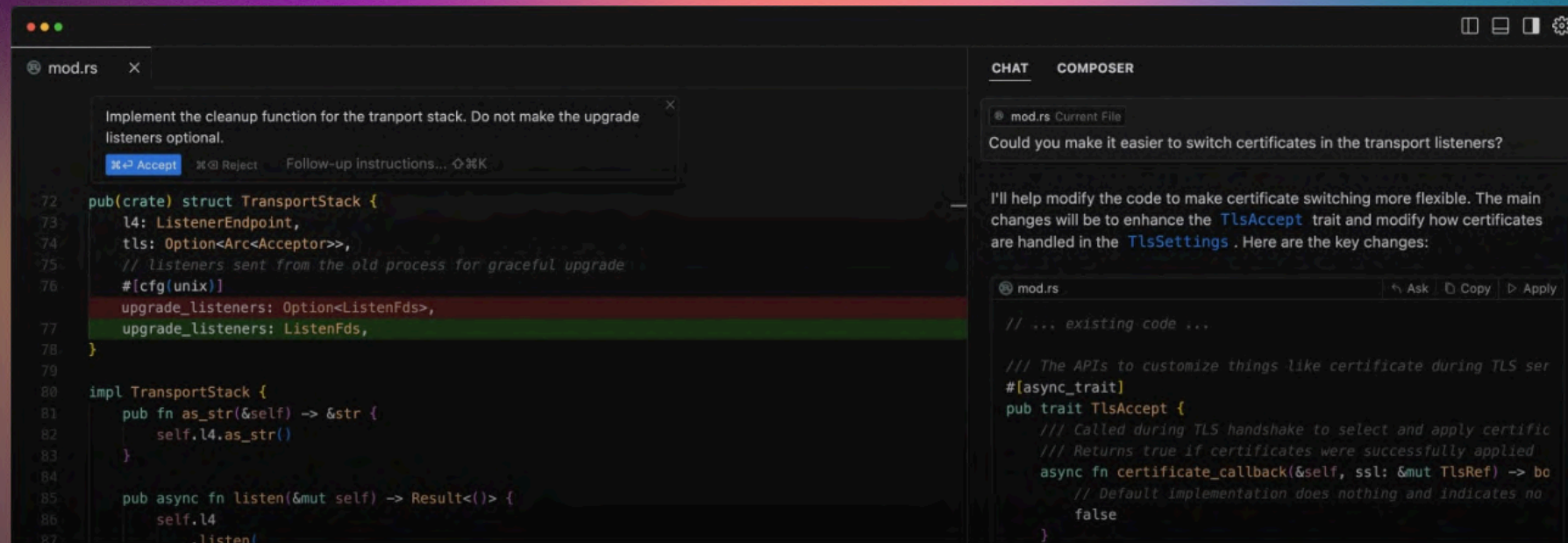
The AI Code Editor

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



DOWNLOAD FOR MACOS

ALL DOWNLOADS





Cursor AI

How do I implement a similar UI for this?

gpt-4 @ Mention Image

Screenshot 2024-10-10 at 2.38.23 AM

Screenshot 2024-10-10 at 2.37.30 AM

Screen Recording 2024-10-10 at 2.35.4

Screen Recording 2024-10-10 at 2.35.2

Use Images

Hit the image button under chat or drag an image into the input box to include visual context into chat.

Add new doc

ENTRYPOINT

<https://threejs.org/docs/>

PREFIX

<https://threejs.org/docs/>

@ NAME

Three.js

Use Documentation

Reference popular libraries using @LibraryName, or add your own using @Docs → Add new doc.



Trae

myproject

File

react-todolist

- node_modules
- public
- src
 - assets
 - components
 - TodoList.jsx
 - styles
 - TodoList.css
 - App.css
 - App.jsx
 - index.css
 - main.jsx
 - .gitignore
 - eslint.config.js
 - index.html
 - package-lock.json
 - package.json
 - README.md
 - vite.config.js

TodoList.jsx

App.css

App.jsx

TodoList.css

Builder

Chat

```
1 import { useState, useEffect } from 'react';
2 import '../styles/ToDoList.css';
3
4 const ToDoList = () => {
5   const [todos, setTodos] = useState(() => {
6     const savedTodos = localStorage.getItem('todos');
7     return savedTodos ? JSON.parse(savedTodos) : [];
8   });
9   const [inputValue, setInputValue] = useState('');
10
11   useEffect(() => {
12     localStorage.setItem('todos', JSON.stringify(todos));
13   }, [todos]);
14
15   const handleSubmit = (e) => {
16     e.preventDefault();
17     if (!inputValue.trim()) return;
18
19     const newTodo = {
20       id: Date.now(),
21       text: inputValue,
22       completed: false
23     };
24
25     setTodos([...todos, newTodo]);
26     setInputValue('');
27   };
28
29   const toggleTodo = (id) => {
30     setTodos(todos.map(todo =>
31       todo.id === id ? { ...todo, completed: !todo.completed } : todo
32     ));
33   };
34
35   const deleteTodo = (id) => {
36     setTodos(todos.filter(todo => todo.id !== id));
37   };
38
39   return (
40     <div className="todo-container">
41       <h1>ToDo List</h1>
42       <form onSubmit={handleSubmit} className="todo-form">
43         <input
```

Did You Know?

Uploading design drafts or reference images can enhance front-end development efficiency.

'↑↓' to navigate input history, '↵' to insert a new line

#Context Image

Claude 3.5-Sonnet



Windsurf

The screenshot displays the Windsurf IDE interface. On the left, the Explorer panel shows a file tree for a project named 'web-app'. The tree includes directories like '.next', 'app', 'components', 'fonts', and 'style', along with various files such as 'Button.tsx', 'Card.tsx', 'Header.tsx', 'Button.css', 'Card.css', 'Header.css', 'globals.css', 'layout.tsx', 'page.tsx', 'node_modules', 'public', '.gitignore', 'next-env.d.ts', 'next.config.ts', 'package-lock.json', 'package.json', 'postcss.config.mjs', 'README.md', 'tailwind.config.ts', and 'tsconfig.json'.

The main editor area shows the content of 'Button.css', which contains the following CSS code:

```
# Button.css > ...
1  .button {
2    padding: 8px 16px;
3    border-radius: 4px;
4    border: none;
5    font-size: 16px;
6    cursor: pointer;
7    transition: all 0.2s ease;
8  }
9
10 .button.primary {
11   background-color: #0070f3;
12   color: white;
13 }
14
15 .button.primary:hover {
16   background-color: #0051b3;
17 }
18
19 .button.secondary {
20   background-color: #f5f5f5;
21   color: #333;
22   border: 1px solid #ddd;
23 }
24
25 .button.secondary:hover {
26   background-color: #e5e5e5;
27 }
28
```

On the right side, a chat assistant is active, displaying a conversation about organizing the codebase. The assistant suggests moving component files to a 'components' directory and CSS files to a 'style' directory. It provides a list of files to be moved and offers to execute terminal commands to perform these moves. The user has responded with 'Accept'.

Can you move all of my components to components directory and css files to style directory?

I'll help you organize your codebase by moving components to a `components` directory and CSS files to a `style` directory. First, let me check the current structure of your project.

Analyzed `/Users/andyzhang/Documents/web-app/app`

I see that you already have `components` and `style` directories. I'll move:

- Component files (`.tsx`): `Button.tsx`, `Card.tsx`, and `Header.tsx` to the `components` directory
- CSS files (`.css`): `Button.css`, `Card.css`, and `Header.css` to the `style` directory

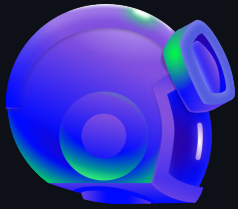
I'll use the `run_command` tool to move these files:

Ran terminal command: `mv Button.tsx Card.tsx Header.tsx components/`

Running terminal command: `mv Button.css Card.css Header.css style/`

Are you sure you want to run this command?

Waiting on response...



Copilot

Free

A fast way to get started with GitHub Copilot.

\$0 ^{USD}

Get started

Open in VS Code

^ What's included

- ✓ 50 agent mode or chat requests per month
- ✓ 2,000 completions per month
- ✓ Access to Claude 3.5 Sonnet, GPT-4o, and more

Most popular

Pro

Unlimited completions and chats with access to more models.

~~\$19~~ **\$10** ^{USD}

per month or \$100 per year

Try for 30 days free

^ What's included

Everything in Free and:

- ✓ Unlimited agent mode and chats with GPT-4o
- ✓ Unlimited code completions
- ✓ Access to code review, Claude 3.7 Sonnet, o1, and more
- ✓ 6x more premium requests to use latest models than Free, with the option to buy more¹

Free for verified students, teachers, and maintainers of popular open source projects. [Learn more](#)

Pro+

Maximum flexibility and model choice.

\$39 ^{USD}

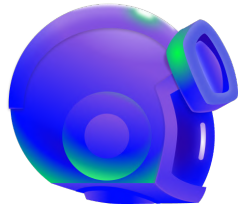
per month or \$390 per year

Get started

^ What's included

Everything in Pro and:

- ✓ Access to all models, including GPT-4.5
- ✓ 30x more premium requests to use latest models than Free, with the option to buy more¹



Copilot

[Students](#)[Teachers](#)[Schools](#)[Events](#)[Sign in](#)

GitHub Student Developer Pack

Learn to ship software like a pro. There's no substitute for hands-on experience. But for most students, real world tools can be cost-prohibitive. That's why we created the GitHub Student Developer Pack with some of our partners and friends.

[Sign up for Student Developer Pack](#)

Love the pack? Spread the word

[X Post](#)

Experiences

Discover the best ways to use pack offers with Experiences. Experiences are curated bundles of pack partner products, GitHub tools, and other resources that are designed for you learn new skills and make the most out of the Student Developer Pack and your journey in GitHub Education.



LaunchPad



LaunchPad



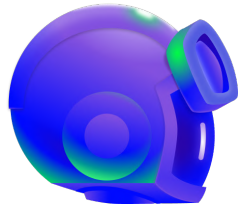
LaunchPad

				
Precio	20€	15€	0€	0€/10€
Agente				
Imagen				
Modelos	Claude Gemini DeepSeek 4o, o3 Grok	Claude DeepSeek 4o, o3	Claude DeepSeek 4o	Claude Gemini 4o, o3, o1...

Uso de



Copilot



Ask Mode

actions.md App.jsx README.md CHAT

src > App.jsx > App

```
1 import './App.css';
2
3 function App() {
4   return (
5     <div className="landing-page">
6       <header className="header">
7         <h1>Descubre Nuestra Pala de Pádel</h1>
8         <p>La mejor pala para llevar tu juego a
9         
14         <button className="cta-button">Más Info
15       </header>
16       <section className="features">
17         <h2>Características</h2>
18         <ul>
19           <li>Material de alta calidad para máx
20           <li>Diseño ergonómico para un mejor c
21           <li>Ligera y potente para un rendimie
22         </ul>
23       </section>
24       <footer className="footer">
25         <p>&copy; 2025 Nuestra Marca de Pádel.
```

More Actions...

alvarogarciapiz

Explicame el funcionamiento de este fragmento de código

App.jsx:1-24

GitHub Copilot

> Used 2 references

Este fragmento de código es un componente funcional de React llamado `App`. A continuación, te explico su funcionamiento:

1. Importación de Estilos

```
import './App.css';
```

El archivo `App.css` se importa para aplicar estilos al componente. Esto permite que los elementos del componente tengan un diseño visual específico.

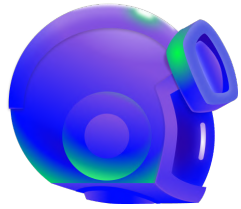
Add Context... App.jsx Current file

Ask Copilot

@

Ask GPT-4o

Ln 16, Col 37 Spaces: 2 UTF-8 LF {} JavaScript JSX Prettier



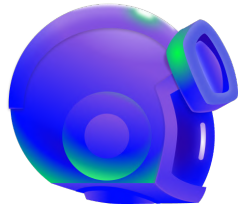
Edit Mode

The screenshot shows the VS Code editor interface with the GitHub Copilot sidebar on the right. The main editor displays a file named `App.jsx` with the following code:

```
src > App.jsx > App
1 import './App.css';
2
3 function App() {
4   return (
5     <div className="landing-page">
6       <header className="header">
7         <h1>Descubre Nuestra Pala de Pádel</h1>
8         <p>La mejor pala para llevar tu juego al siguiente nivel.</p>
9         
14         <button className="cta-button">Más Información</button>
15       </header>
16       <section className="features">
17         <h2>Características</h2>
18         <ul>
19           <li>Material de alta calidad para máxima durabilidad</li>
20           <li>Diseño ergonómico para un mejor control</li>
21           <li>Ligera y potente para un rendimiento óptimo</li>
22         </ul>
23       </section>
24       <section className="technical-info">
25         <h2>Información Técnica</h2>
26         <ul>
27           <li>Peso: 360-375 gramos</li>
28           <li>Dimensiones: 45.5 cm x 26 cm x 3.8 cm</li>
29         </ul>
30       </section>
31       <footer className="footer">
32         <p>&copy; 2025 Nuestra Marca de Pádel. Todos los derechos reservados</p>
33       </footer>
34     </div>
35   );
36 }
```

The sidebar on the right shows the **CHAT** panel with a message from **alvarogarciapiz**: "Añade una nueva sección con información técnica del producto como peso y dimensiones". Below this, the **GitHub Copilot** section shows a suggestion for `App.jsx` with a diff of `+7 -0`. At the bottom of the sidebar, the **Edit** button is circled in red.

At the bottom of the editor, the status bar shows: `Ln 16, Col 37 Spaces: 2 UTF-8 {} JavaScript JSX Prettier`.

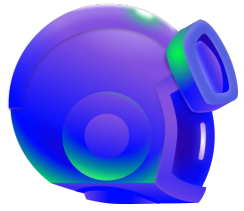


Agent Mode

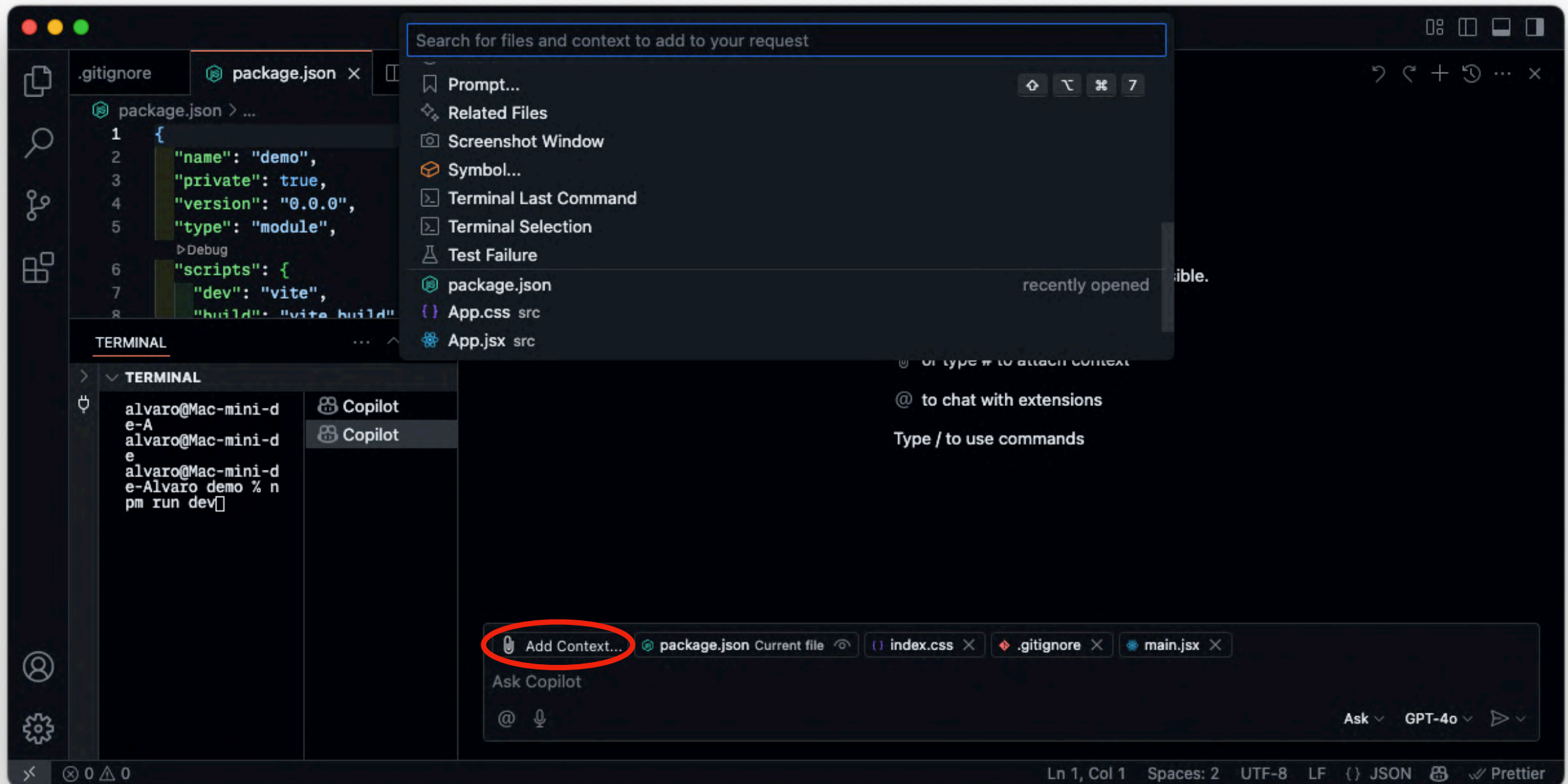
The screenshot displays the VS Code interface with the following components:

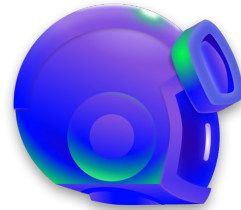
- Editor:** Shows `App.jsx` with the following code:

```
src > App.jsx > App
1  import './App.css';
2
3  function App() {
4    return (
5      <div className="landing-page">
6        <header className="header">
7          <h1>Descubre Nuestra Pala de Pádel</h1>
8          <p>La mejor pala para llevar tu juego al siguiente nivel.</p>
9          
14          <button className="cta-button">Más Información</button>
15        </header>
16        <section className="features">
```
- Terminal:** Shows the command `npm run dev` being executed. A Copilot suggestion is visible in the terminal area.
- CHAT:** Contains a message in Spanish: "Añade una nueva sección con información técnica del producto como peso y dimensiones y luego corre la aplicación". It also shows a command `npm run dev` and a message: "It seems there was an issue starting the Vite development server. Let me try running the command again to ensure the application starts properly.".
- Bottom Bar:** Shows the status bar with "Ln 16, Col 37", "Spaces: 2", "UTF-8", and "JavaScript JSX". The "Agent" dropdown menu is highlighted.



