

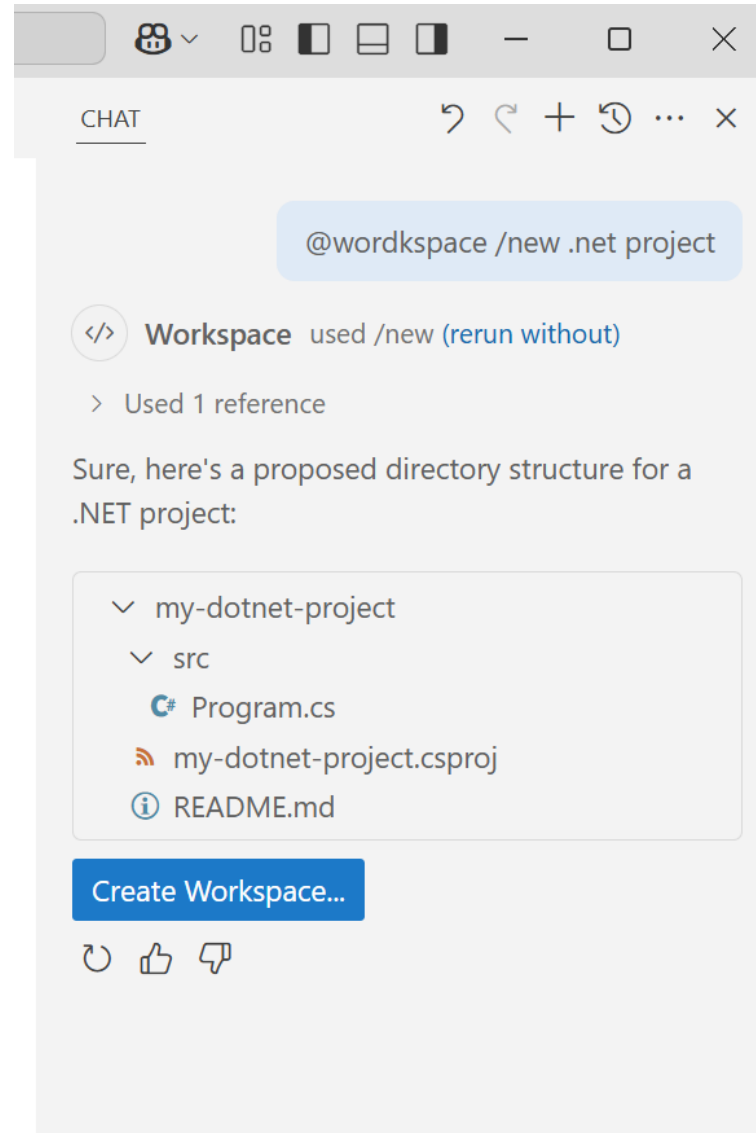


GitHub Copilot: No Longer Just a Chat... CLI, Apps, Agentic Workflows, and More...



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Copilot Chat “Ask” mode agent...



Context deep dive for VS and VS Code

- Implicit Context:
 - Currently selected text, file name or notebook name of the active editor. Active File (optional when using Agents)
- Semantic Indexing
 - Remote (GitHub or ADO), Local or Basic
- @, #, MCP, Vision, Browser Elements...
 - #codebase, #fetch URL, etc...
 - <https://code.visualstudio.com/docs/copilot/chat/copilot-chat-context>
 - <https://learn.microsoft.com/en-us/visualstudio/ide/copilot-chat-context-references?view=visualstudio>