Contexto

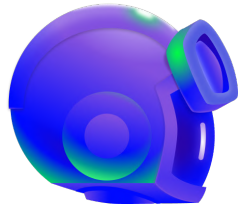




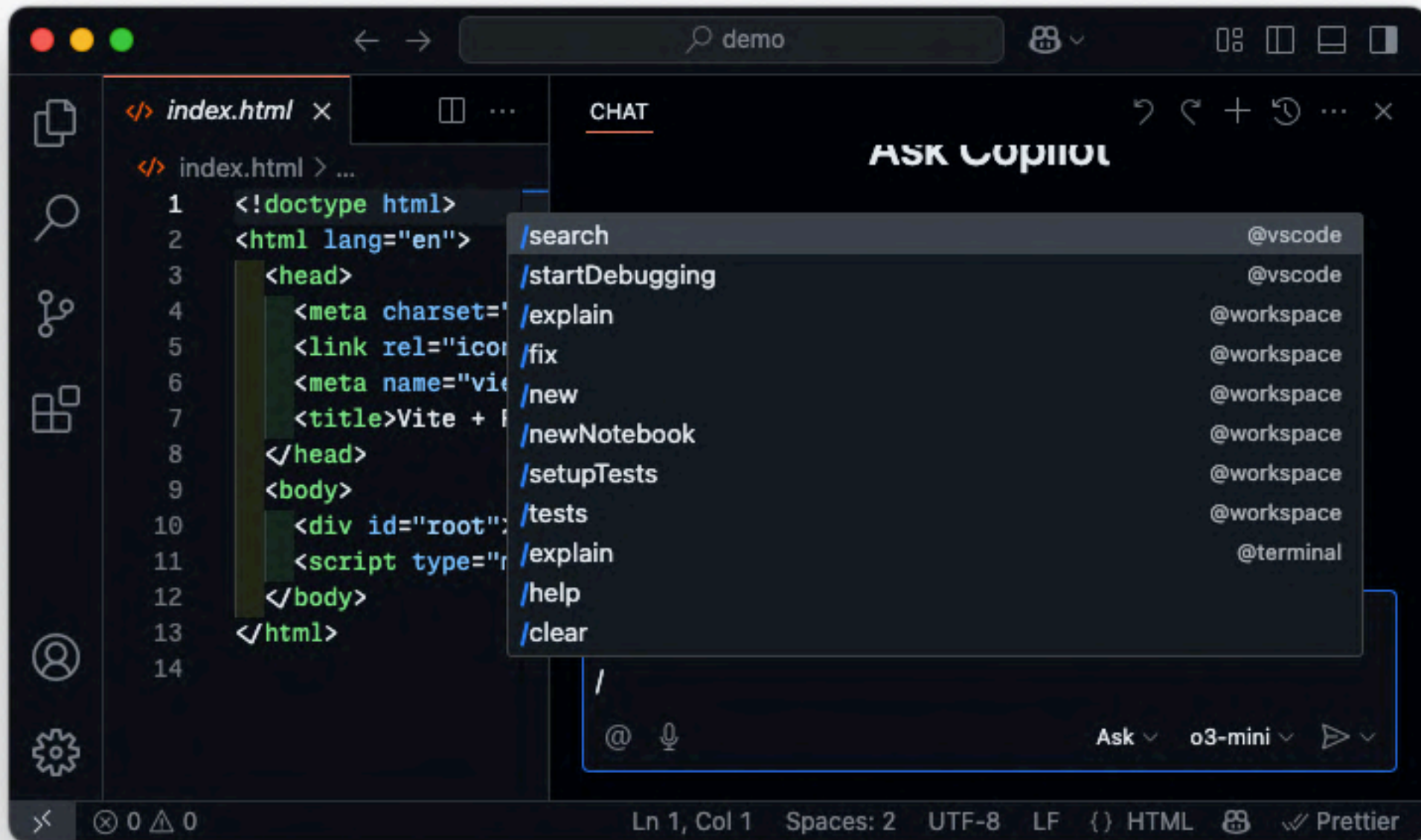
/Comandos Slash

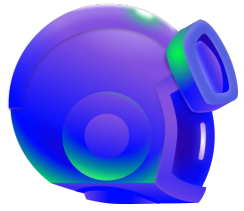
@Participantes de Chat

#Variables

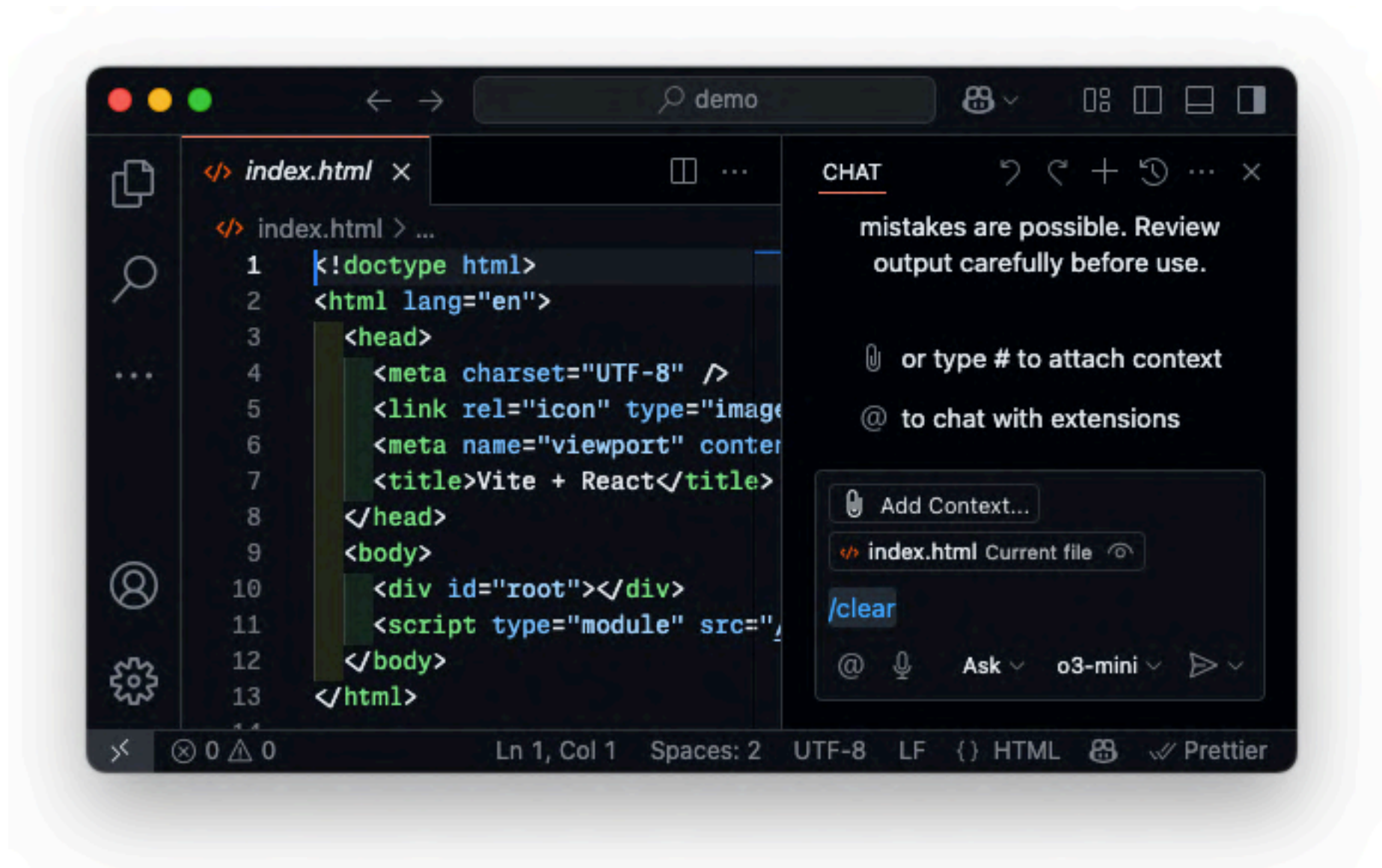


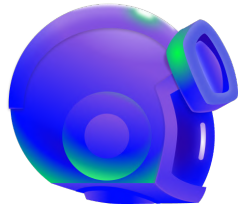
/Comandos Slash



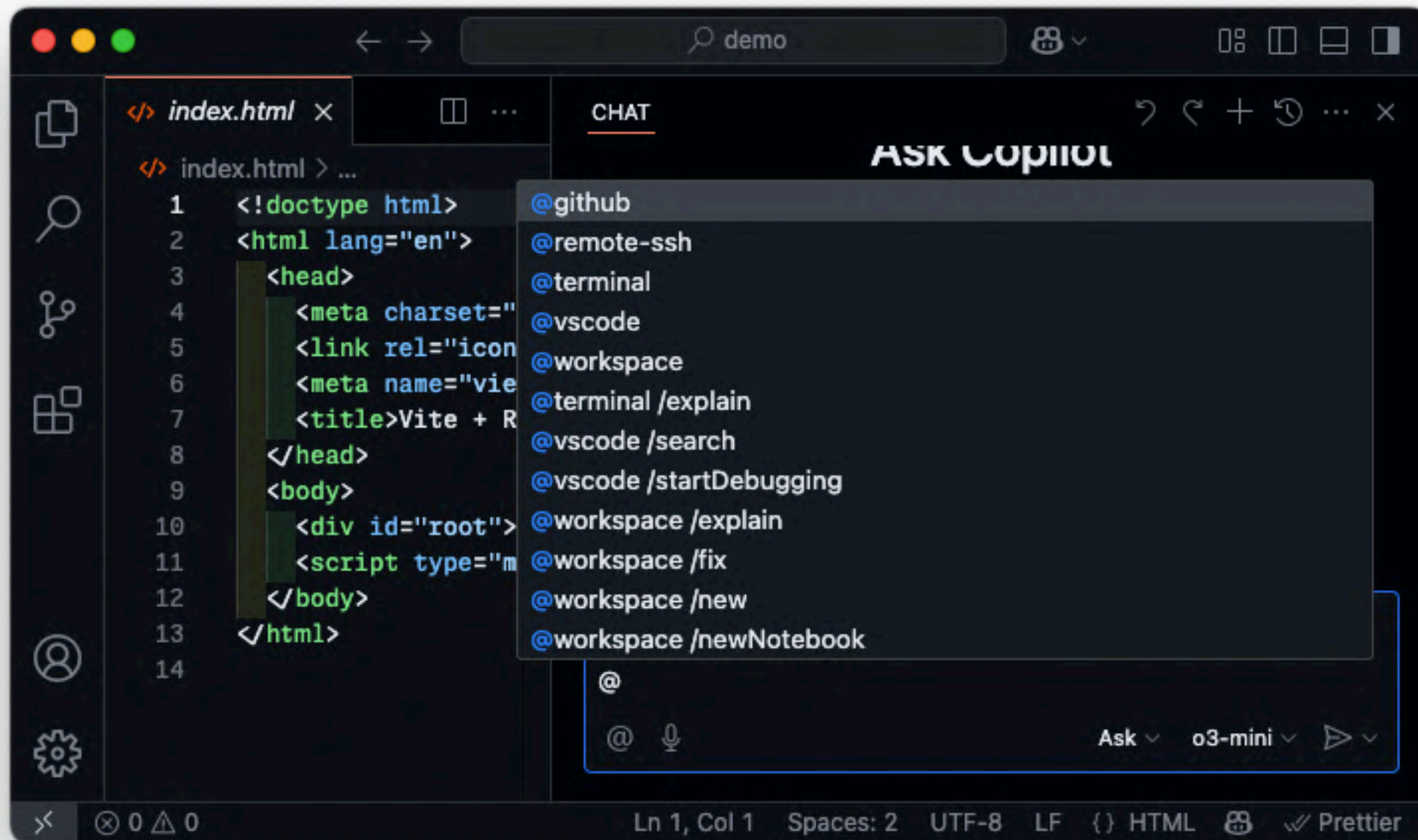


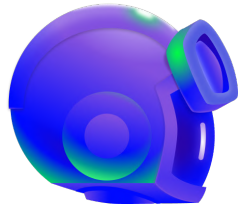
/clear





@Participantes de Chat





@terminal

The screenshot shows a code editor with a dark theme. The main editor area displays the content of `index.html`, which includes an HTML doctype, language attribute, and a meta charset declaration. Below the editor is a terminal window showing a shell prompt and a command to create a directory and move a file. On the right side, there is a chat sidebar with a message from `@terminal` suggesting a command to create a `tests` directory and move `test_user.js` to it. The chat sidebar also includes a search bar, a list of references, and a section for asking Copilot questions.

index.html

```
1 <!doctype html>
2 <html lang="en">
3 <head>
4 <meta charset="UTF-8" />
```

TERMINAL

```
alvaro@Mac-mini-de-Alvaro demo %
alvaro@Mac-mini-de-Alvaro demo % mkdir tests && mv test_user.js tests/
```

CHAT

`@terminal` crea un nuevo directorio para tests y mueve el fichero test_user.js a ese directorio

`index.html:1-14`

Terminal

Used 2 references

`mkdir tests && mv test_user.js tests/`

How do I run the tests?

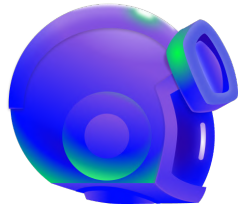
Explain the suggested command

Add Context... `index.html` Current file

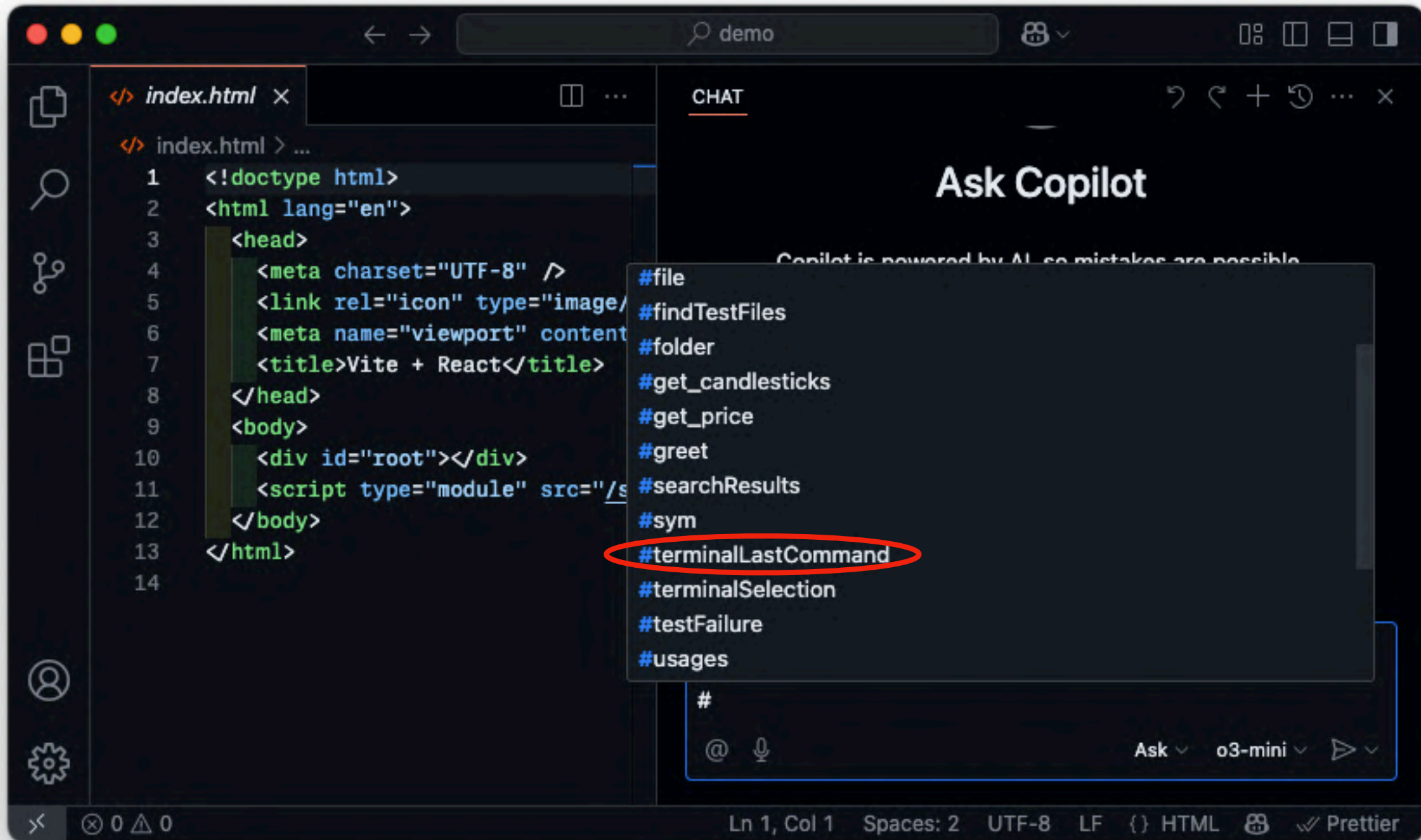
Ask Copilot

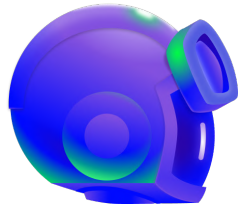
@ [microphone icon] Ask o3-mini [play icon]