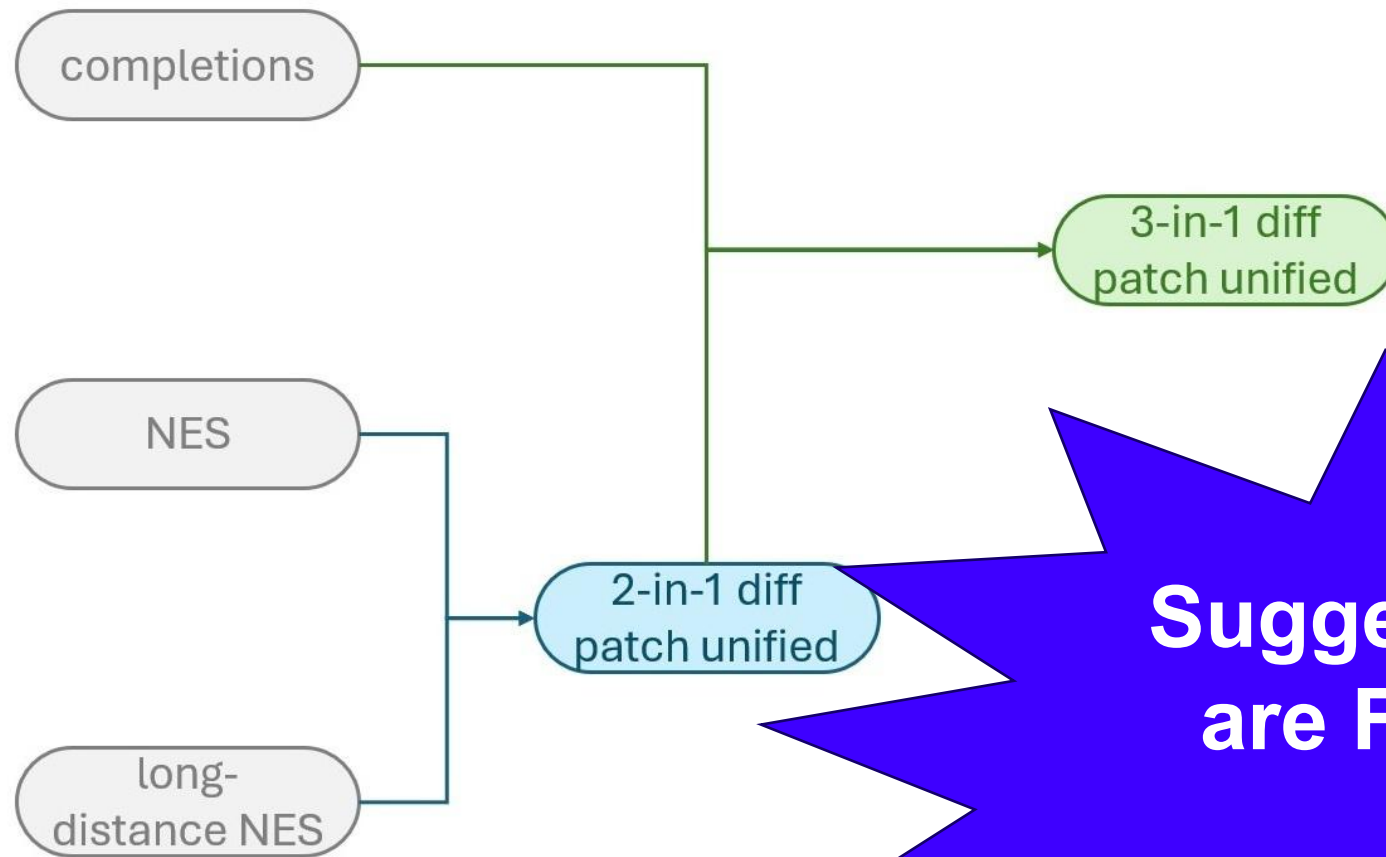
Next Edit Suggestions

```
1  public class Point {
2      private int x;
3      private int y;
4
5      public Point (int x, int y) {
6          this.x = x;
7          this.y = y;
8      }
9
10     public double GetDistance (Point other) {
11         return Math.Sqrt ((x - other.x) * (x - other.x) + (y - other.y) * (y - other.y));
12     }
13 }
```

Release	Shown rate	Acceptance rate	Hide rate
April	+17.9%	+10.0%	-17.5%
May	-18.8%	+23.2%	-20.0%
November	-24.5%	+26.5%	-25.6%

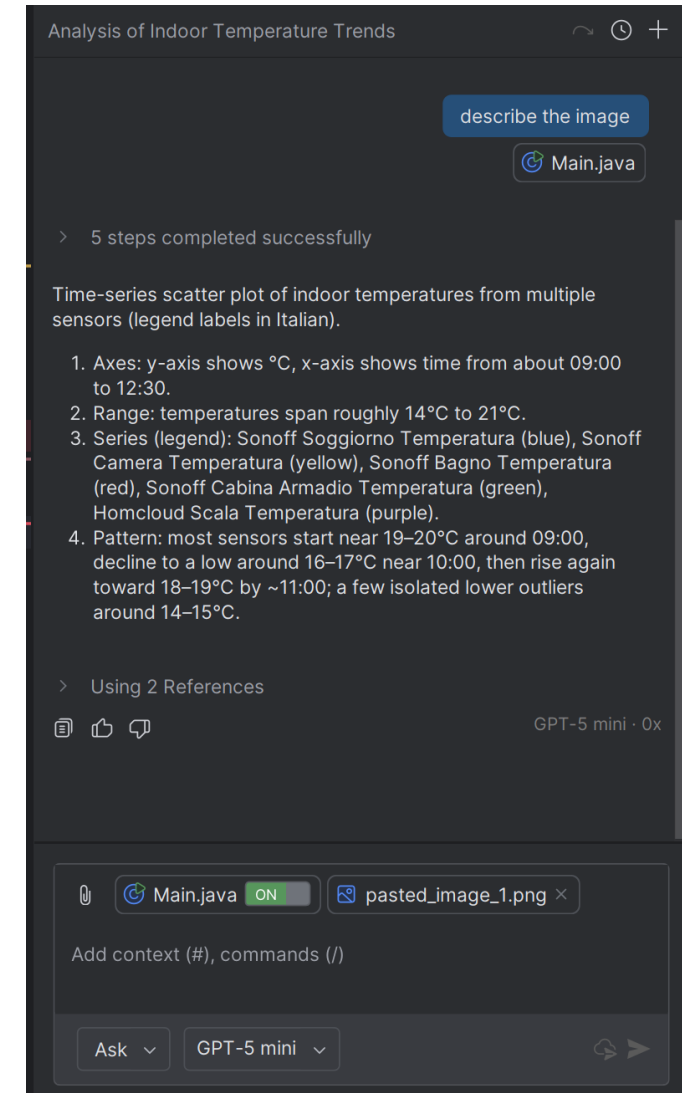
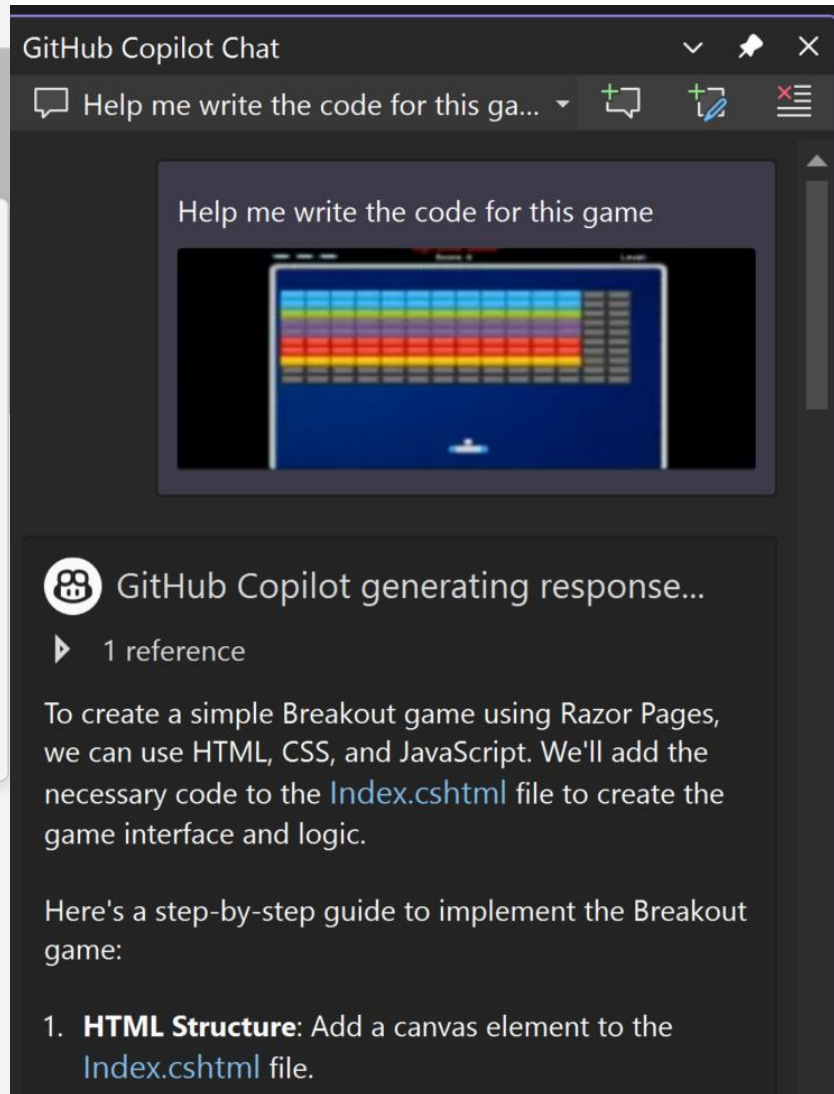
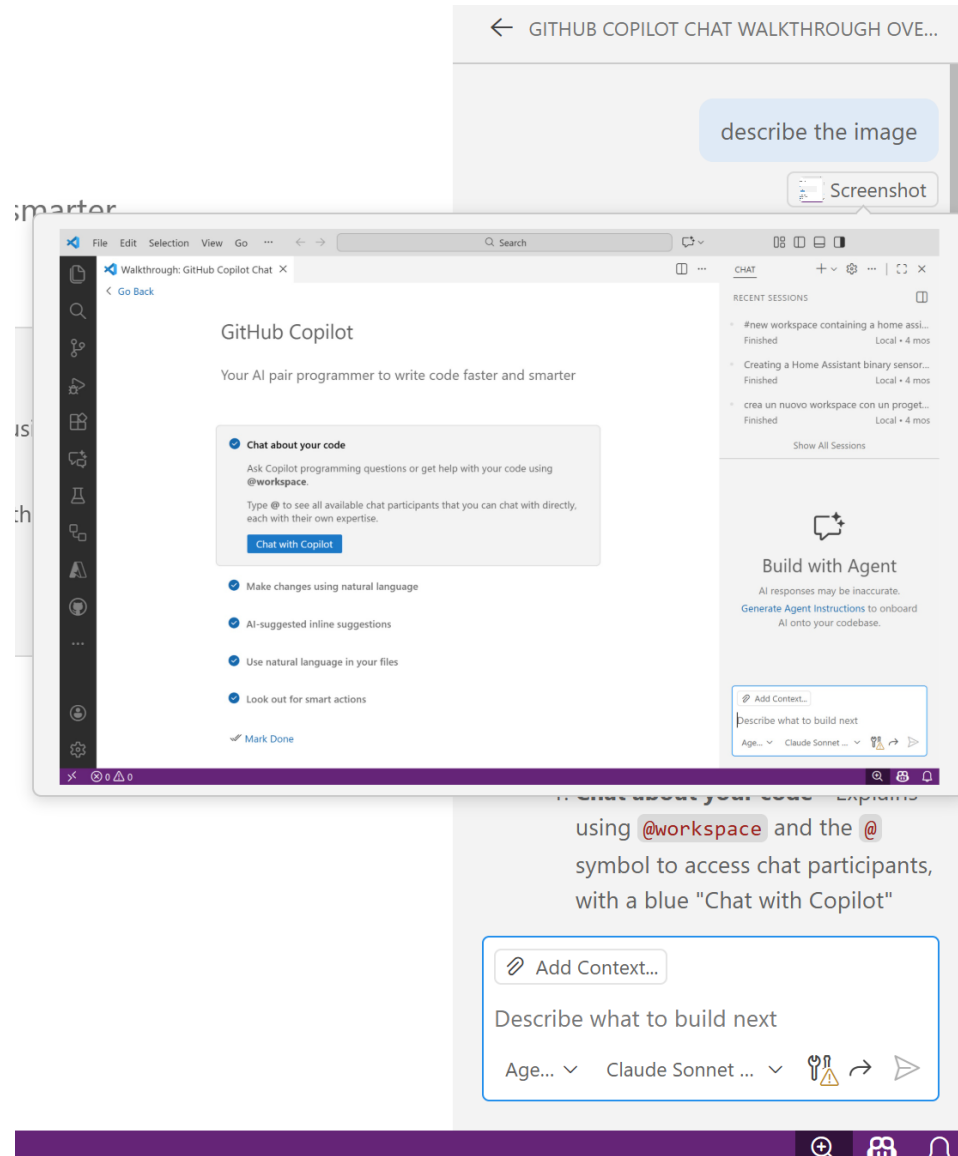
<https://github.blog/ai-and-ml/github-copilot/evolving-github-copilots-next-edit-suggestions-through-custom-model-training/>