Ln 1, Col 1 Spaces: 2 UTF-8 LF {} HTML Prettier

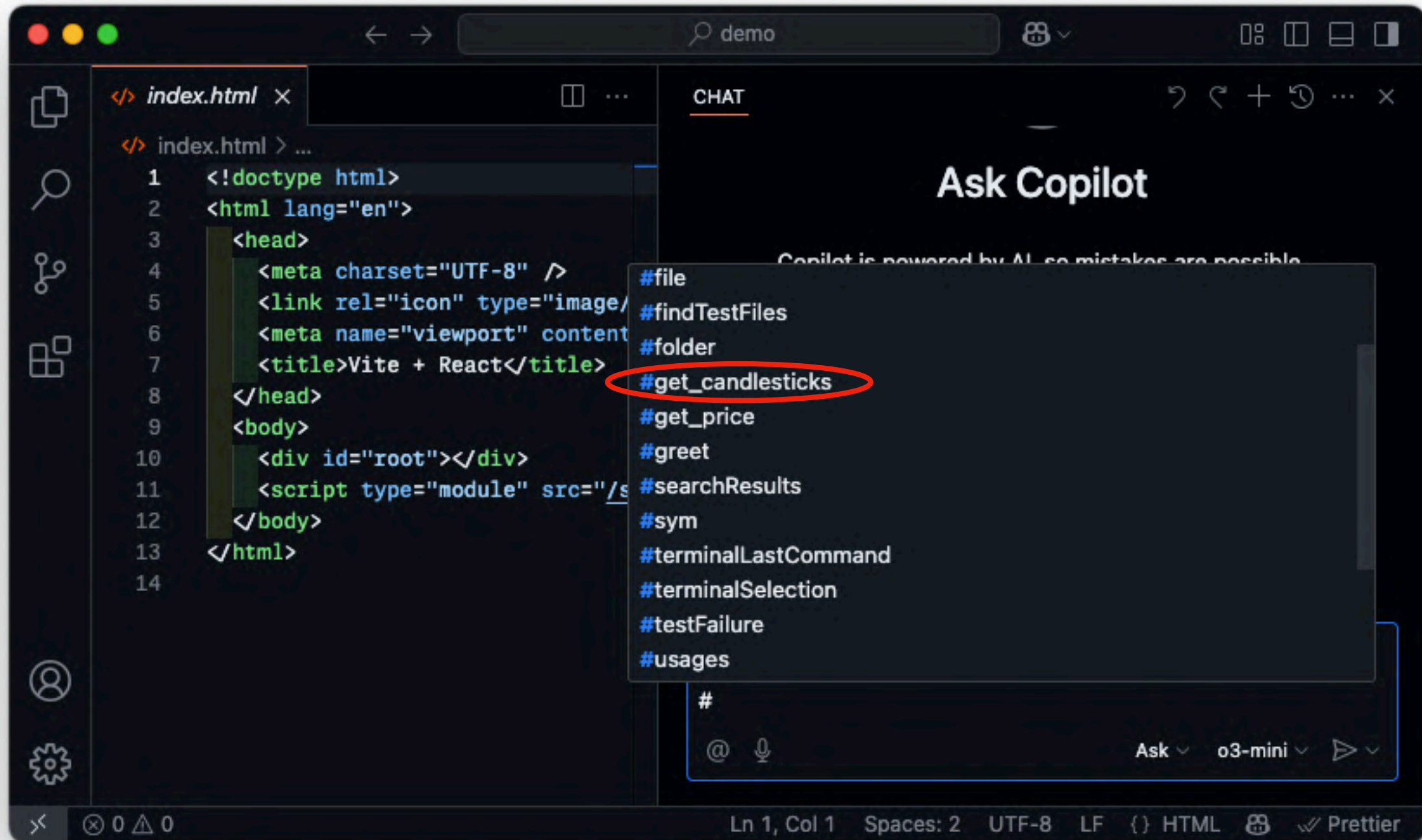


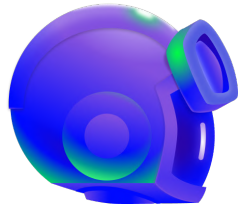
#Variables



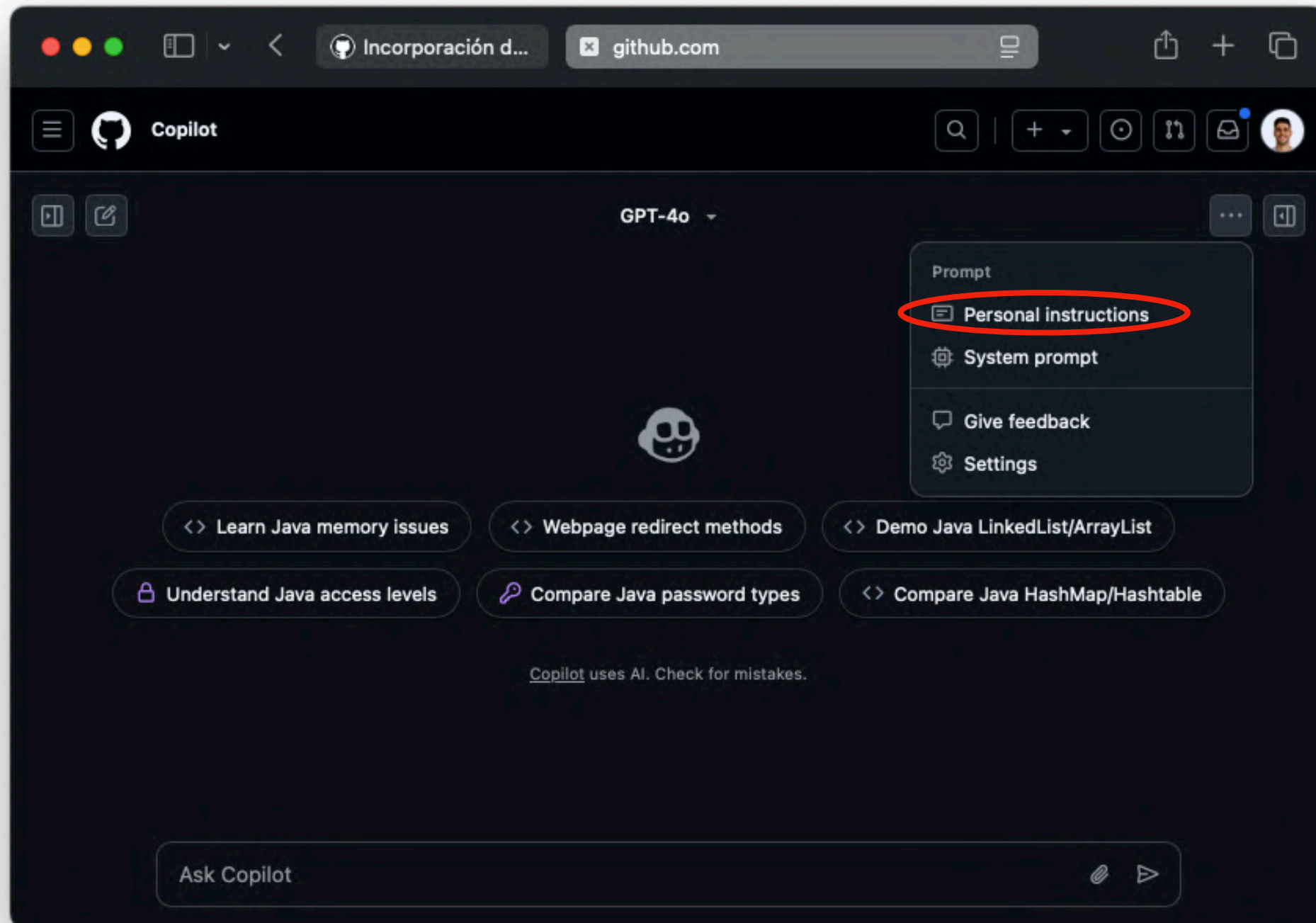


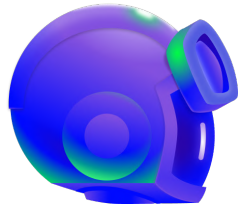
#MCP



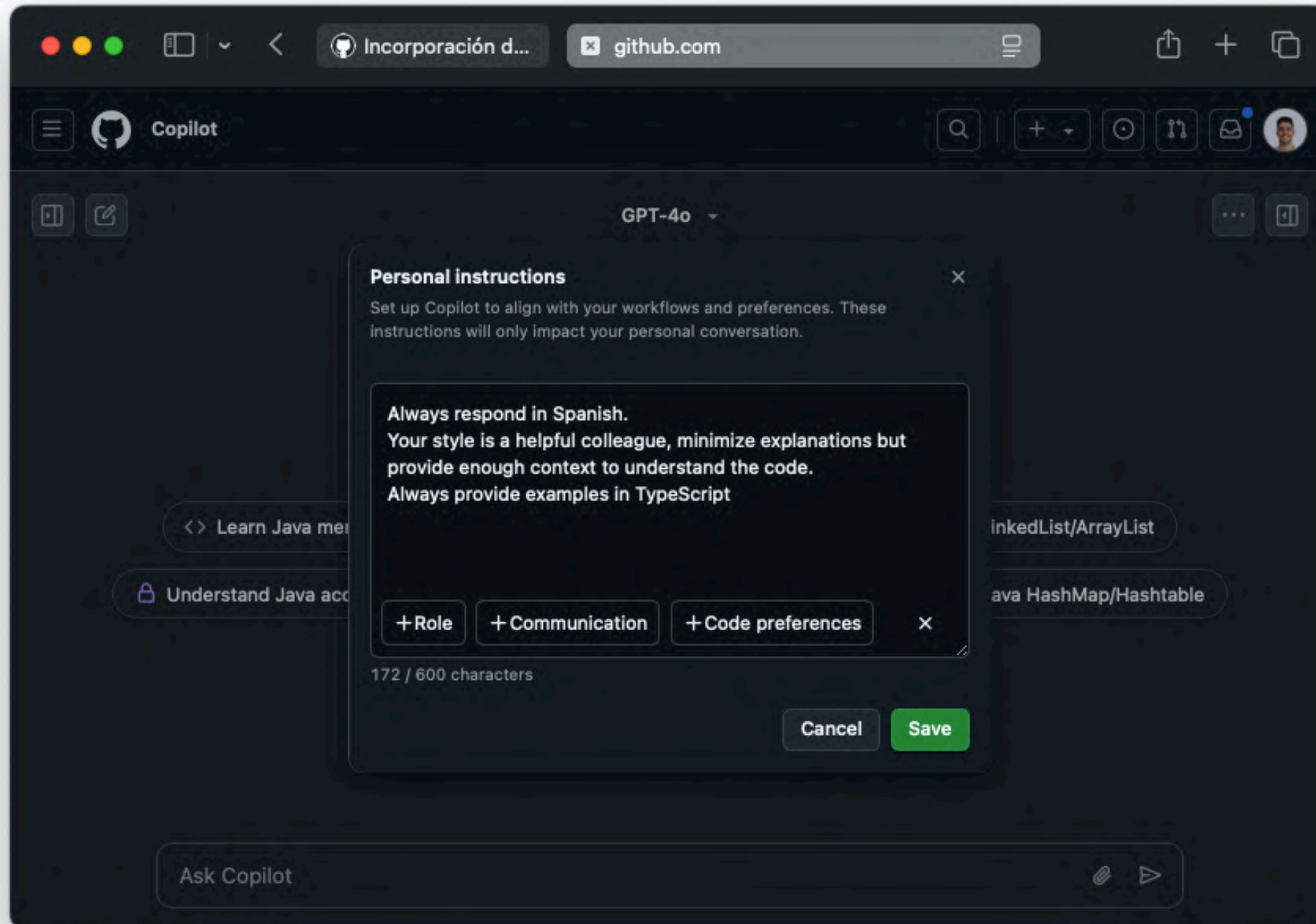


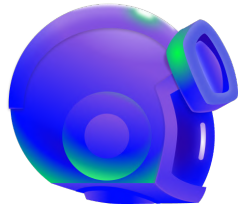
Personalizar Copilot





Personalizar Copilot

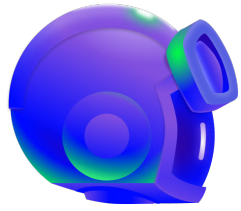




Instrucciones Personalizadas de Repositorio

`.github/copilot-instructions.md`

```
1 # Instrucciones Copilot
2
3 Invertir tiempo aquí es importante
4
5 ## ¿Cómo se gestionan las dependencias?
6 - Utilizar un gestor de paquetes adecuado (por ejemplo, npm, yarn, etc.).
7 - Mantener actualizadas las dependencias y realizar auditorías periódicas.
8
9 ## Informar de versiones
10 - Seguir un esquema de versionado semántico.
11 - Documentar cambios en un CHANGELOG.
12
13 ## Documentación
14 - Mantener la documentación actualizada y clara.
15 - Usar comentarios y README para explicar el funcionamiento.
16
17 ## Indentación
18 - Usar una indentación consistente (4 espacios o 2 espacios).
19 - Configurar el editor para mantener esta convención.
20
21 ## Tests
22 - Escribir pruebas unitarias y de integración.
23 - Asegurarse de que el código pase todas las pruebas antes de hacer merge.
```



Prompt Files

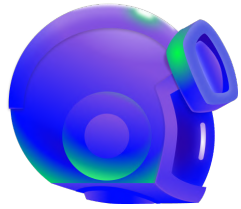
form.prompt.md

Your goal is to generate a new React form component.

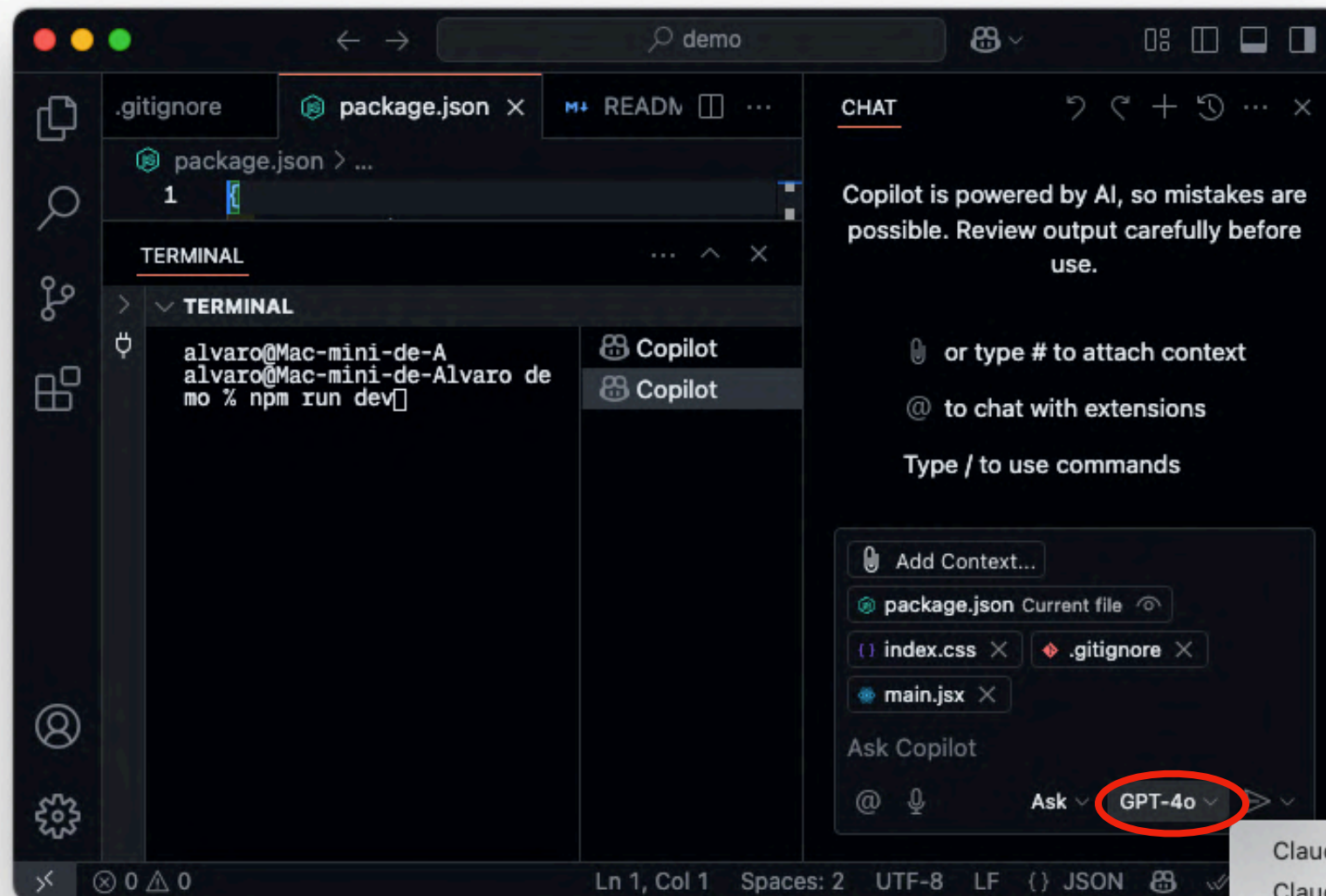
Ask for the form name and fields if not provided.

Requirements for the form:

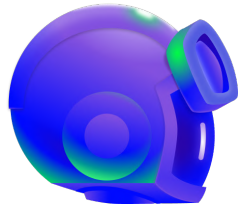
- Use form design system components: `[design-system/Form.md](../docs/design-system/Form.md)`
- Use `'react-hook-form'` for form state management:
 - Always define TypeScript types for your form data
 - Prefer **uncontrolled** components using register
 - Use `'defaultValues'` to prevent unnecessary rerenders
- Use `'yup'` for validation:
 - Create reusable validation schemas in separate files
 - Use TypeScript types to ensure type safety
 - Customize UX-friendly validation rules



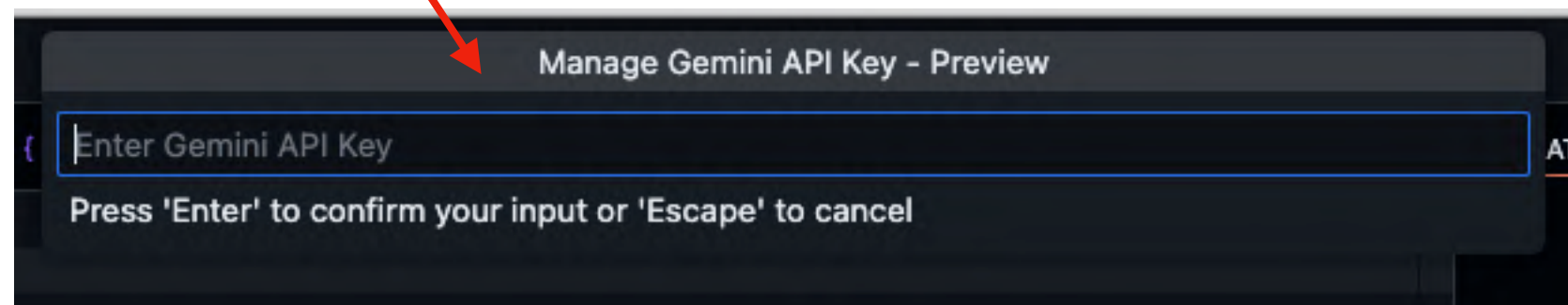
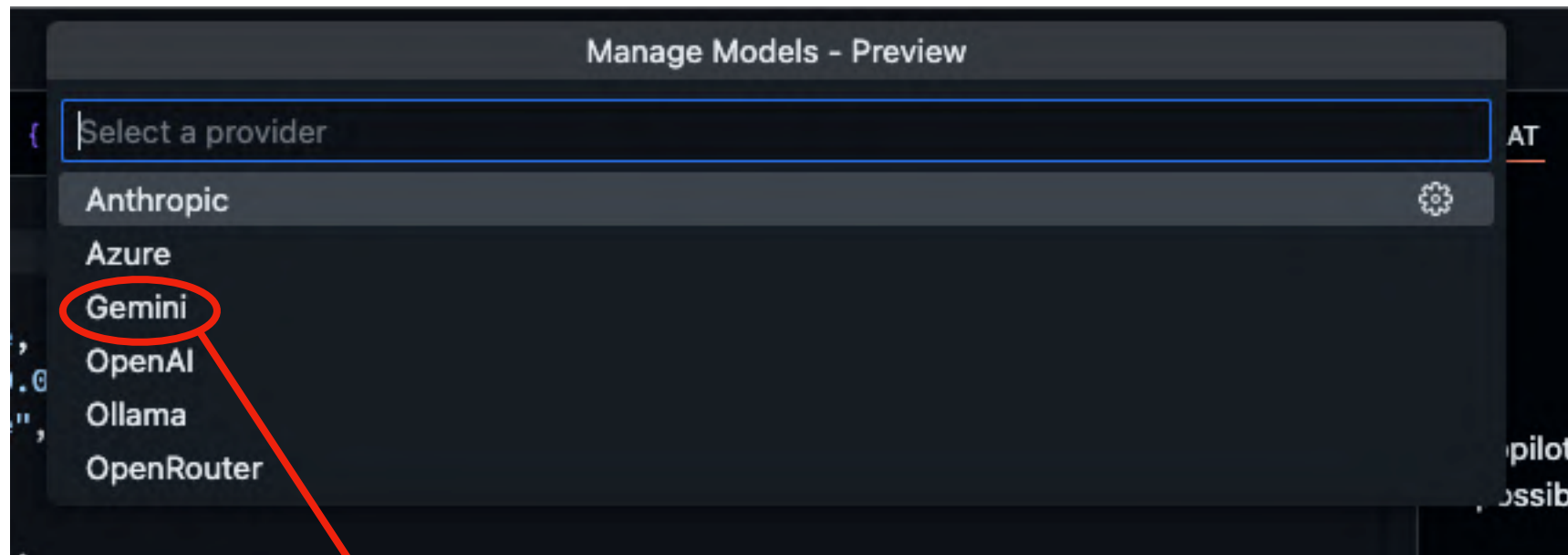
Modelos

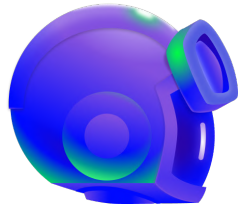


- Claude 3.5 Sonnet
- Claude 3.7 Sonnet
- Claude 3.7 Sonnet Thinking
- Gemini 2.0 Flash
- Gemini 2.5 Pro (Preview)
- ✓ GPT-4o
- o1 (Preview)
- o3-mini
- Manage Models...

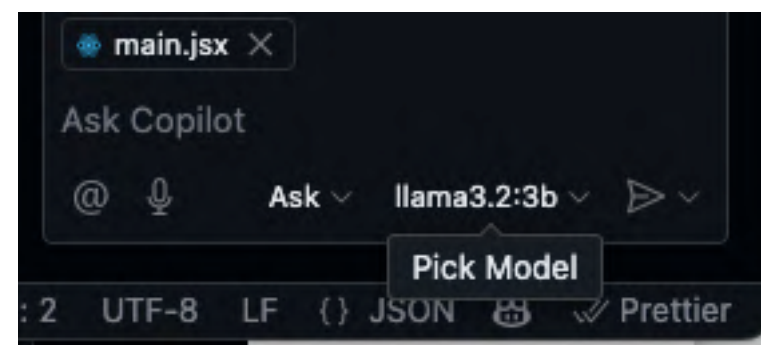
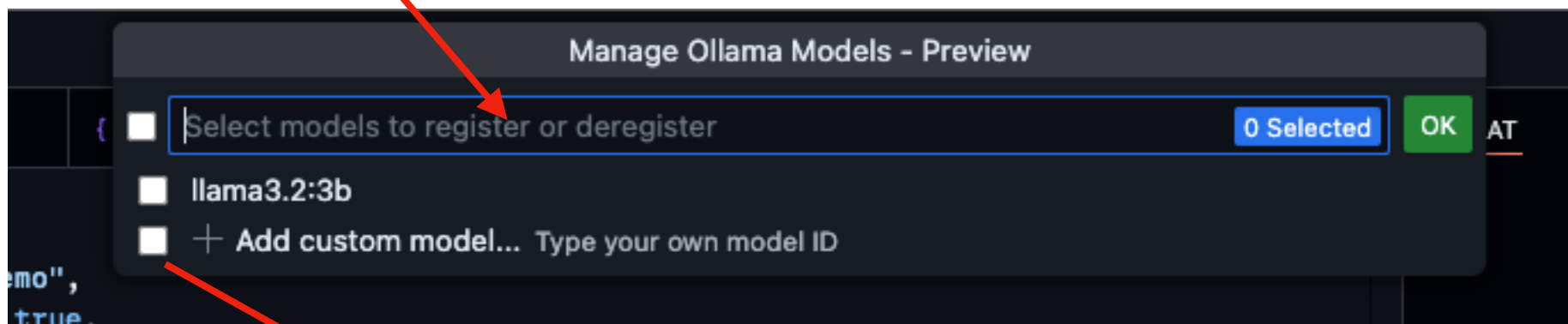
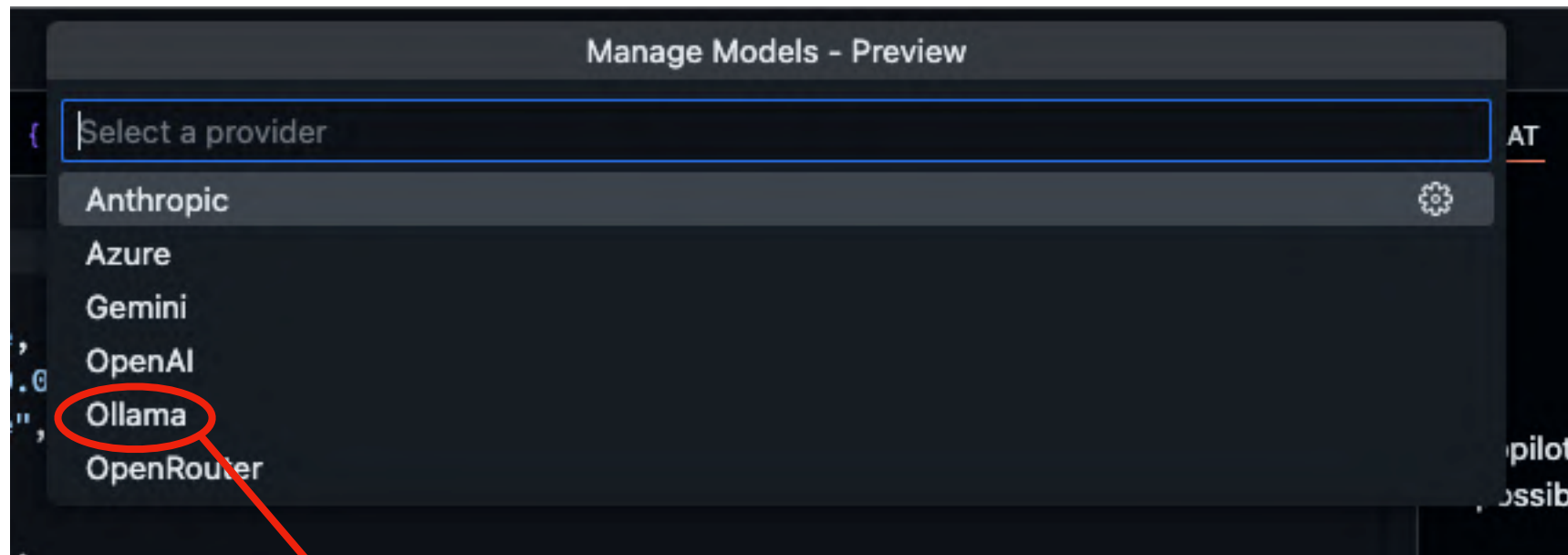


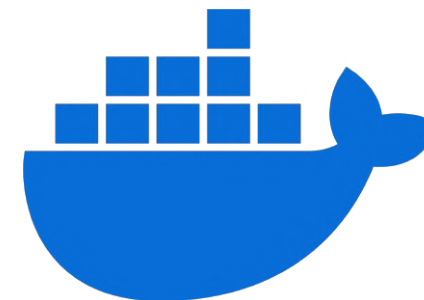
Modelos





Modelos





Modelos



locales



¿Cuándo usar modelos locales?