Unified Model for every Suggestion...



<https://code.visualstudio.com/blogs/2026/09/23/building-the-github-copilot-inline-suggestions-model-part-two>

Vision in Copilot Chat no longer in Preview



Model Choice and costs



Models

Language Models

Type to search...

Add ModelsInstall Model Providers

Name	Context Size	Capabilities	Cost (Credits per 1M Tokens)		
▼ ⓘ Copilot					
ⓘ Claude Fable 5	1M	Tools Vision	In: 1000	Out: 5000	Ca
ⓘ Claude Fable 5.1	1M	Tools Vision	In: 1000	Out: 5000	Ca
ⓘ Claude Haiku 4.5	160K	Tools Vision	In: 100	Out: 500	Ca
ⓘ Claude Opus 4.7	⚠ 1M	Tools Vision	In: 500	Out: 2500	Ca
ⓘ Claude Opus 4.8	1M	Tools Vision	In: 500	Out: 2500	Ca
ⓘ Claude Opus 4.8 (fast mode) (Preview)	1M	Tools Vision	In: 1000	Out: 5000	Cache Read:... Cache Write...
ⓘ Claude Opus 5	1M	Tools Vision	In: 500	Out: 2500	Cache Read:... Cache Write...
ⓘ Claude Opus 5.5	1M	Tools Vision	In: 400	Out: 2000	Cache Read:... Cache Write...
ⓘ Claude Sonnet 5	1M	Tools Vision	In: 200	Out: 1000	Cache Read:... Cache Write...
ⓘ Claude Sonnet 5.5	1M	Tools Vision	In: 200	Out: 1000	Cache Read:... Cache Write...
ⓘ Gemini 3.5 Flash	⚠ 1M	Tools Vision	In: 150	Out: 900	Cache Read:... Cache Write...
ⓘ Gemini 3.6 Flash	⚠ 1M	Tools Vision	In: 75	Out: 375	Cache Read:... Cache Write...
ⓘ Gemini 3.7 Flash	⚠ 1M	Tools Vision	In: 75	Out: 375	Cache Read:... Cache Write...
ⓘ Gemini 3.8 Flash	1M	Tools Vision	In: 75	Out: 375	Cache Read:... Cache Write...
ⓘ GPT 5 mini	⚠ 128K	Tools Vision	In: 25	Out: 200	Cache Read:... Cache Write...

- Anthropic
- Azure
- Google
- OpenAI
- OpenRouter
- xAI
- Ollama (Deprecated)
- Custom Endpoint

Auto

Auto is available in all the integrations and selects the best model to ensure that you get the **optimal performance** and reduce the likelihood of rate limits.

In VS Code, GitHub Copilot CLI, GitHub Copilot app and JetBrains IDE it has three different behaviours:

- **Efficiency** prioritizes keeping costs low and suits fast, straightforward tasks.
- **Balance** weighs cost, quality, and latency together, and is a good fit for everyday work.
- **Intelligence** prioritizes quality and is built for complex tasks.

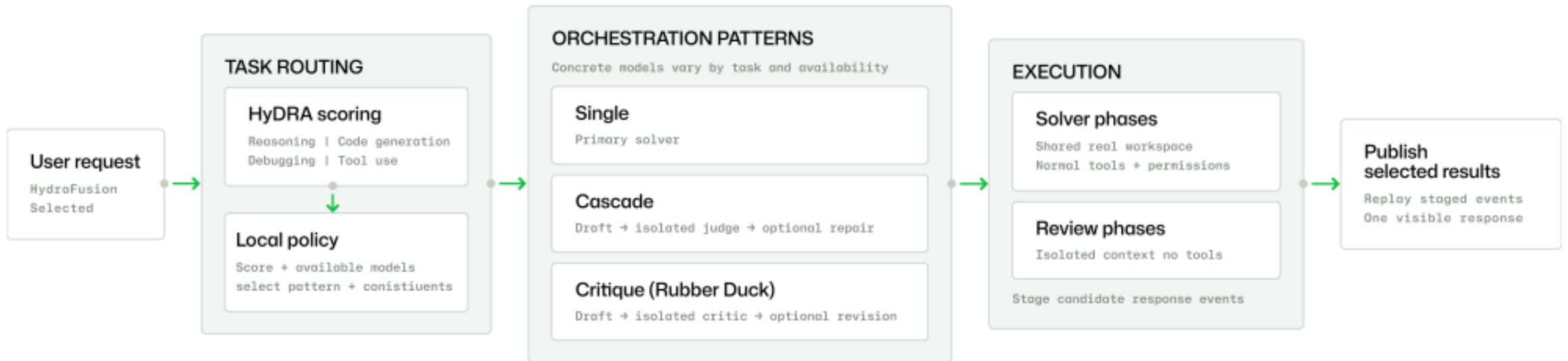
All three tiers use the same set of available models. Auto individually evaluates each prompt to select a best-suited model. For example, a simple task like adding a docstring to an existing function may use a small, efficient model even when auto is optimizing for intelligence.