Procesar datos sensibles

Offline

Coste

Personalización

Integración con sistemas

Problemas de modelos locales

Requisitos Hardware

Consumo energético

Ventanas de Contexto limitadas

Uso de espacio en memoria

¿Opciones?



Docker



LMStudio



Ollama



Docker

[Products](#) ▾[Developers](#) ▾[Pricing](#)[Support](#)[Blog](#)[Company](#) ▾[Sign In](#)[Get started](#)

Run LLMs Locally with Docker: A Quickstart Guide to Model Runner



Kevin Wittek

AI is quickly becoming a core part of modern applications, but running large language models (LLMs) locally can still be a pain. Between picking the right model, navigating hardware quirks, and optimizing for performance, it's easy to get stuck before you even start building. At the same time, more and more developers want the flexibility to run LLMs locally for development, testing, or even offline use cases. That's where [Docker Model Runner](#) comes in.

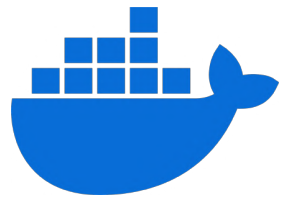
Posted

Apr 4, 2025



Categories

- Community
- Company
- Engineering
- Products



Docker - Modelos



Docker  **Verified Publisher**

 Verified Publisher  Docker  San Francisco, CA, USA  <https://www.docker.com>

Repositories

Displaying 1 to 14 of 14 repositories



ai/smollm2 

By [Docker](#) • Updated 2 days ago

Tiny LLM built for speed, edge devices, and local development

↓2.3K • ☆2

Pulls: 760
Last week



[Learn more](#)



ai/deepcoder-preview 

By [Docker](#) • Updated 8 days ago

↓257 • ☆0

Pulls: 132
Last week



[Learn more](#)



ai/qwen2.5 

By [Docker](#) • Updated 10 days ago

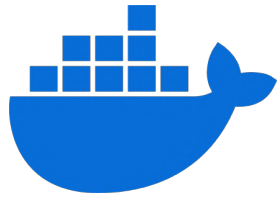
Versatile Qwen update with better language skills and wider support

↓1.1K • ☆3

Pulls: 348
Last week



[Learn more](#)



Docker - Demo

```
docker model run ai/smollm2

alvaro@Mac-mini-de-Alvaro ~ % docker model list
MODEL          PARAMETERS  QUANTIZATION  ARCHITECTURE  MODEL ID        CREATED        SIZE
ai/smollm2     361.82 M    IQ2_XXS/Q4_K_M llama         354bf30d0aa3    3 weeks ago    256.35 MiB

alvaro@Mac-mini-de-Alvaro ~ % docker model run ai/smollm2 "Top 10 countries by population"
1. China - 1.448 billion people
2. India - 1.333 billion people
3. United States - 332 million people
4. Japan - 127 million people
5. Brazil - 192 million people
6. Russia - 144 million people
7. Indonesia - 249 million people
8. Canada - 36 million people
9. Australia - 26 million people
10. Philippines - 122 million people
alvaro@Mac-mini-de-Alvaro ~ % docker model run ai/smollm2
Interactive chat mode started. Type '/bye' to exit.
> Write a simple python function to say hello
def hello():
    print("Hello")
>
```



LMStudio

Chats

Secret project

C++ Filesystem... (1600 tokens) ...

log about version of ... (56 tokens)

Financial analysis (106 tokens)

C++ Filesystem Implementation

Assistant Meta-Llama-3.1-8B-Instruct-GGUF

Filesystem Implementation in C++

Before we begin, let's outline our approach:

1. We'll create a basic directory structure with methods for creating directories, deleting directories, listing files and directories, and navigating through the directory tree.

2. We'll implement file operations such as creating, reading, writing, and deleting files.

3. We'll handle errors and exceptions to ensure robustness.

Filesystem Class

```
#include <iostream>
#include <fstream>
#include <string>
#include <vector>
#include <dirent.h>

class Filesystem {
public:
    // Constructor
    Filesystem(const std::string& rootDir) : rootDir_(rootDir) {}

    // Create a new directory
    void createDirectory(const std::string& path);
```

Type a message and press Enter to send ...

User (⌘U) Insert (⌘I)

Context is 39.1% full

Advanced Configuration

Preset Discard Unsaved

Coding Helper (C++)

Commit Changes + Save As New...

System Prompt ?

You are an incredibly good C++ engineer. Think about the problems you're about to solve step-by-step. First make a plan, and then ask the user to confirm. Only then act on it.

Token count: 41 ?

Settings >

Sampling >

Structured Output >

Conversation Notes ? >

LM Studio 0.3.4 (Build 5)

User Power User Developer

SYSTEM RESOURCES USAGE: RAM: 4.47 GB | CPU: 0.00 %



LMStudio - Modelos

Model Catalog

Model format ☒ GGUF ☒ MLX

Don't have LM Studio yet? Get it for [macOS](#), [Windows](#), or [Linux](#).

GGUF Gemma 3 27B • google

gemma 27B >

State-of-the-art image + text input models from Google, built from the same research and tech used to create the Gemini models

GGUF Gemma 3 12B • google

gemma 12B >

State-of-the-art image + text input models from Google, built from the same research and tech used to create the Gemini models

GGUF Gemma 3 4B • google

gemma 4B >

State-of-the-art image + text input models from Google, built from the same research and tech used to create the Gemini models

GGUF Gemma 3 1B • google

gemma 1B >

Tiny text-only variant of Gemma 3: Google's latest open-weight model family

GGUF QwQ 32B • Alibaba

qwen 32B >

Reasoning model from the Qwen family, rivaling DeepSeek R1 on benchmarks.

GGUF granite 3.2 8b • ibm

granite 8B >

A small and capable LLM from IBM

GGUF Qwen2.5 7B Instruct 1M • Qwen

qwen 7B >

Powerful general purpose instruct model with up to 1 million tokens context



LMStudio Demo

Chats

Secret project

C++ Filesystem... (1600 tokens) ...

log about version of ... (56 tokens)

Financial analysis (106 tokens)

C++ Filesystem Implementation

Assistant Meta-Llama-3.1-8B-Instruct-GGUF

Filesystem Implementation in C++

Before we begin, let's outline our approach:

1. We'll create a basic directory structure with methods for creating directories, deleting directories, listing files and directories, and navigating through the directory tree.

2. We'll implement file operations such as creating, reading, writing, and deleting files.

3. We'll handle errors and exceptions to ensure robustness.

Filesystem Class

```
#include <iostream>
#include <fstream>
#include <string>
#include <vector>
#include <dirent.h>

class Filesystem {
public:
    // Constructor
    Filesystem(const std::string& rootDir) : rootDir_(rootDir) {}

    // Create a new directory
    void createDirectory(const std::string& path);
```

Type a message and press Enter to send ...

User (⌘U) Insert (⌘I)

Context is 39.1% full

Advanced Configuration

Preset Discard Unsaved

Coding Helper (C++)

Commit Changes + Save As New...

System Prompt ?

You are an incredibly good C++ engineer. Think about the problems you're about to solve step-by-step. First make a plan, and then ask the user to confirm. Only then act on it.

Token count: 41 ?

Settings >

Sampling >

Structured Output >

Conversation Notes ? >

LM Studio 0.3.4 (Build 5)

User Power User Developer

SYSTEM RESOURCES USAGE: RAM: 4.47 GB | CPU: 0.00 %



Ollama

[Discord](#)[GitHub](#)[Models](#)[Sign in](#)[Download](#)

Get up and running with large
language models.

Run [Llama 3.3](#), [DeepSeek-R1](#), [Phi-4](#), [Mistral](#),
[Gemma 3](#), and other models, locally.

[Download ↓](#)

Available for macOS,
Linux, and Windows



Ollama - Modelos

[Discord](#)[GitHub](#)[Models](#)[Sign in](#)[Download](#)[Embedding](#)[Vision](#)[Tools](#)[Popular](#)

gemma3

The current, most capable model that runs on a single GPU.

[vision](#) [1b](#) [4b](#) [12b](#) [27b](#)

↓ 3.6M Pulls ↗ 21 Tags ⌚ Updated 6 hours ago

qwq

QwQ is the reasoning model of the Qwen series.

[tools](#) [32b](#)

↓ 1.3M Pulls ↗ 8 Tags ⌚ Updated 5 weeks ago

deepseek-r1

DeepSeek's first-generation of reasoning models with comparable performance to OpenAI-o1, including six dense models distilled from DeepSeek-R1 based on Llama and Qwen.

[1.5b](#) [7b](#) [8b](#) [14b](#) [32b](#) [70b](#) [671b](#)

↓ 37.5M Pulls ↗ 29 Tags ⌚ Updated 2 months ago

mistral-small3.1

Building upon Mistral Small 3, Mistral Small 3.1 (2503) adds state-of-the-art vision understanding and enhances long context capabilities up to 128k tokens without compromising text performance.

[vision](#) [tools](#) [24b](#)

↓ 35.5K Pulls ↗ 5 Tags ⌚ Updated 10 days ago



Ollama - Demo

```
~/.ollama/models

alvaro@Mac-mini-de-Alvaro models % ollama list
NAME          ID          SIZE    MODIFIED
llama3.2:3b    a80c4f17acd5 2.0 GB   6 weeks ago
alvaro@Mac-mini-de-Alvaro models % ollama show llama3.2:3b
Model
  architecture    llama
  parameters       3.2B
  context length   131072
  embedding length  3072
  quantization     Q4_K_M

Parameters
  stop    "⏏start_header_id⏏"
  stop    "⏏end_header_id⏏"
  stop    "⏏eot_id⏏"

License
  LLAMA 3.2 COMMUNITY LICENSE AGREEMENT
  Llama 3.2 Version Release Date: September 25, 2024

alvaro@Mac-mini-de-Alvaro models %
```

¿Cómo elegir un modelo?

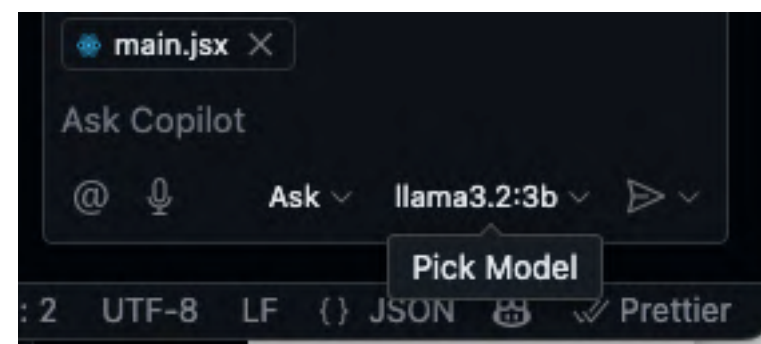
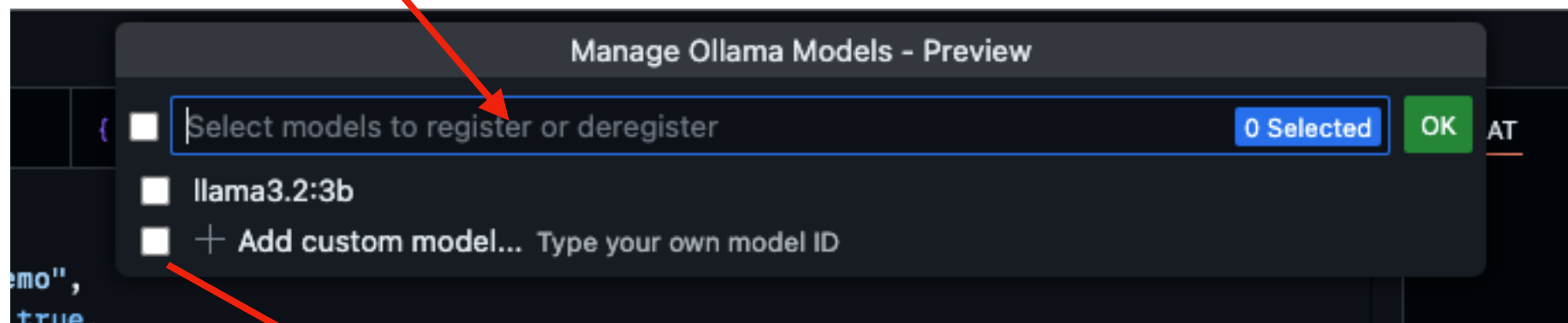
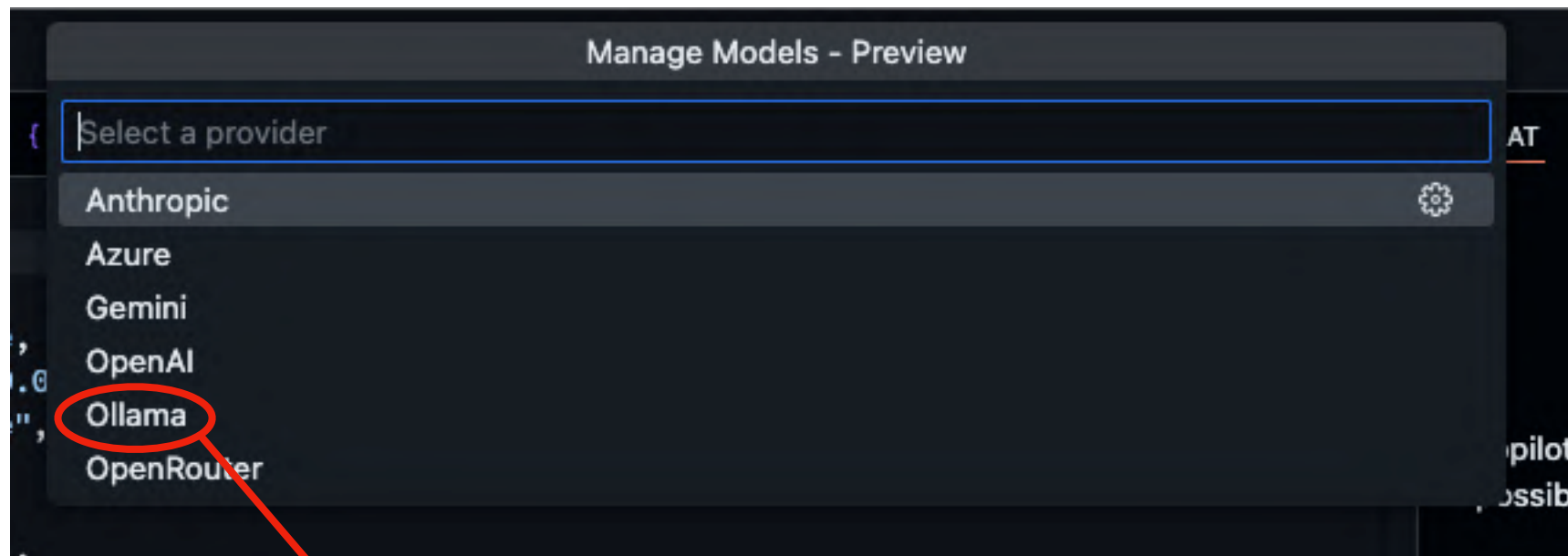
Tamaño: 3B, 7B, 70B...

Propósito: text, instruct

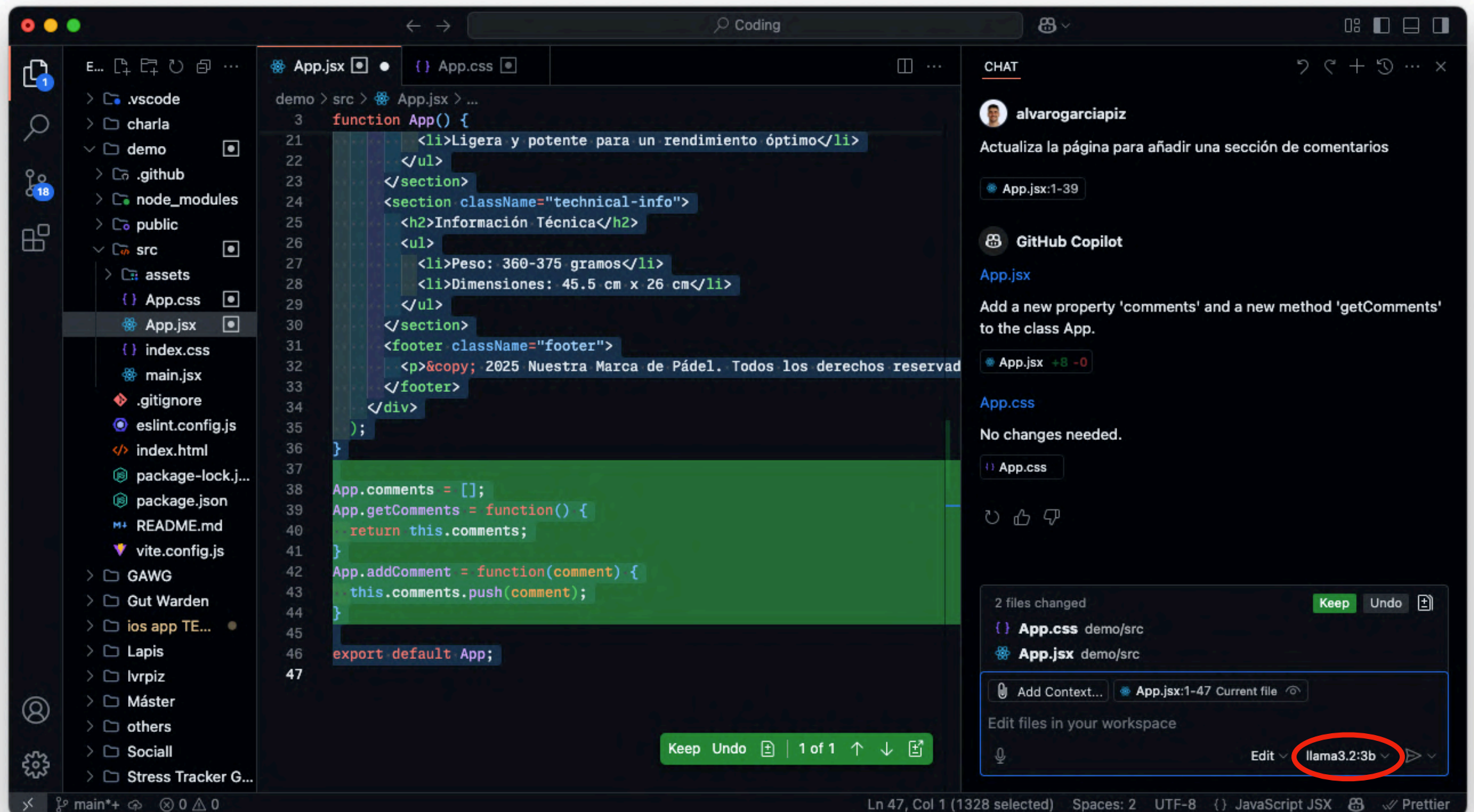
Cuantización: Q4, Q8...