<https://docs.github.com/en/copilot/concepts/models/auto-model-selection>

HydraFusion

HydraFusion

Task-aware workflow orchestration in GitHub Copilot

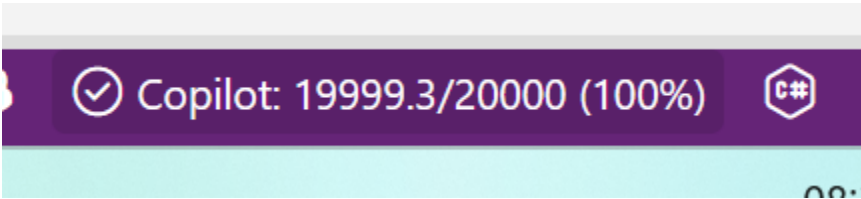
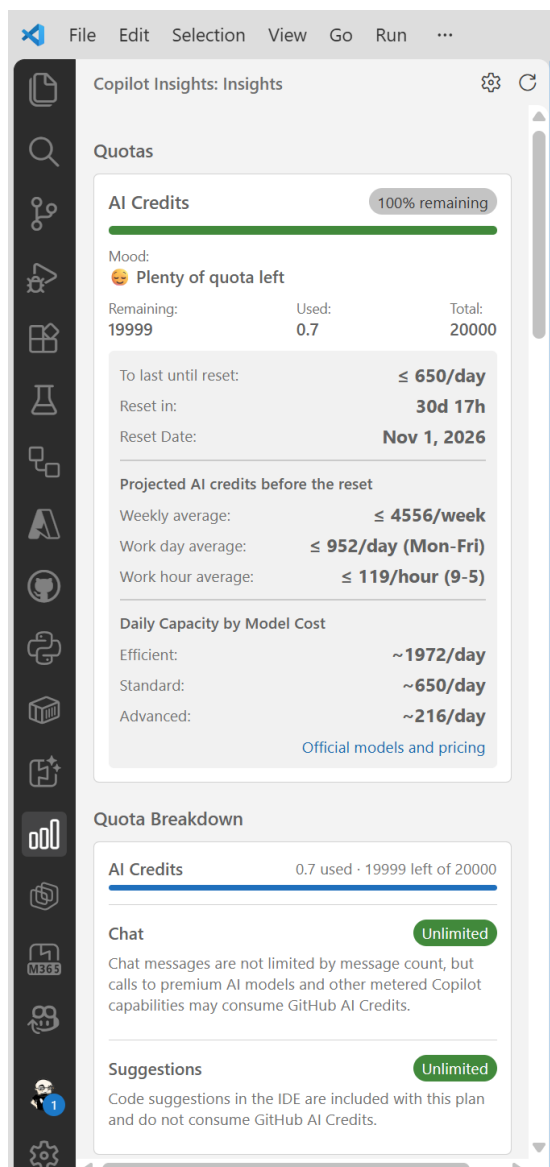


<https://github.blog/ai-and-ml/github-copilot/project-hydrfusion-frontier-quality-via-multi-model-orchestration/>