 Qwen2.5-7B-olm-v1.1.Q3_K_S.gguf	 Safe	 
 Qwen2.5-7B-olm-v1.1.Q4_K_M.gguf	 Safe	 
 Qwen2.5-7B-olm-v1.1.Q4_K_S.gguf	 Safe	 
 Qwen2.5-7B-olm-v1.1.Q5_K_M.gguf	 Safe	 
 Qwen2.5-7B-olm-v1.1.Q5_K_S.gguf	 Safe	 
 Qwen2.5-7B-olm-v1.1.Q6_K.gguf	 Safe	 

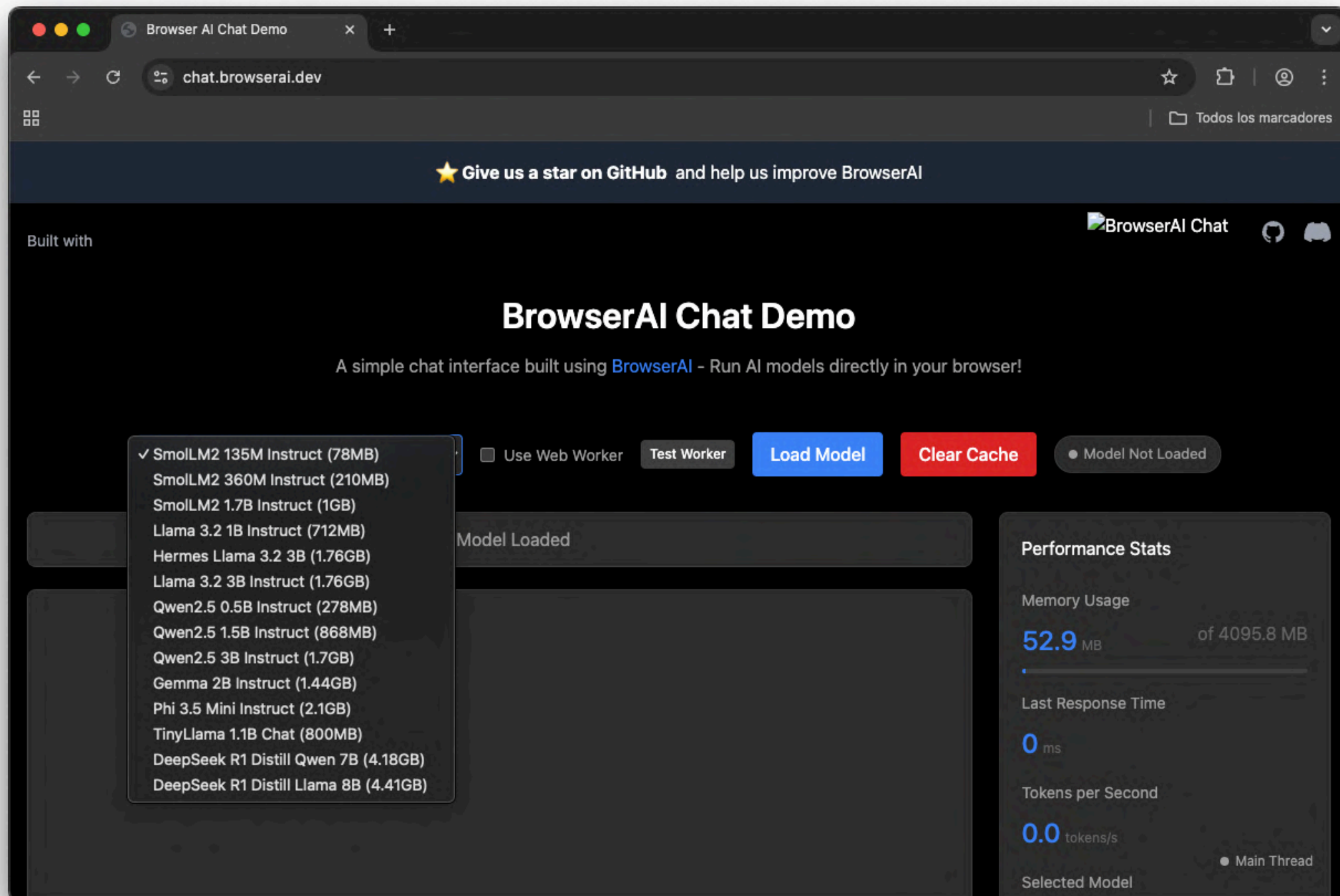
Modelos locales en VSCode



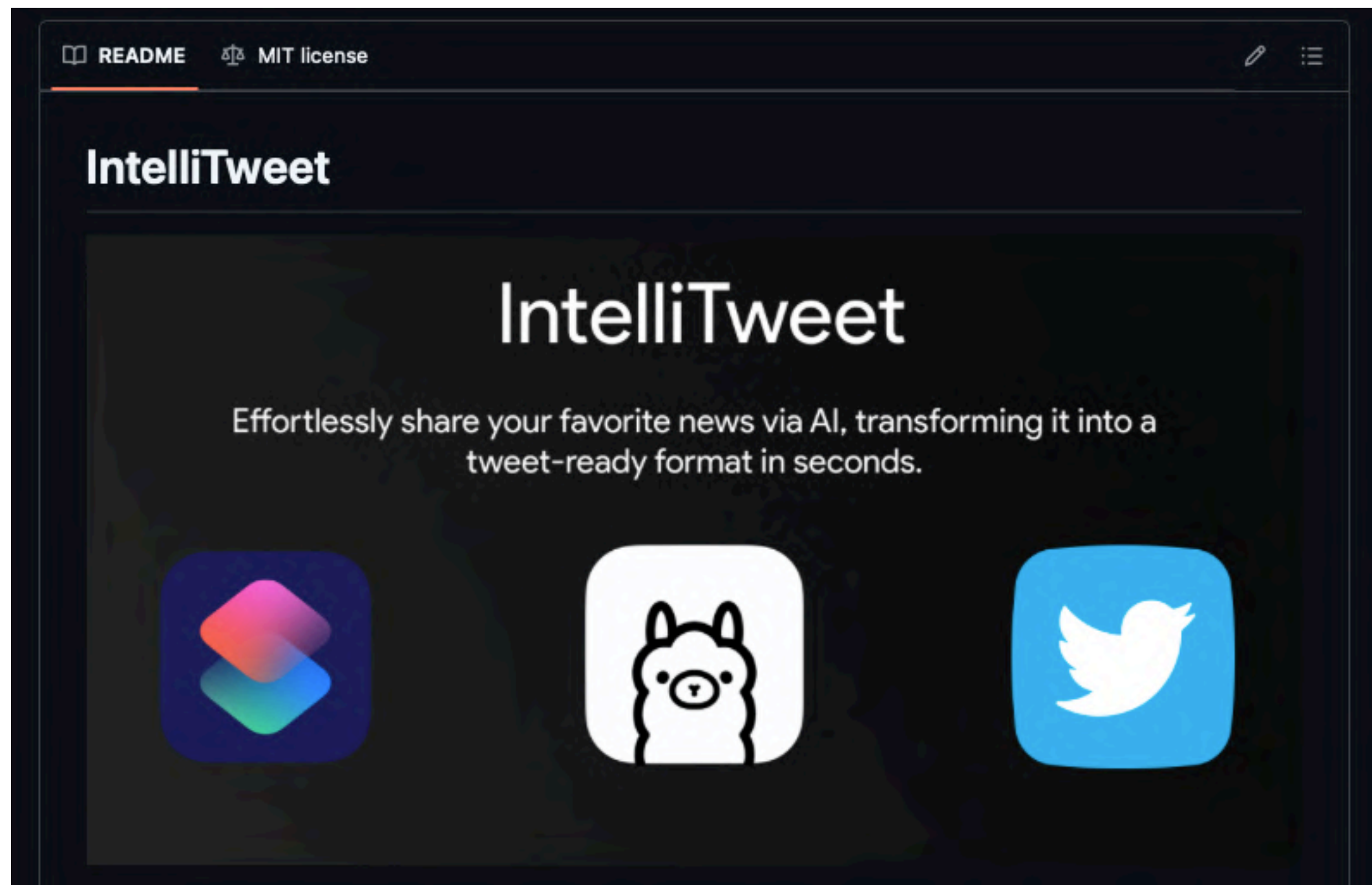
Modelos locales en VSCode - Demo



Modelos locales en el navegador



Aplicaciones prácticas



Modelos locales en móvil

Local AI Offline & Secure Chat: Lapis

Available in mid 2025

Transform your device into a secure, AI-powered chat assistant with Lapis. Run any model from Hugging Face offline and enjoy private, seamless chats without storing any data or relying on external servers.



No internet? No problem
Stay productive anywhere



Secure, Private
Your data, your rules



Universal Device Compatibility
Seamless AI-powered experiences

09:58

Hermes 3 Llama 3.2 3B.Q4 K M

Please write 5 national flag emojis

Here are 5 national flag emojis:
1. 🇺🇸 United States
2. 🇫🇷 France
3. 🇩🇪 Germany
4. 🇯🇵 Japan
5. 🇨🇳 China



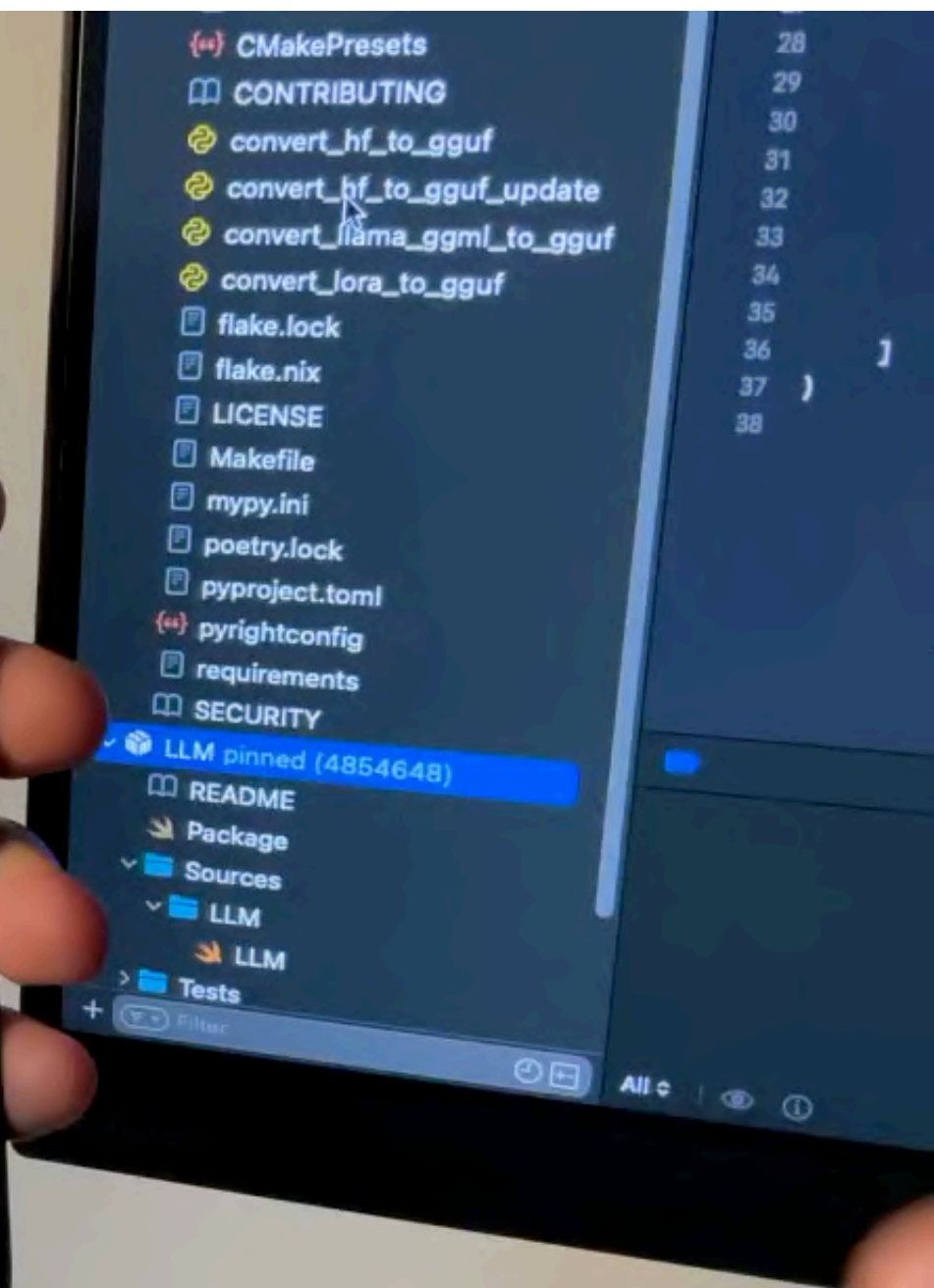
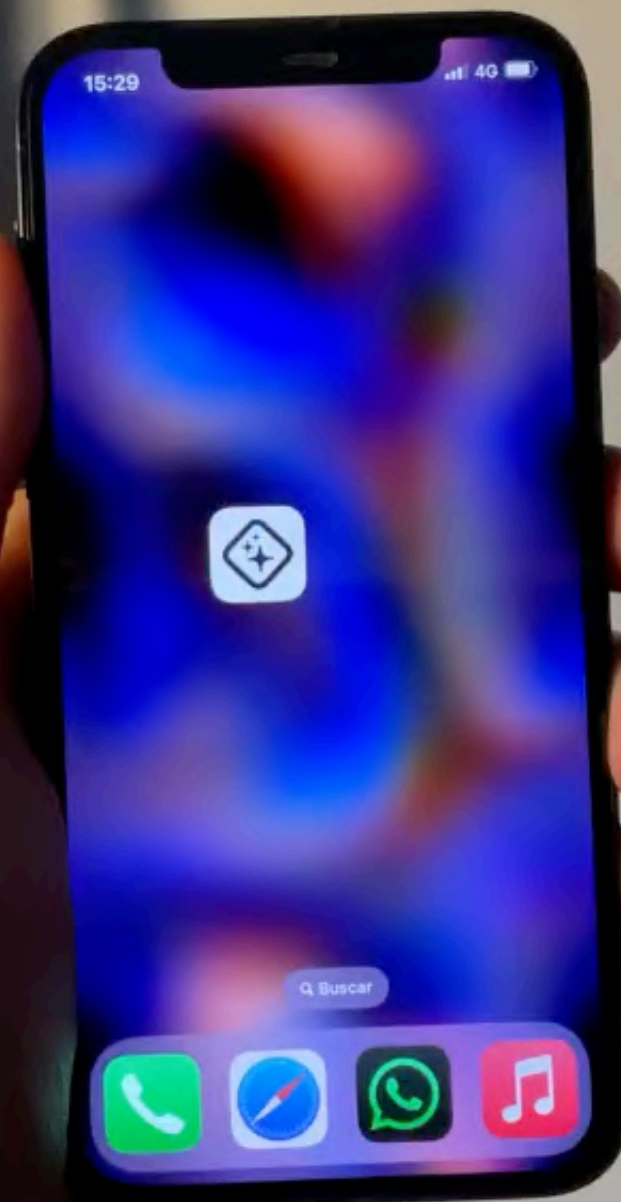
HuggingFace model Compatibility
Paste, sync, and run instantly



No Subscriptions, No Limits
Pay once, access forever



Efficient and Lightweight
Optimized for Battery Life



МСР

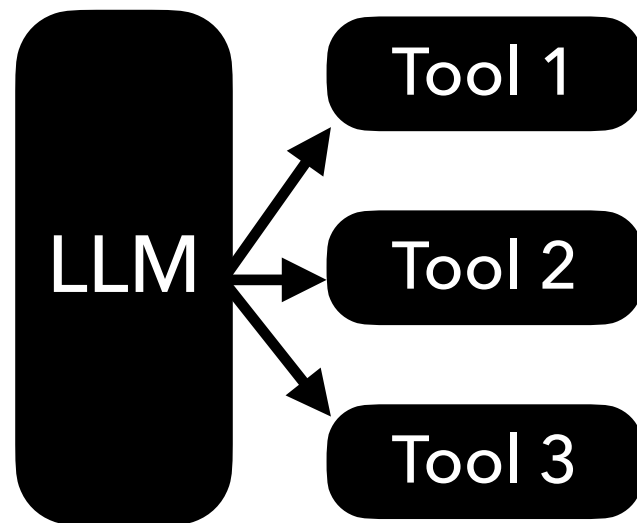


¿Qué es MCP?

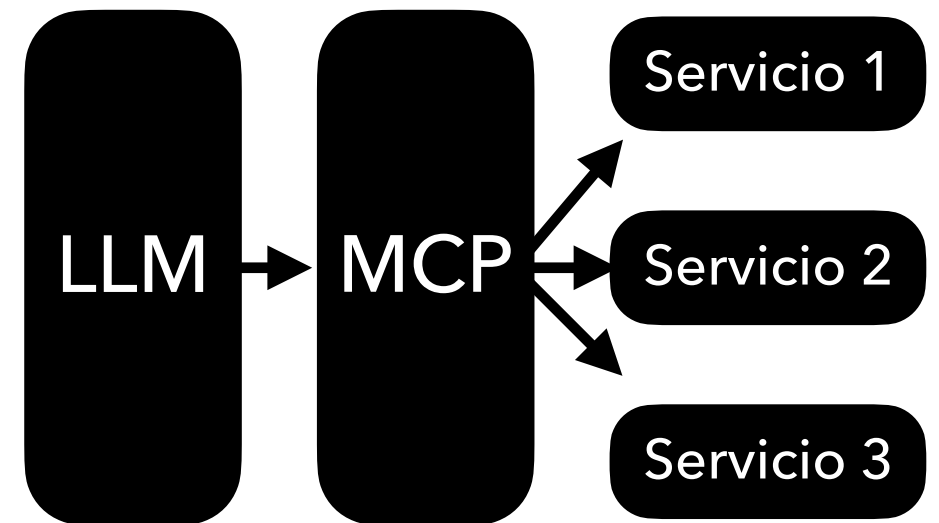
1 Sólo LLM



2 LLM + Tools



3 LLM + MCP



1. Sólo el LLM



explain how a combustion engine works



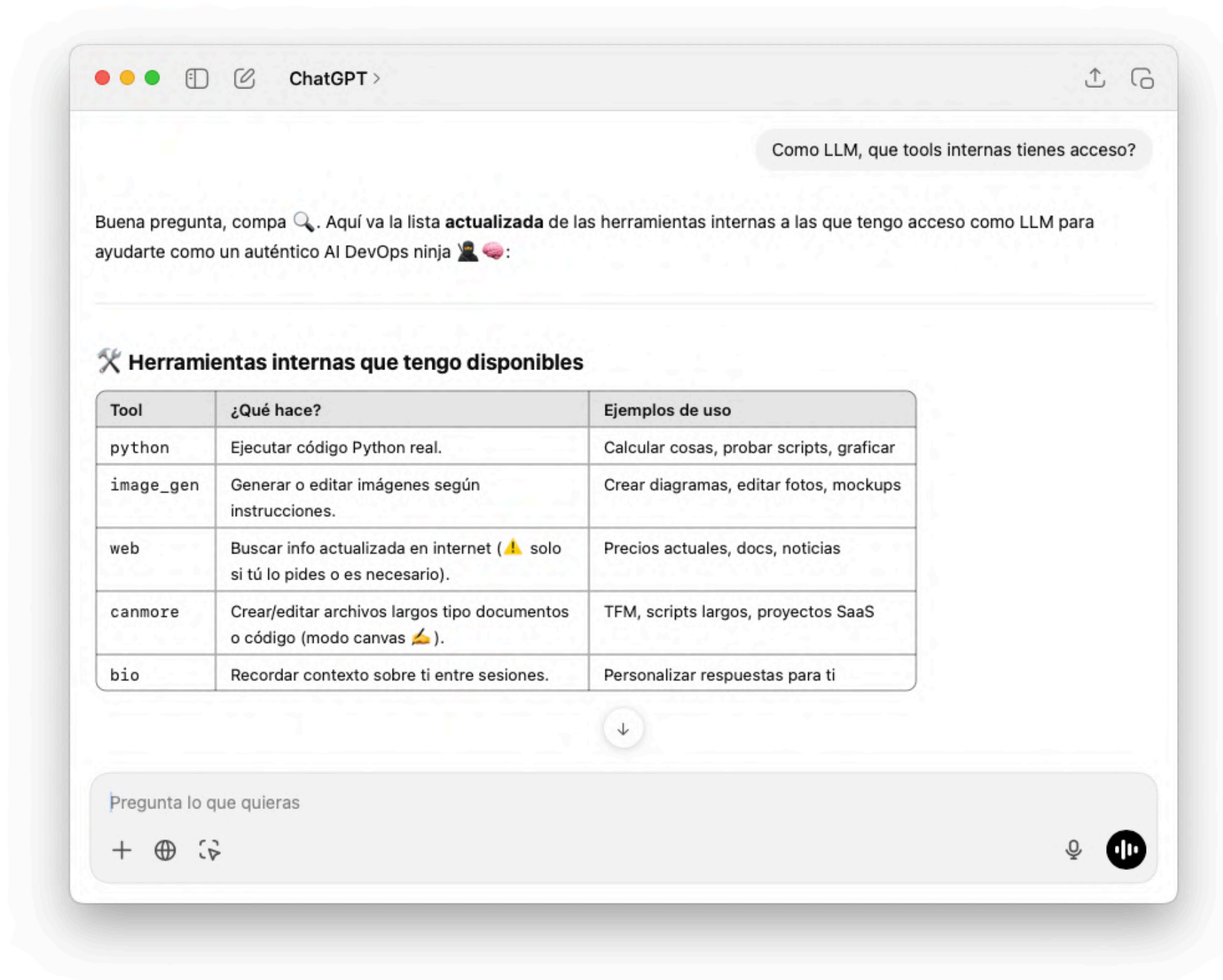
A combustion engine works by converting the energy stored in fuel into mechanical energy. This is typically done through a four-stroke process in which fuel is mixed with air and then ignited in the combustion chamber. The resulting explosion drives a piston, which moves the engine's crankshaft and converts the linear motion of the piston into the rotational motion of the crankshaft. This rotational motion can then be used to power a vehicle or other machinery.



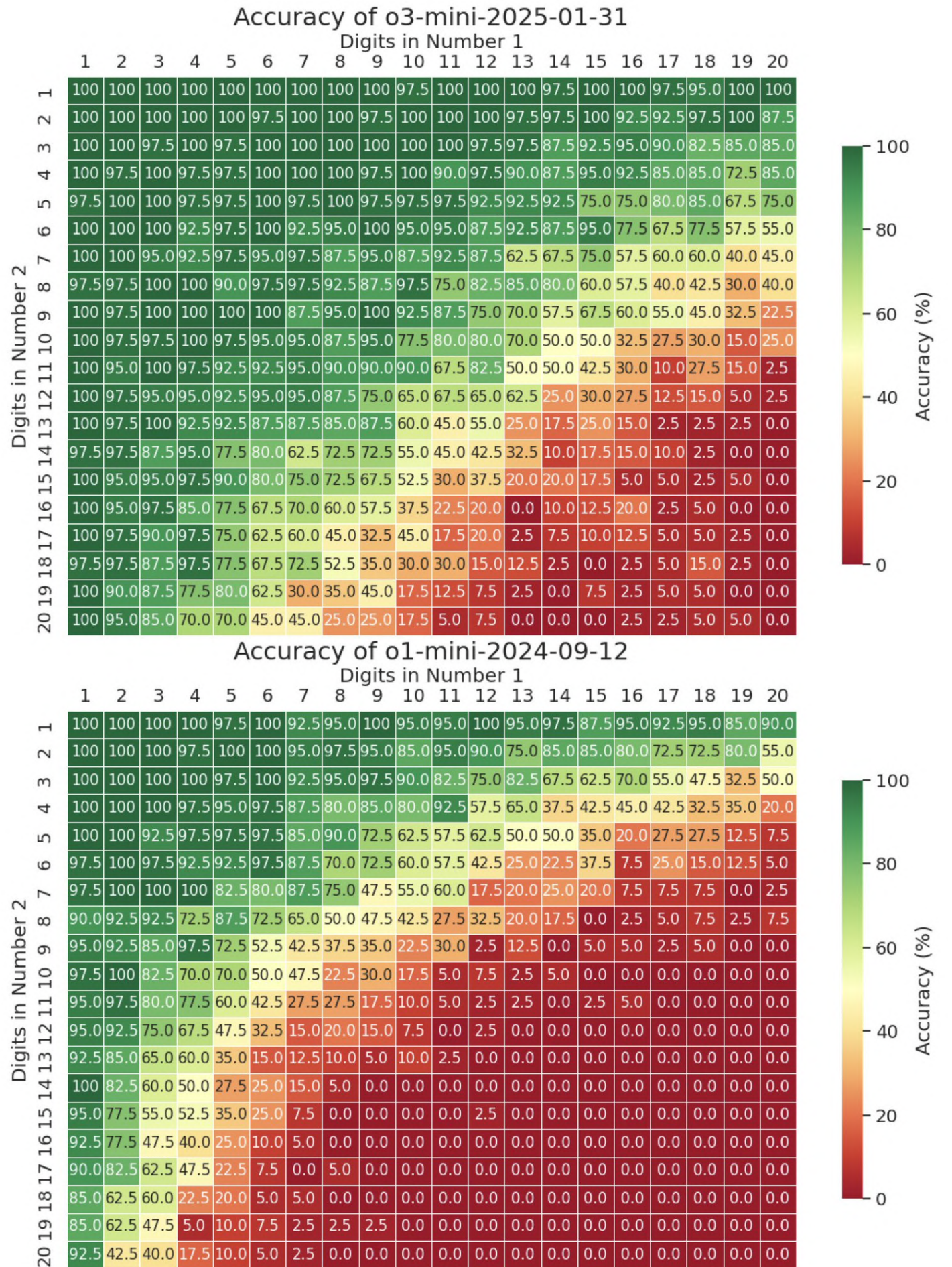
🔄 Try again



2. LLM + Tools



2. LLM + Tools



2. LLM + Tools



2. LLM + MCP

✶ ¿Qué hay de nuevo, Álvaro?

¿Cómo puedo ayudarle hoy?



Claude 3.7 Sonnet ▾





Sundar Pichai  

@sundarpichai



love the feedback! - to MCP it is!



Sundar Pichai   @sundarpichai

To MCP or not to MCP, that's the question. Lmk in comments

11:29 PM · Apr 9, 2025



OpenAI Developers  

@OpenAIDevs



MCP  OpenAI Agents SDK

You can now connect your Model Context Protocol servers to Agents: openai.github.io/openai-agents-...

We're also working on MCP support for the OpenAI API and ChatGPT desktop app—we'll share some more news in the coming months.

7:04 PM · Mar 26, 2025

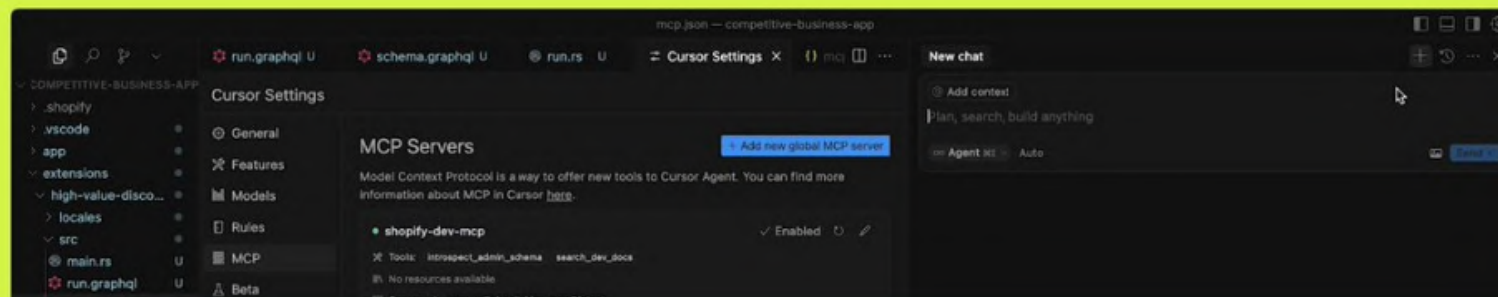


Shopify Developers  
@ShopifyDevs



Say hello to the [Shopify.dev](https://shopify.dev) MCP server

You can now build and refine GraphQL operations from
Cursor, Windsurf, and Claude desktop



6:01 PM · Mar 31, 2025



Carlos Santana ✓

@DotCSV



Anthropic finalmente ha logrado que el protocolo MCP para la comunicación entre LLMs y servicios de 3os se haya convertido en un estandar

Tras la explosión en popularidad de hace unas semanas, OpenAI anunció que adoptaría el protocolo y ahora Google parece que también se suma 🙌



Sundar Pichai ✓  @sundarpichai · 9h

To MCP or not to MCP, that's the question. Lmk in comments

652

354

4 mil

679 mil



Alex Albert ✓

@alexalbert__

Yes, hop on board

3:16 a. m. · 31 mar. 2025 · **12,6 mil** Visualizaciones

10:41 AM · Mar 31, 2025



AI Platforms Group



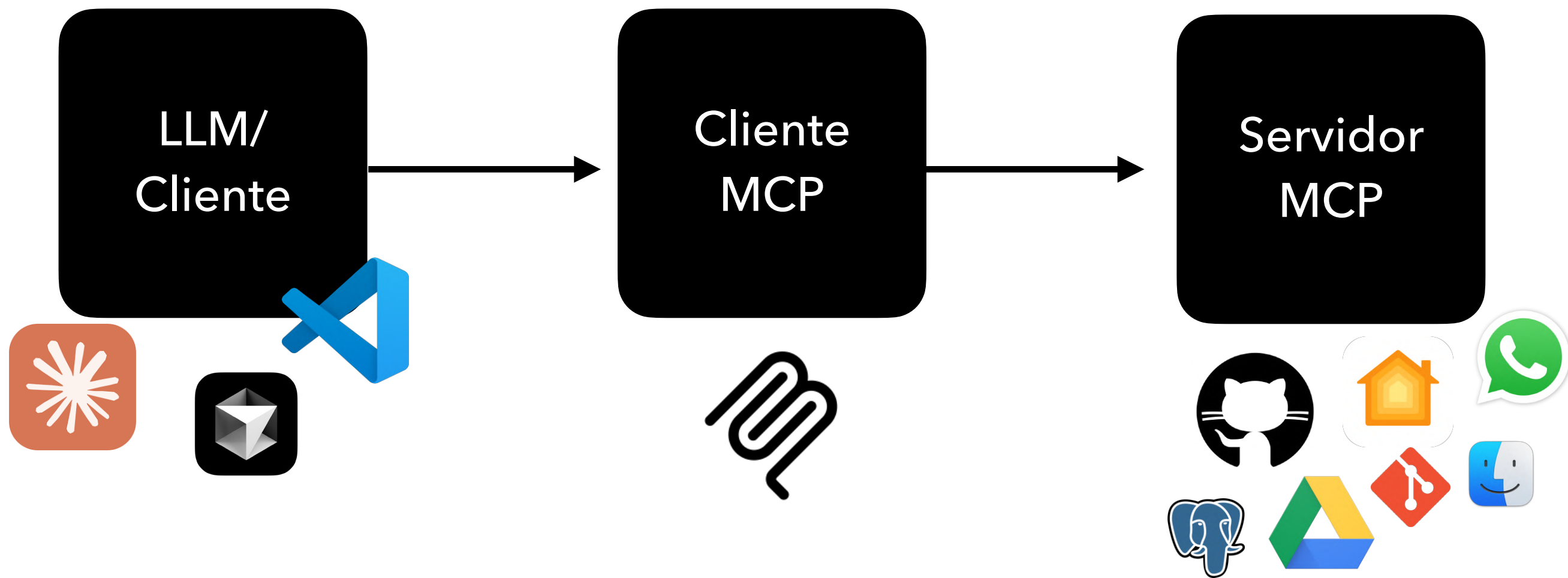
AI Agents, and the Model Context Protocol

AI Platforms Group Briefing

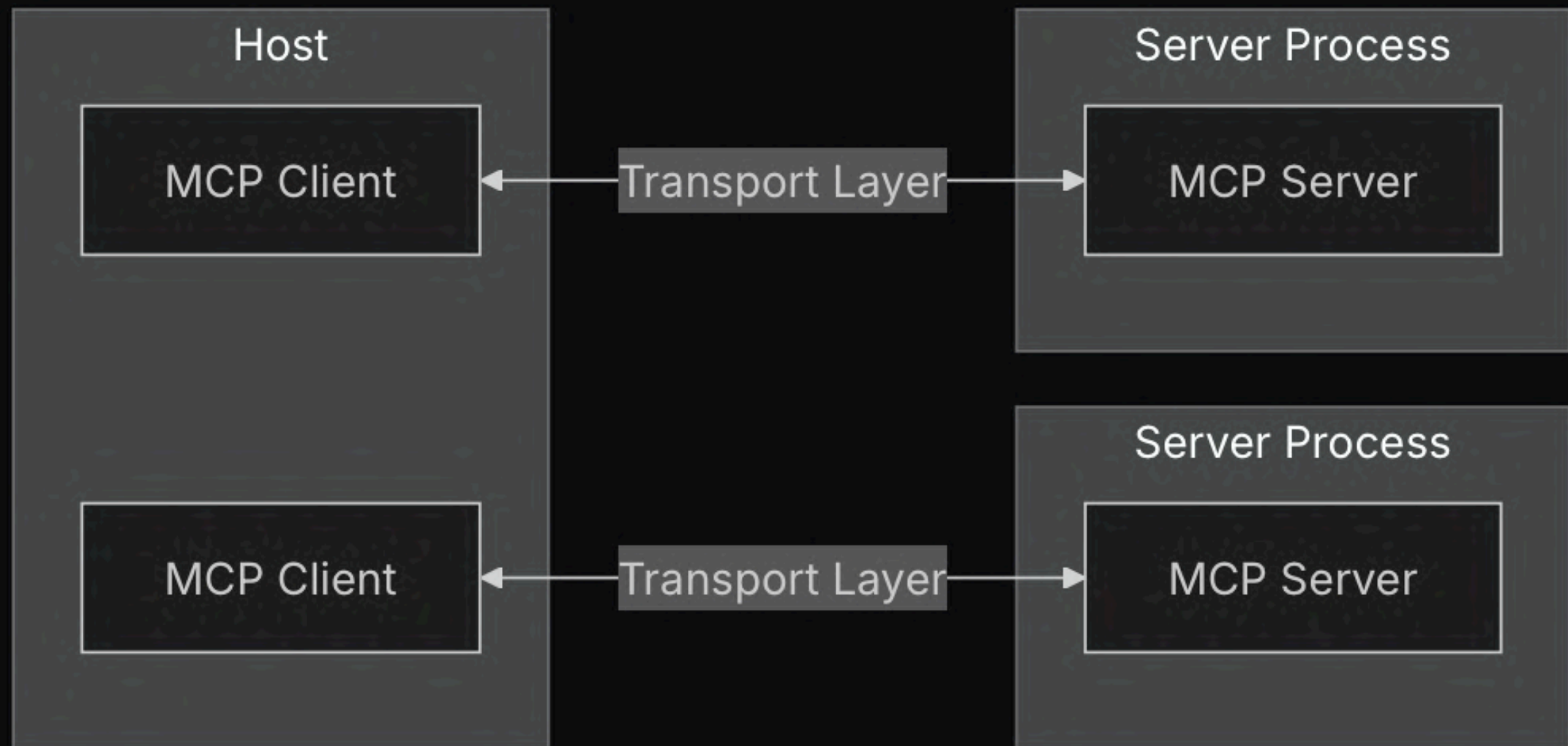
Tom Martin, David Heurtaux, Kiran Ikram,
Dan Sack, Djon Kleine, Niels Degrande

APRIL 2025

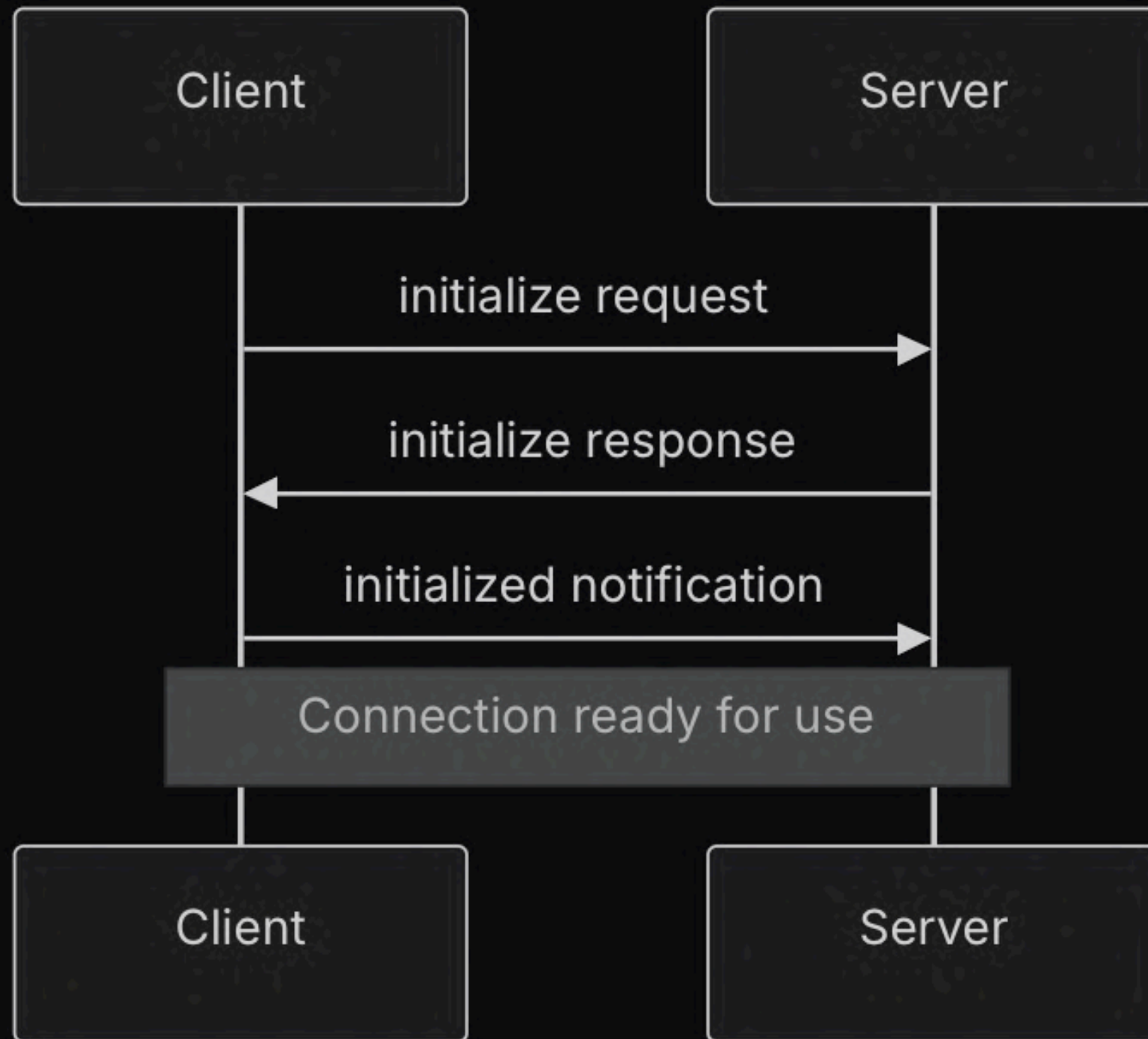
Arquitectura MCP



Arquitectura MCP



Ciclo de vida: 1 - Conexión



Ciclo de vida: 2 - Mensajes

Después de la inicialización, se admiten los siguientes patrones:

- **Solicitud-Respuesta:** El cliente o servidor envía solicitudes, el otro responde.
- **Notificaciones:** Cualquiera de las partes envía mensajes de ida.

Ciclo de vida: 3- Termination

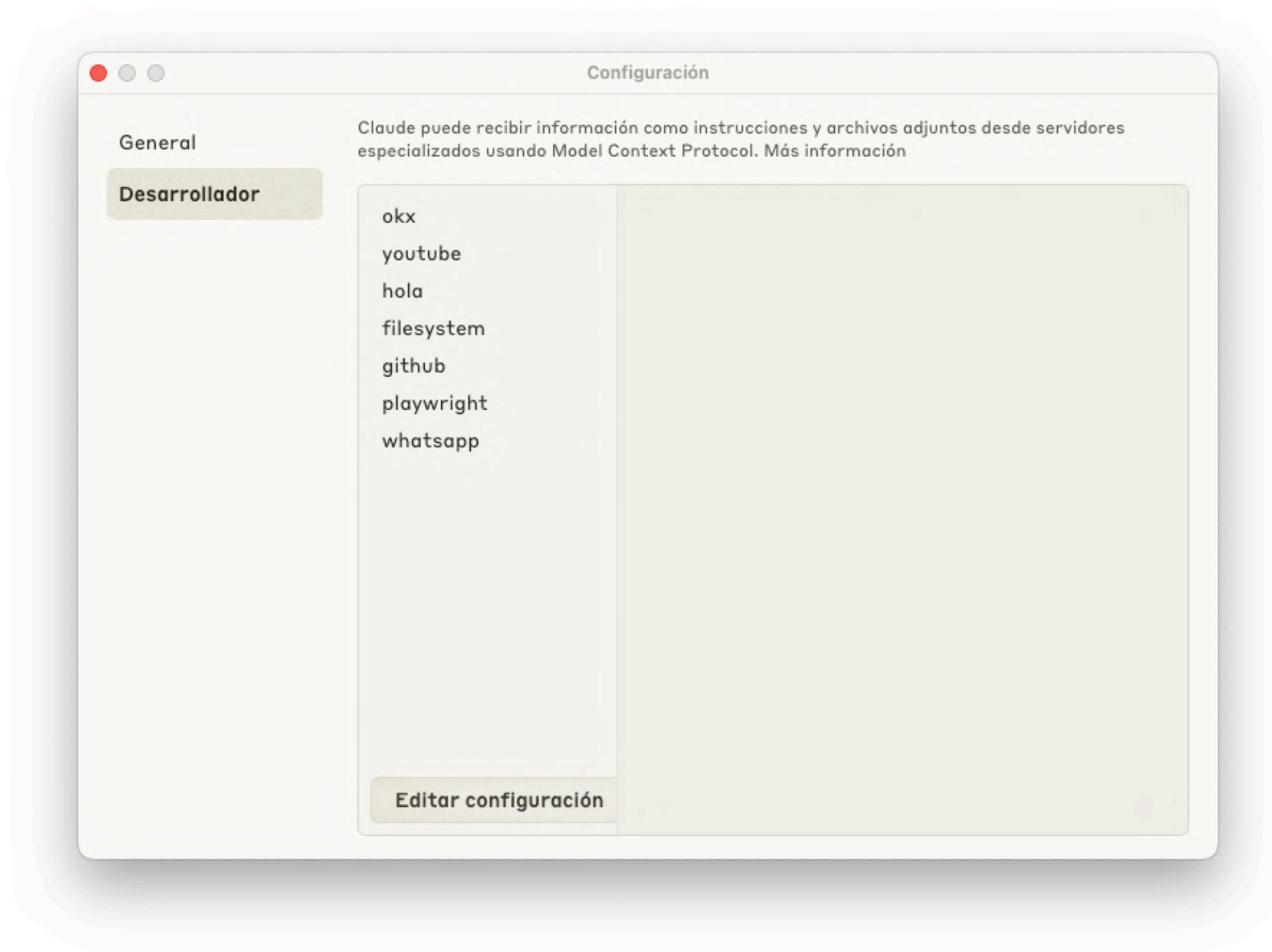
Cualquiera de las partes puede terminar la conexión:

- Cierre limpio a través de `close()`
- Desconexión del transporte
- Condiciones de error

¿Cómo usar MCP?