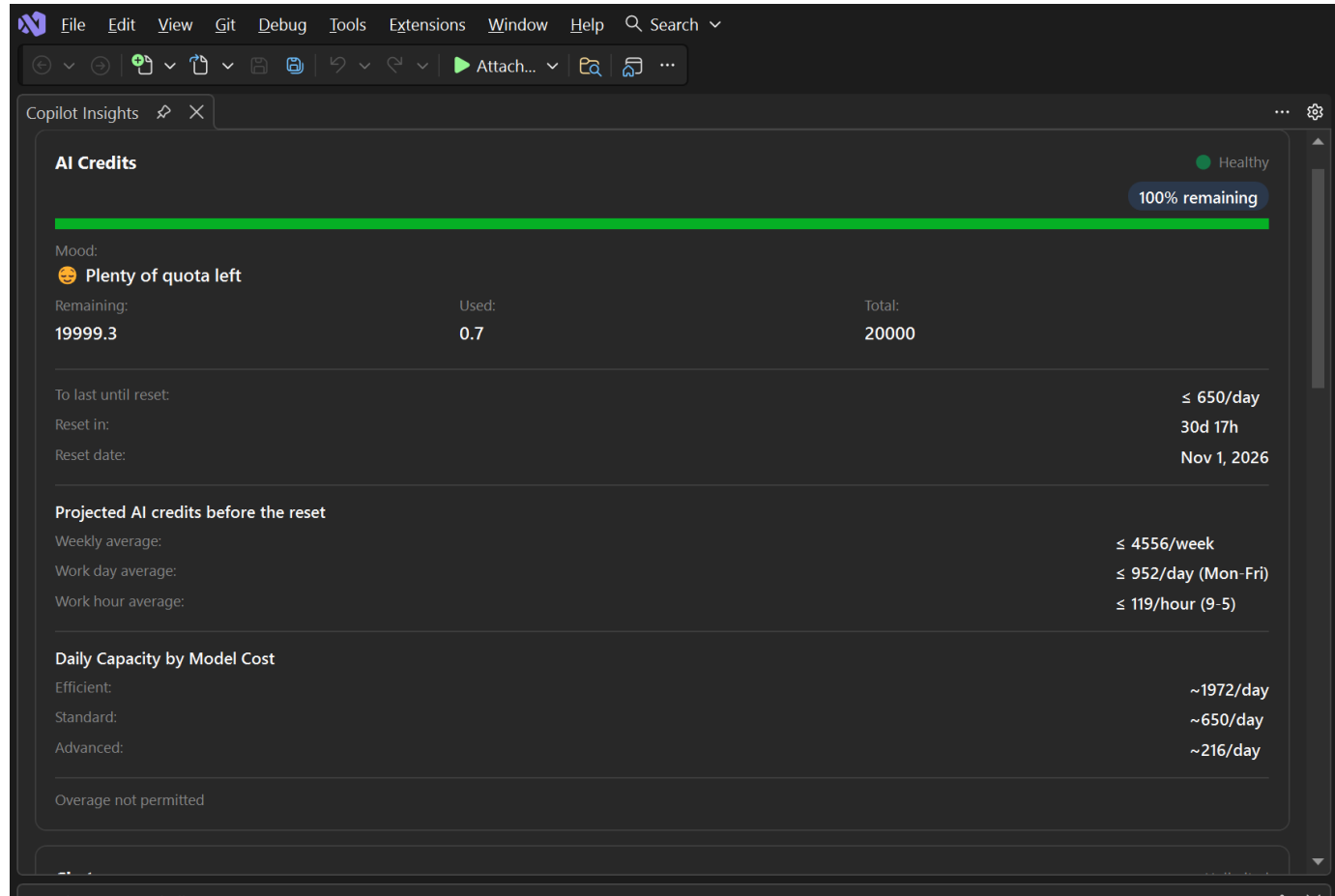
**Keep an eye on
credits**



Copilot Insights for Visual Studio Code



Copilot Insights for Visual Studio 2026



**You can use
Copilot Chat
(even the Basic
one) to save
Credits**



**Agent, Plan,
etc....**



Plan agent

CHAT

create a new .net web app using entra id authentication and create the azure landing zone

> Used 2 references

✓ Research existing project and Azure requirements

✓ Read `Program.cs`

✓ Read `EntraldAuthApp.csproj`

✓ Read `appsettings.json`

✓ Read `appsettings.Development.json`

✓ Read `launchSettings.json`

✓ Read `_LoginPartial.cshtml`

✓ Searched for files matching `**/*.bicep`, no matches

> Searched for files matching `**/*.json`, 6 matches

✓ Searched for files matching `**/*.tf`, no matches

✓ Searched for files matching `**/*.yaml`, no matches

✓ Searched for files matching `**/azure*`, no matches

> Searched for files matching `**/.github/**`, 2 matches

✓ Searched for files matching `**/infra/**`, no matches

✓ Read `EntraldAuthApp`

✓ Read `.github`

✓ Read `_Layout.cshtml`

> Learning about search capabilities... – Azure MCP (MCP Server) ✓

Plan: Add Azure Landing Zone for Entra ID Web

PROCEED FROM PLAN

Start Implementation Open in Editor

Add Context...

Outline the goal or problem to research

Plan Claude Opus 4.5 (Preview)

CHAT

`appsettings.json` has placeholder values that need real Entra ID credentials. The remaining work is creating the Azure App Registration and infrastructure.

Steps

- Create Entra ID App Registration** — Use Azure CLI or Portal to register an application with redirect URIs `https://localhost:7039/signin-oidc` (dev) and `https://<appname>.azurewebsites.net/signin-oidc` (prod), enable ID tokens, and grant `User.Read` Graph permission.
- Update `appsettings.json` with real values** — Replace placeholder `TenantId`, `ClientId`, and `Domain` with actual values from the App Registration; add `ClientSecret` to User Secrets for local development.
- Create `/infra` folder with Bicep templates** — Add `main.bicep` (orchestrator), `appservice.bicep` (App Service Plan + Web App), `keyvault.bicep` (for secrets), and `monitoring.bicep` (Application Insights + Log Analytics).
- Configure App Service for authentication** — Set app settings to reference Key Vault secrets for `AzureAd:ClientSecret`, enable system-assigned Managed Identity, and grant Key Vault access.
- Add CI/CD workflow** — Create `.github/workflows/deploy.yml` or `azure-pipelines.yml` to deploy infrastructure and application to Azure.

Further Considerations

- Single-tenant vs Multi-tenant?** — Single tenant restricts to your organization; multi-tenant allows external users. Recommend: **Single tenant** unless B2B scenarios required.
- App Service SKU?** — Basic (B1) for dev/test ~\$13/mo, Standard (S1) for production with slots ~\$73/mo. Recommend: **B1 for dev, S1 for prod.**
- Should I generate the Bicep files now?** — I can create a complete infrastructure-as-code setup with parameterized templates for dev/prod environments.