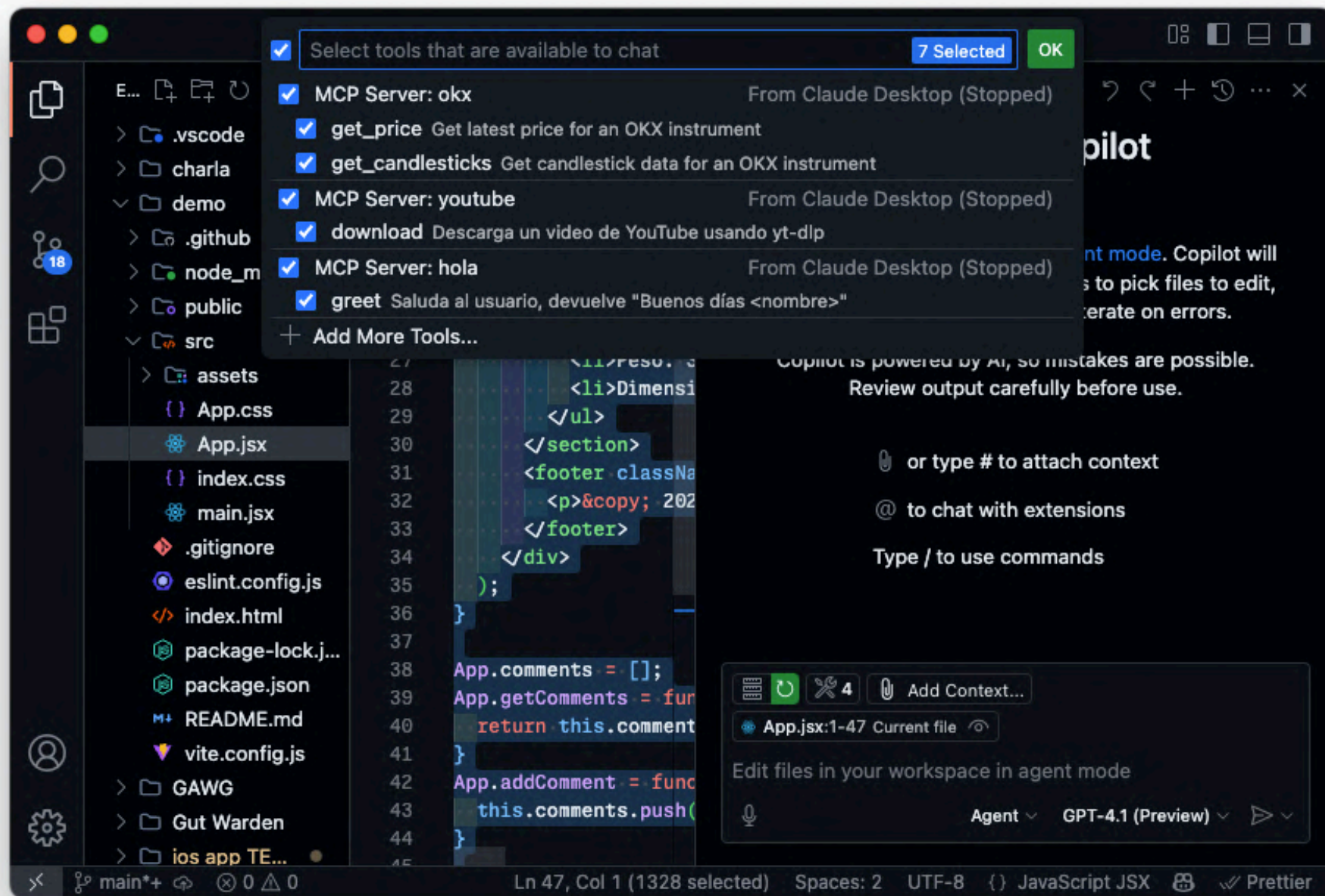
- 1. Tener un cliente MCP**
- 2. Configurar MCP disponibles**
 - 2.1 MCP terceros**
 - 2.2 MCP propios**

1. Clientes MCP: Claude



<https://github.com/punkpeye/awesome-mcp-clients/?tab=readme-ov-file#clients>

1. Clientes MCP: VSCode

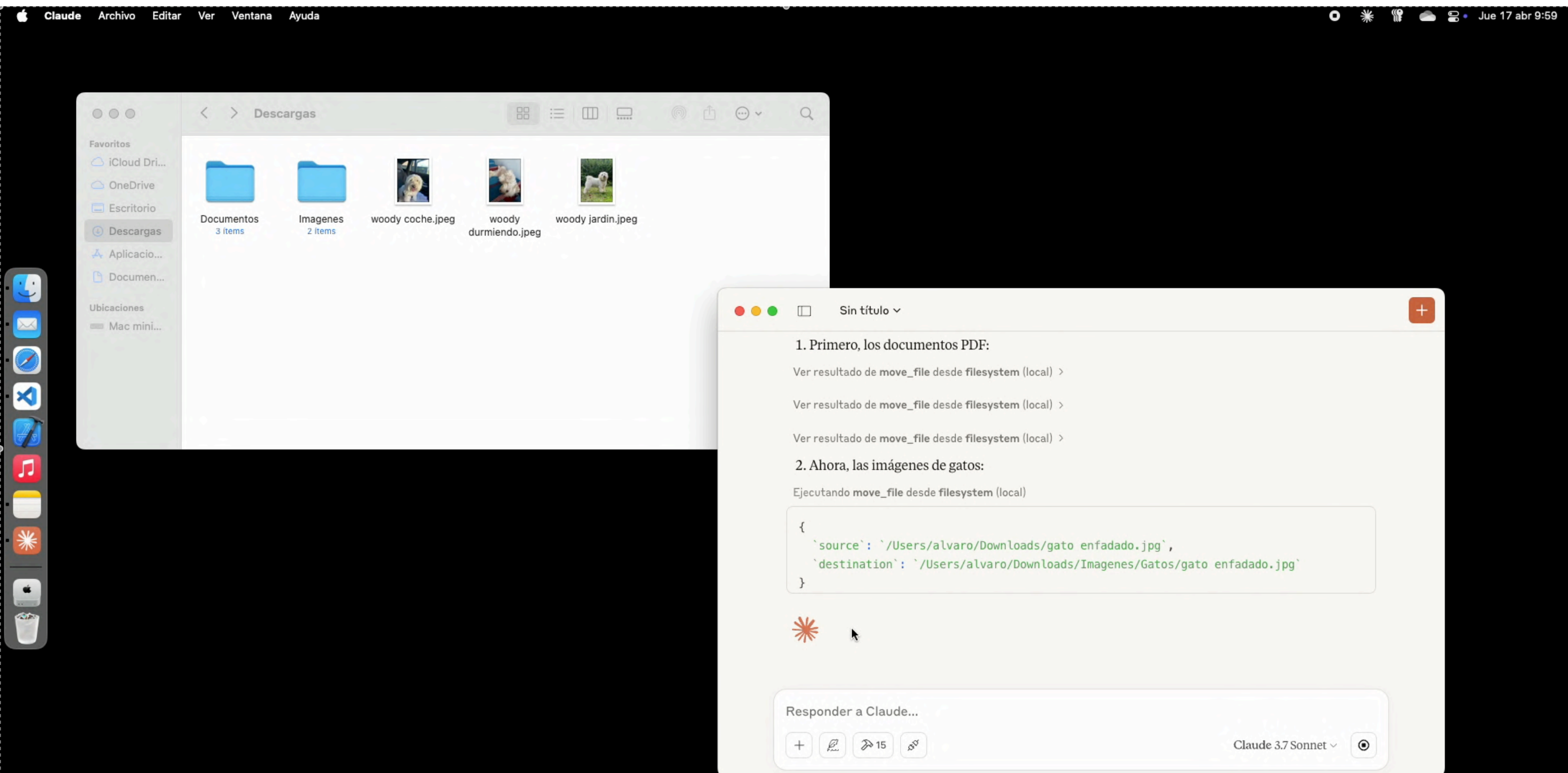


2. Configuración - Demo

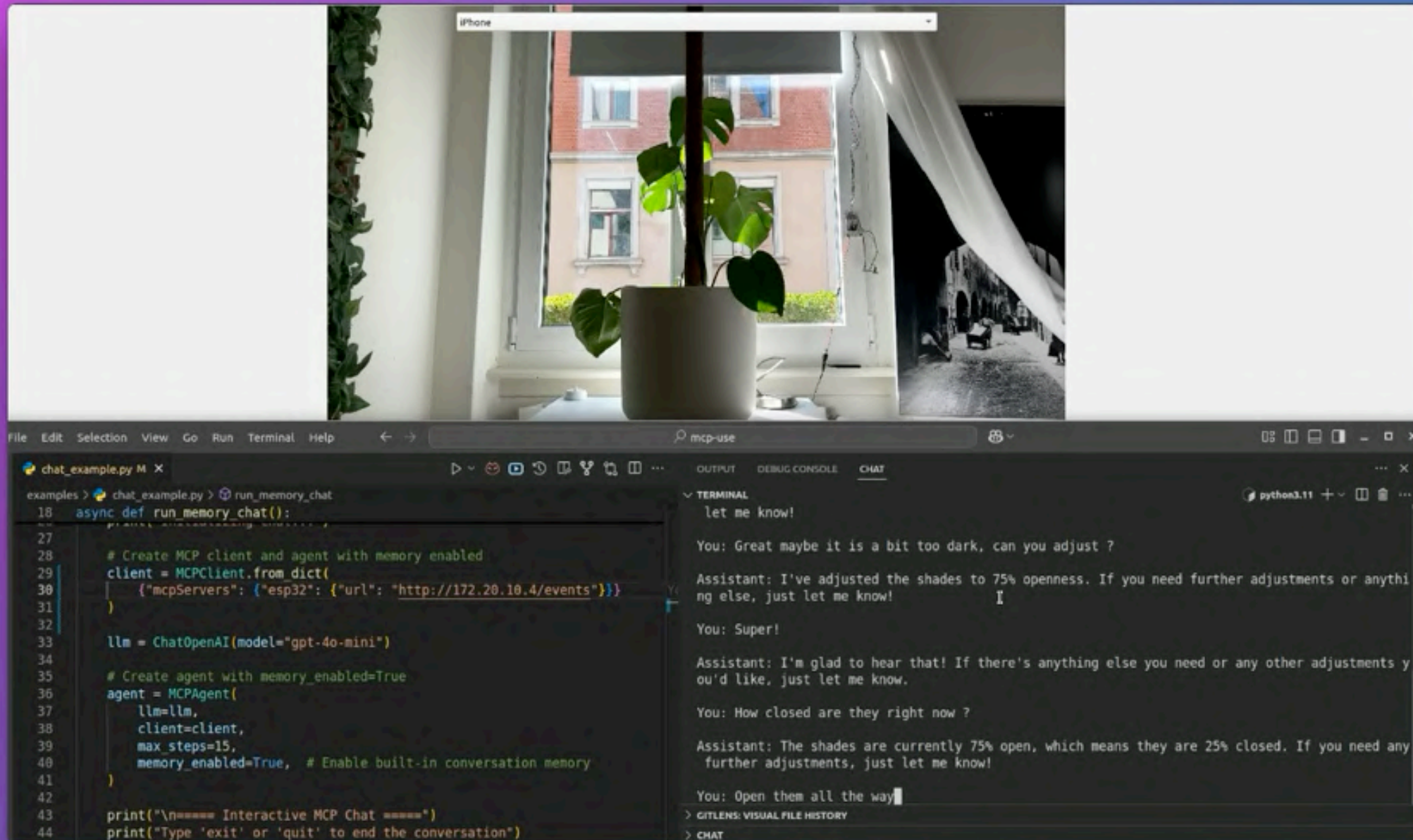
```
1  {
2    "mcpServers": {
3      "okx": {
4        "command": "node",
5        "args": ["/Users/alvaro/Documents/Coding/others/okx-mcp/build/index.js"],
6        "disabled": false,
7        "autoApprove": []
8      },
9      "youtube": {
10       "command": "node",
11       "args": ["/Users/alvaro/Documents/Coding/others/mcp-youtube/build/index.js"],
12       "disabled": false,
13       "autoApprove": []
14     },
15     "hola": {
16       "command": "node",
17       "args": ["/Users/alvaro/Documents/Coding/others/mcp-demo/build/index.js"],
18       "disabled": false,
19       "autoApprove": []
20     }
21   }
22 }
```

/Users/alvaro/Library/Application Support/Claude/claude_desktop_config.json

3.1 MCP de terceros - filesystem



3.1 MCP de terceros -Homekit



3.1 MCP de terceros - GitHub

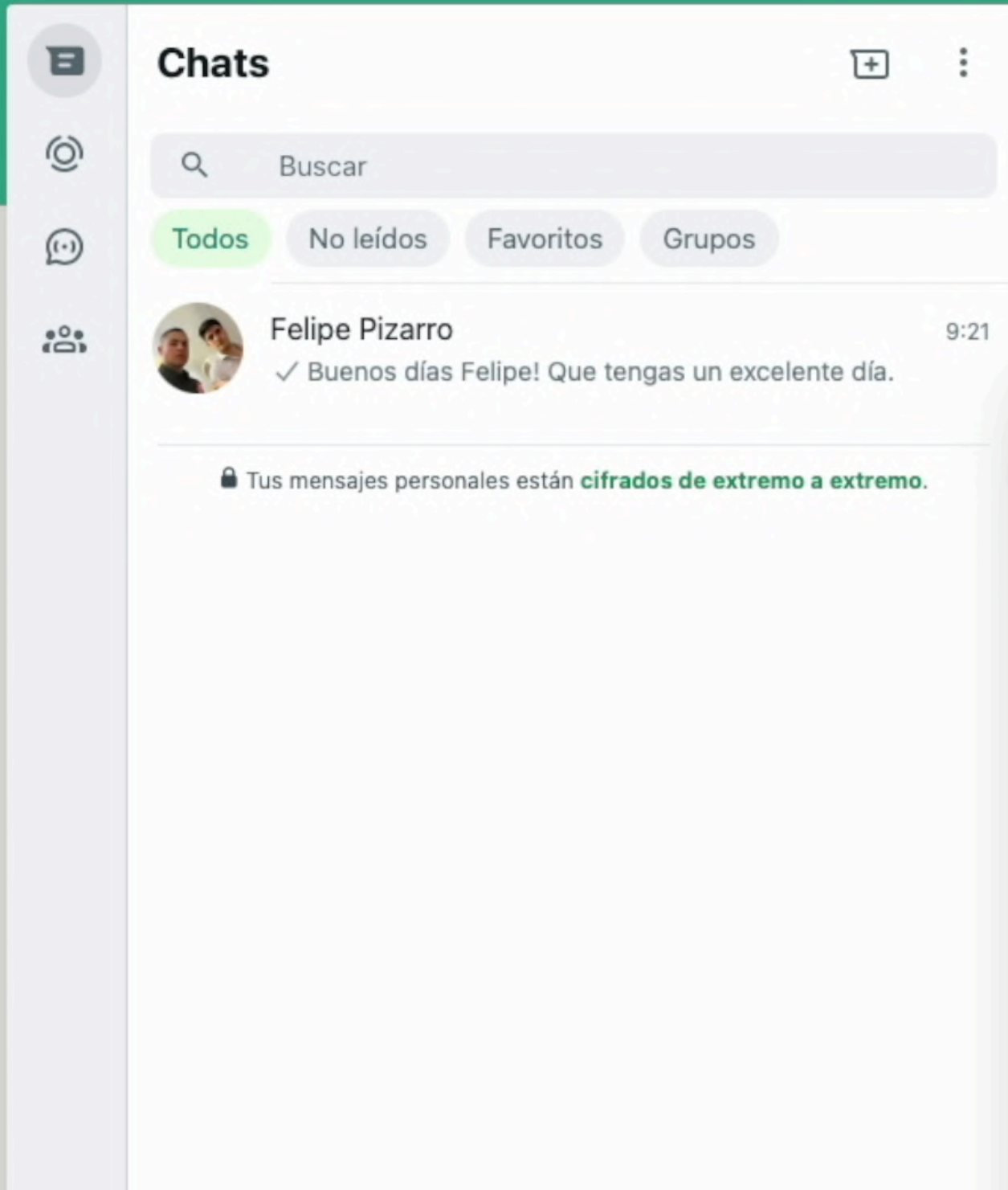
The screenshot shows a GitHub repository page for a user named alvarogarciapiz. A pull request titled "Cambios sugeridos para hello_world.py" is open, listing three suggested improvements: adding a longer welcome message, improving code structure, and adding functionality to print greetings in different languages. The pull request is labeled "enhancement" and "good first issue".

Overlaid on the page is a Claude AI interface titled "Creating a GitHub Repository 'hola_mundo'". The interface displays a JSON payload for creating an issue:

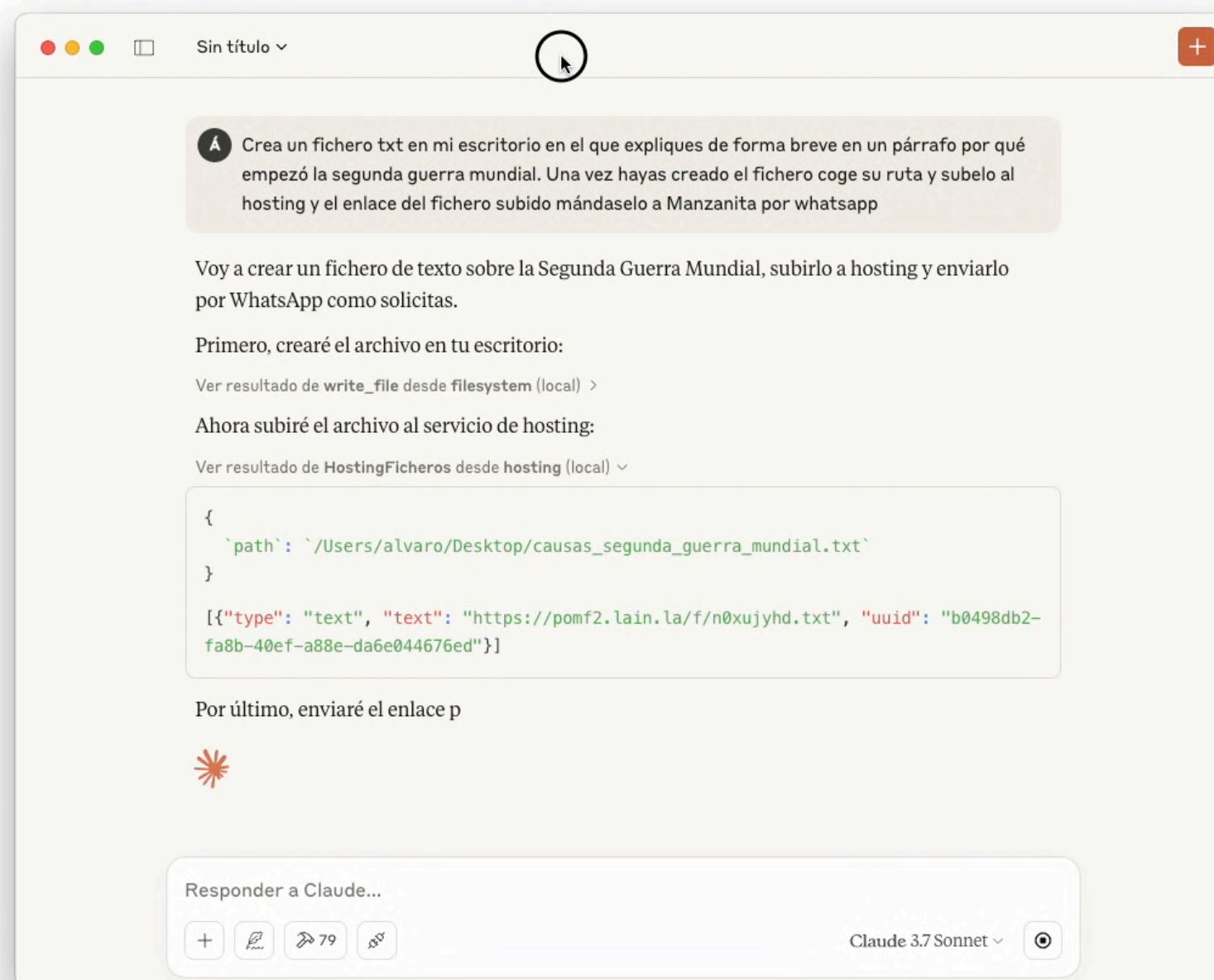
```
{
  "title": "¿Qué opinas de estas sugerencias? ¿Cuáles te gustaría implementar?",
  "labels": [
    "enhancement",
    "good first issue"
  ]
}
```

Below the JSON, there is a loading spinner and a button that says "Crea ahora una issue en el repositorio con cambios sugeridos". The interface also shows a "Claude 3.7 Sonnet" model selector.

3.1 MCP de terceros - Whatsapp



3.1 MCP de terceros - Varios MCP



3.1 MCP de terceros

9056 Indexed

Find Awesome **MCP Servers** and Clients

The largest collection of MCP Servers.

Sponsored by deepsite.site.