🔄 ↶ 🏠 🔒 Claude Opus 4.5 (Preview) • 1x

PROCEED FROM PLAN

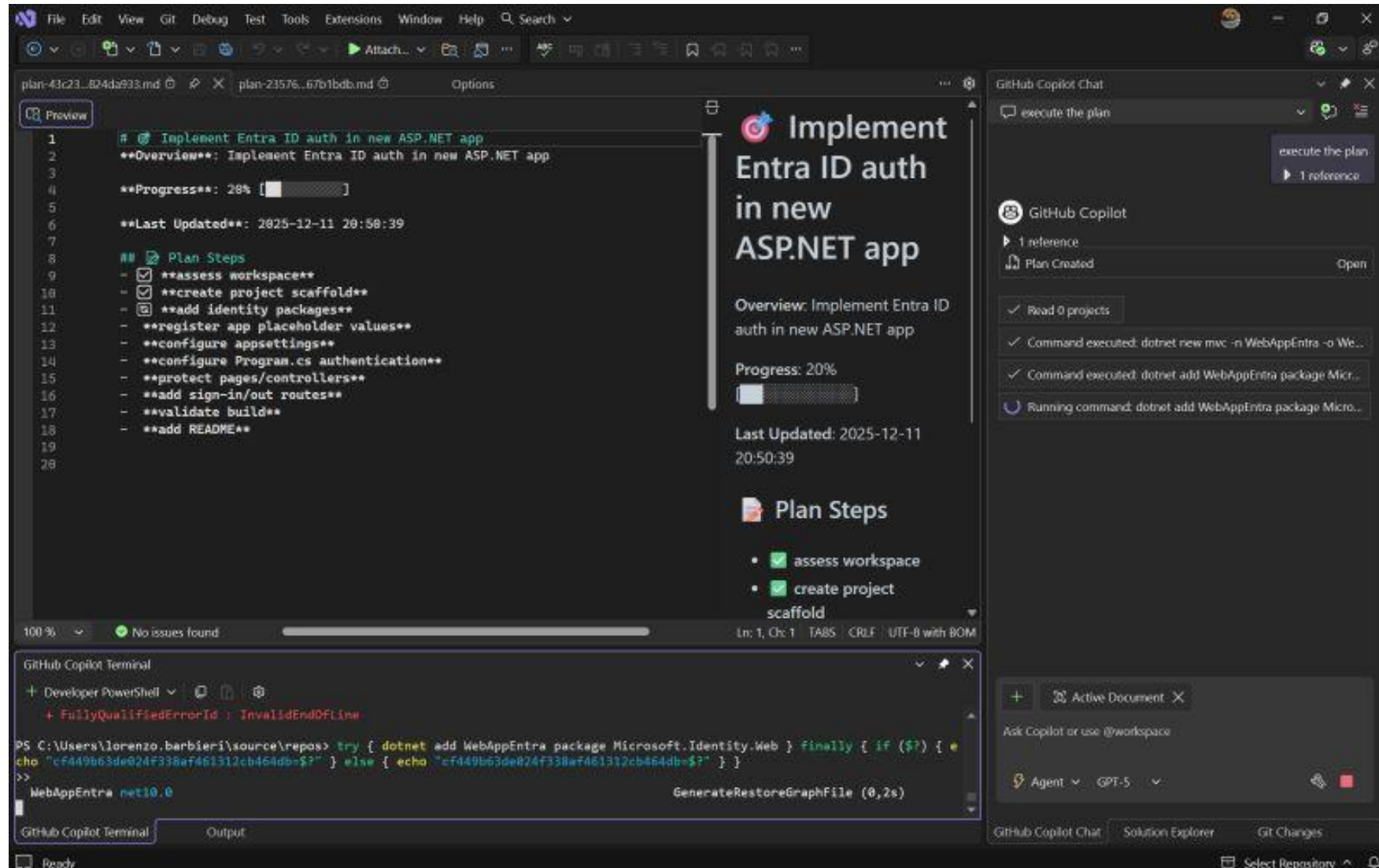
Start Implementation Open in Editor

Add Context...

Outline the goal or problem to research

Plan Claude Opus 4.5 (Preview)

Plan can be done also in VS 2026



Awesome GitHub Copilot

A curated collection of prompts, instructions, and chat modes to supercharge your GitHub Copilot experience across different domains, languages, and use cases.

Includes a MCP Server (running locally).

github.com/github/awesome-copilot



**Custom Agents,
Harness, etc...**



GitHub Copilot CLI



GitHub Copilot CLI

```
C:\WINDOWS\system32\cmd. x + v
Welcome to GitHub
COPILLOT
CLI Version 0.0.358
Version 0.0.358 · Commit f5a8b1e76
Copilot can write, test and debug code right from your terminal. Describe a task to get started or enter ? for help.
Copilot uses AI, check for mistakes.
• Logged in as user: genidelmale
• Connected to GitHub MCP Server
~
claude-sonnet-4.5 (1x)
> Enter @ to mention files or / for commands
Ctrl+c Exit · Ctrl+r Expand recent
```

GitHub Copilot App



GitHub Copilot App

Issues

Automations

Customize

More

Projects

Chats

ha-addon-orefree

No sessions yet



Ask anything or paste a URL. Use / for commands, & sessions, # issues...

+ Interactive

HydraFusion



 ha-addon-orefree

 New worktree · main



Add tests for the most critical untested paths.



Update or generate documentation from the source.



Find performance bottlenecks and optimize them.