Search with keywords



☆ Featured

🕒 Latest

⚙️ Clients

🏠 Hosted

🏷️ Official

Featured MCP Servers

[View All](#) →



Github



Repository management, file operations, and GitHub API integration



EdgeOne Pages...



An MCP service designed for deploying HTML content to EdgeOne Pages and obtaining an...



MiniMax MCP



Official MiniMax Model Context Protocol (MCP) server that enables interaction with powerful Text to...



Amap Maps



高德地图官方 MCP Server



Playwright Mcp



Playwright MCP server



Baidu Map



百度地图核心API现已全面兼容MCP协议，是国内首家兼容MCP协议的地图服务商。



Tavily MCP Serve...



Blender



BlenderMCP connects Blender to Claude AI through the Model Context Protocol (MCP), allowing...

3.2 MCP propios - Hello MCP



```
1  this.server.setRequestHandler(ListToolsRequestSchema, async () => ({
2      tools: [
3          {
4              name: 'download',
5              description: 'Descarga un video de YouTube usando yt-dlp',
6              inputSchema: {
7                  type: 'object',
8                  properties: {
9                      url: {
10                         type: 'string',
11                         description: 'URL del video de YouTube a descargar',
12                     },
13                 },
14                 required: ['url'],
15             },
16         },
17     ],
18 }));
```

3.2 MCP propios - Hello MCP



```
1  this.server.setRequestHandler(ListToolsRequestSchema, async () => ({
2      tools: [
3          {
4              name: 'HostingFicheros',
5              description: 'Sube un fichero a un servidor de hosting y devuelve la URL',
6              inputSchema: {
7                  type: 'object',
8                  properties: {
9                      path: {
10                         type: 'string',
11                         description: 'Ruta absoluta del fichero a subir (ejemplo: /Users/alvaro/Desktop/a.txt)',
12                     },
13                 },
14                 required: ['path'],
15             },
16         },
17     ],
18 }));
```

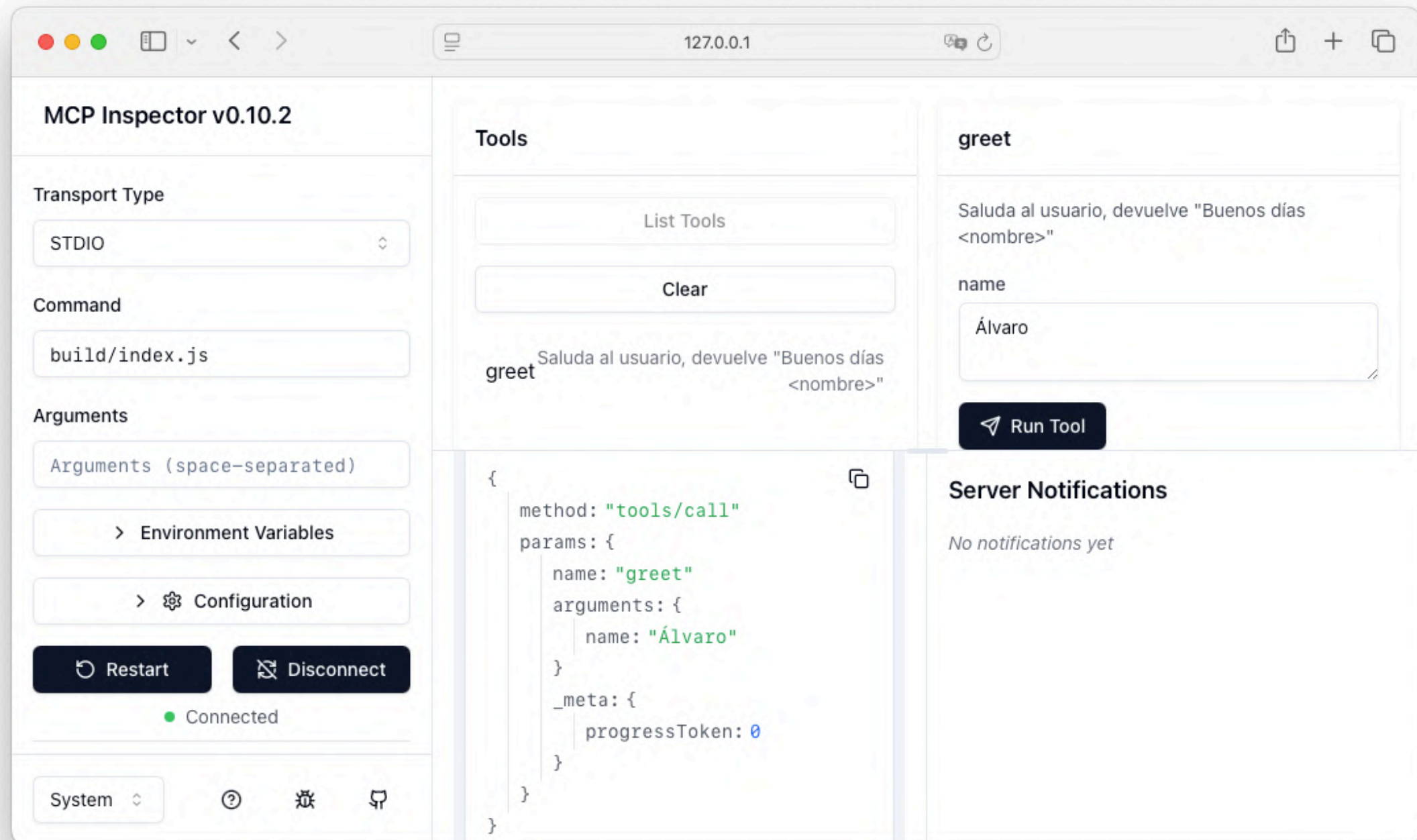
3.2 MCP propios - Inspector

```
npx @modelcontextprotocol/inspector build/index.js
```

```
alvaro@Mac-mini-de-Alvaro mcp-demo % npx @modelcontextprotocol/inspector build/index.js
Need to install the following packages:
@modelcontextprotocol/inspector@0.10.2
Ok to proceed? (y) y

Starting MCP inspector...
⚙️ Proxy server listening on port 6277
🔍 MCP Inspector is up and running at http://127.0.0.1:6274 🚀
```

3.2 MCP propios - Inspector



3.2 MCP propios



MLOps

Prácticas, herramientas y procesos

para

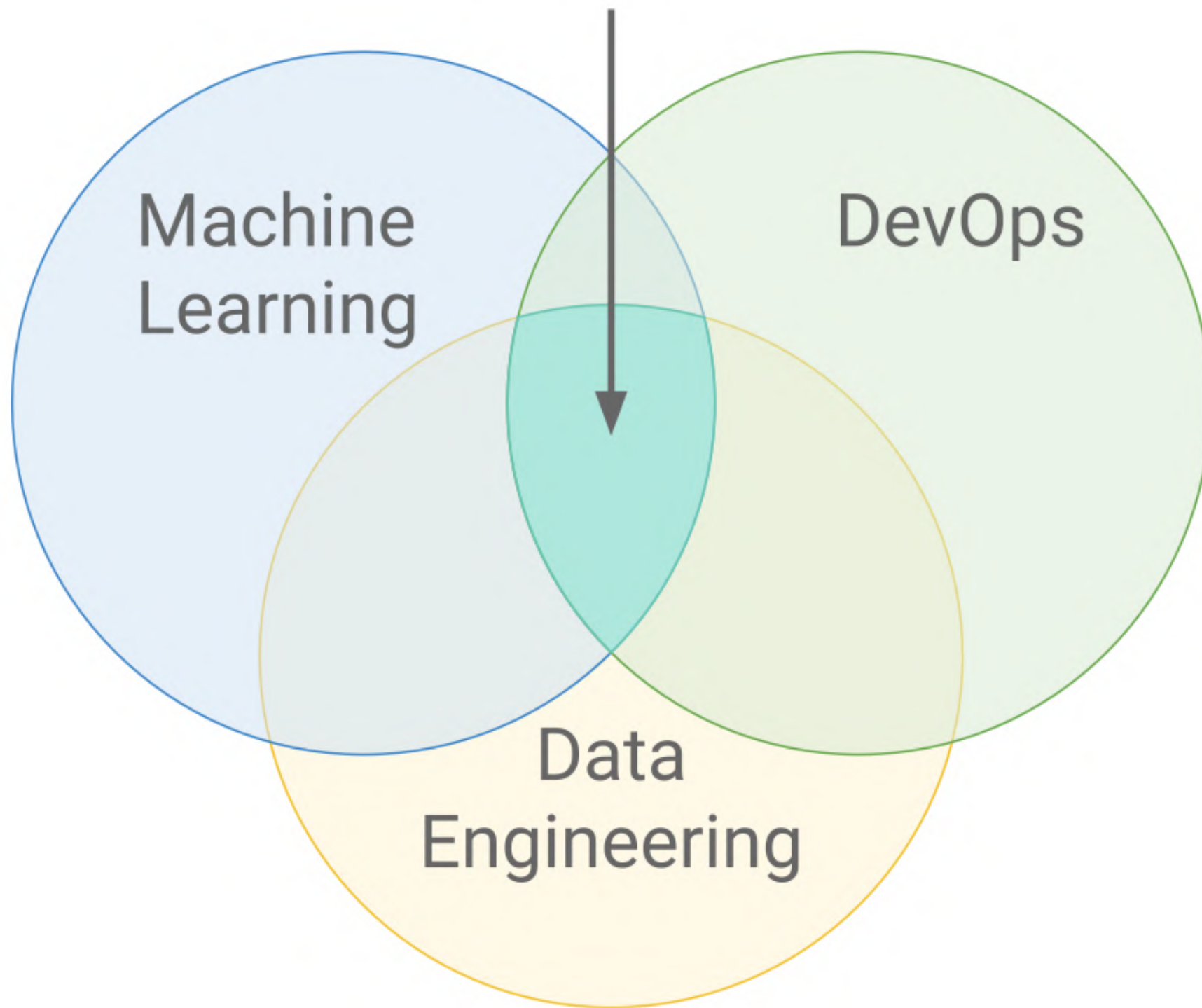
desarrollar, entrenar, validar,

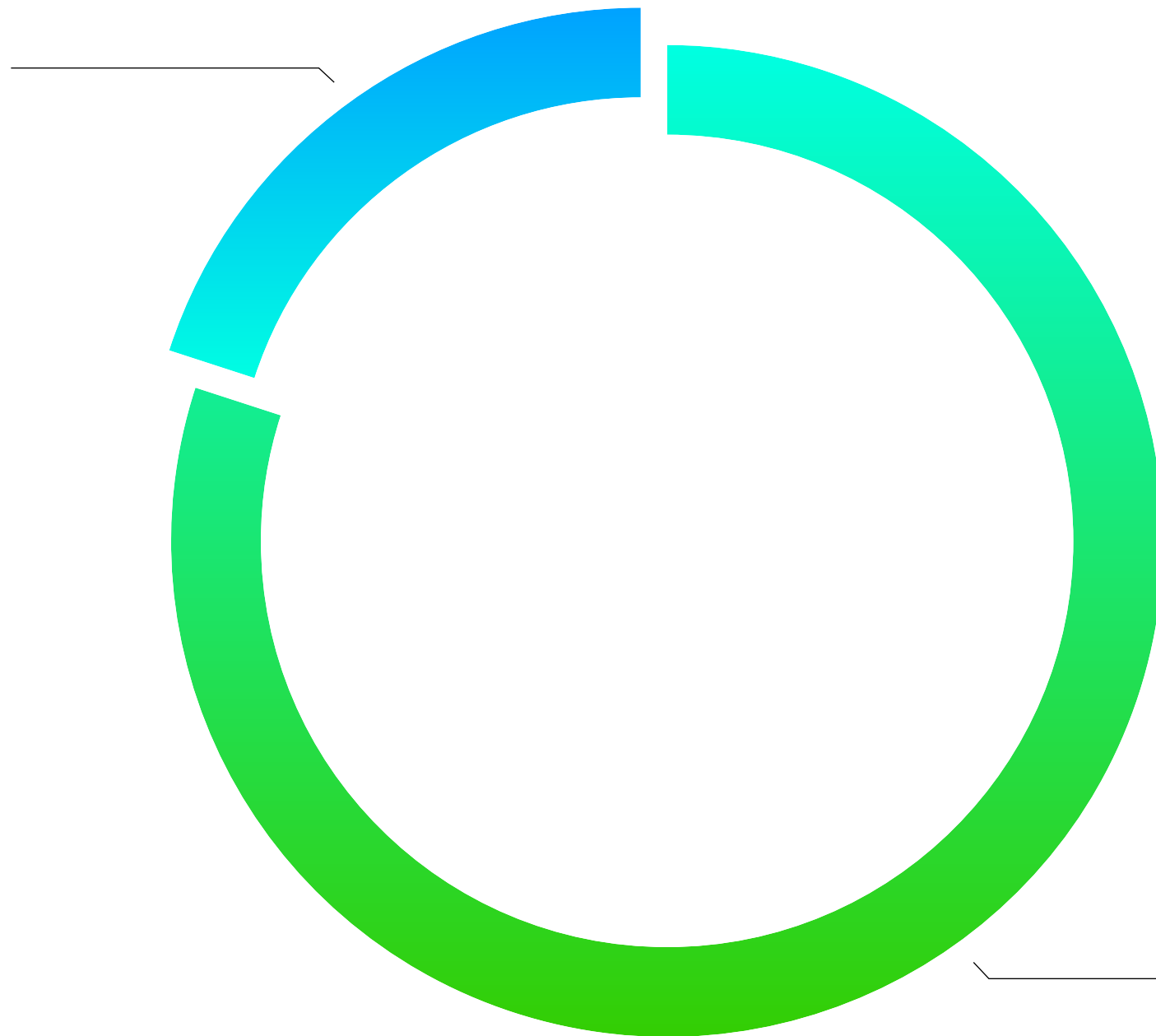
desplegar y mantener



modelos de ML

MLOps





DevOps

O'REILLY®

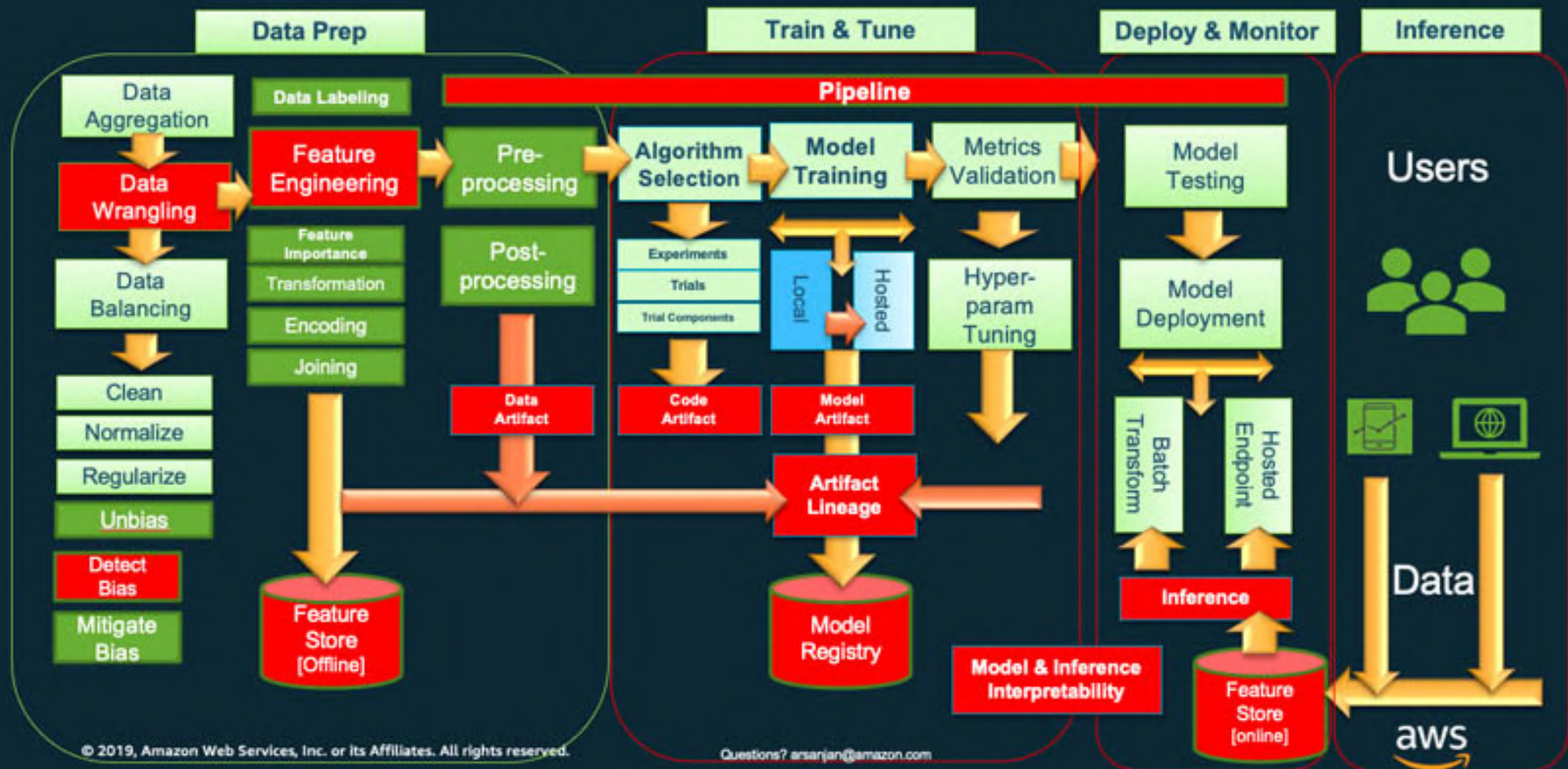
Practical MLOps

Operationalizing Machine Learning Models



Noah Gift & Alfredo Deza

The ML-Lifecycle: Detailed View



Principios de MLOps

Control de versiones

Automation

CI/CD

Gobernanza de Modelos

1. Control de versiones

Seguimiento de cambios en los activos (código, modelos y datos) para asegurar **reproducibilidad** para auditar, mejorar y depurar el sistema.



git

+



2. Automation

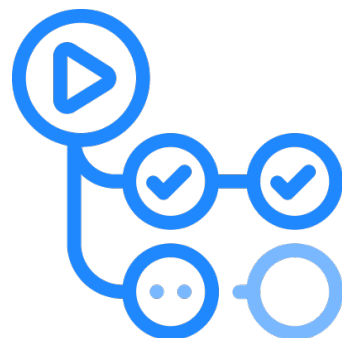
Automatizar con **pipelines** el flujo de
Ingesta > preprocesado >
entrenamiento > validación >
implementación



3. CI/CD

Integración continua: prueba
datos, código y modelos.

Entrega continua: Implementa
modelos nuevos automáticamente



3. CI/CD

Entrenamiento continuo:

Reentrena modelos con nueva info.

Monitoreo continuo: Supervisa
datos y rendimiento del modelo en
producción

4. Gobernanza de modelos

Buenas prácticas:

- > Colaboración entre perfiles técnicos y de negocio**
- > Documentación clara + feedback**
- > Seguridad y privacidad en acceso a datos e infra**

Beneficios de MLOps

Reducción del time to market

Mayor productividad

Implementaciones eficientes



3 Reflexiones

Apps > Navegador > LLM

'App Store' de MCP en ChatGPT

Agente = LLM + MCP



in linkedin.com



Álvaro García Pizarro

Especialista en Cloud, DevOps y sistemas en Santander | Ingeniero Informático y Economista | Desarrollo software como hobby | Estudiante de máster en Informática | Más sobre mi en mi web 🖱️

Valladolid, Castilla y León, España ·

[Información de contacto](#)

lvrpiz.com

Más de 500 contactos



Santander Consumer Finance Global Services



Universidad de Valladolid

Tengo interés en...

Añadir sección

Recursos

Mejorar perfil



Álvaro García Pizarro
Ingeniero DevOps y Cloud

✕ Github LinkedIn

Álvaro García Pizarro - Ingeniero **Cloud**, **DevOps** y de **Automatización**

alvaro@lvrpiz.com

Bulletin

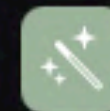
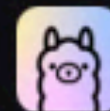
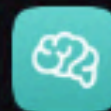
CV

Apasionado de la tecnología, el deporte y la innovación. Actualmente trabajando como ingeniero Cloud, DevOps y de Automatización en Santander. Anteriormente desarrollador de software en Altia.

Comencé mi trayectoria académica graduándome en Comercio por la Universidad de Valladolid y en Business Administration por la South Champagne Business School, donde construí una base sólida en análisis y principios económicos. Sin embargo, mi interés por la tecnología me llevó a reorientar mi carrera y estudiar Ingeniería Informática acabando como el mejor estudiante de mi promoción. Actualmente, estoy ampliando mi especialización cursando un máster en Ingeniería Informática.

En mi tiempo libre, desarrollo aplicaciones innovadoras centradas en la salud y la inteligencia artificial, incluyendo soluciones para el Apple Watch y agentes de IA para distintas plataformas. Puedes descubrir más sobre mis proyectos en mi web. Mi mail está siempre abierto para nuevas oportunidades y colaboraciones.

Proyectos



lvrpiz.com

Q & A

lvrpiz.com