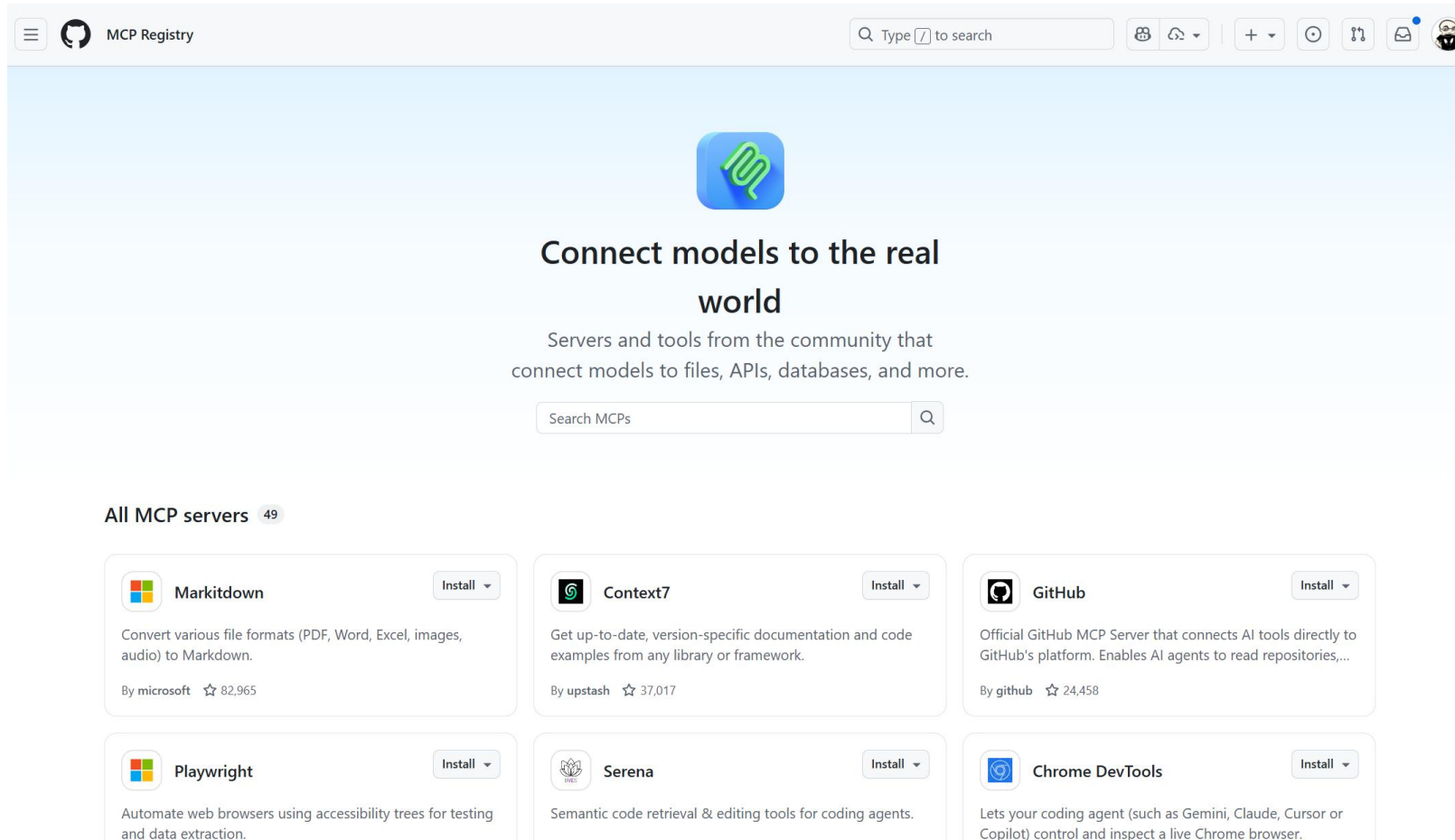
software **one**

Tools:

- Built in
- Command line
- Extensions
- MCP Protocol
- Computer Use



GitHub MCP Registry - <https://github.com/mcp>



The screenshot shows the GitHub MCP Registry homepage. At the top, there's a navigation bar with the GitHub logo, the text "MCP Registry", a search bar with the placeholder "Type / to search", and several utility icons. The main content area has a light blue background. In the center, there's a green icon with a white 'M' and a blue 'C'. Below it, the text "Connect models to the real world" is displayed in a large, bold font. Underneath, a smaller line of text reads "Servers and tools from the community that connect models to files, APIs, databases, and more." Below this is a search bar labeled "Search MCPs". Further down, there's a section titled "All MCP servers" with a count of "49". Below this, there are six cards, each representing an MCP server. Each card includes an icon, the server name, a description, and an "Install" button. The servers listed are: Markitdown (by microsoft, 82,965 stars), Context7 (by upstash, 37,017 stars), GitHub (by github, 24,458 stars), Playwright, Serena, and Chrome DevTools.

MCP Registry

Type / to search

Connect models to the real world

Servers and tools from the community that connect models to files, APIs, databases, and more.

Search MCPs

All MCP servers 49

Markitdown Install

Convert various file formats (PDF, Word, Excel, images, audio) to Markdown.

By microsoft ☆ 82,965

Context7 Install

Get up-to-date, version-specific documentation and code examples from any library or framework.

By upstash ☆ 37,017

GitHub Install

Official GitHub MCP Server that connects AI tools directly to GitHub's platform. Enables AI agents to read repositories,...

By github ☆ 24,458

Playwright Install

Automate web browsers using accessibility trees for testing and data extraction.

Serena Install

Semantic code retrieval & editing tools for coding agents.

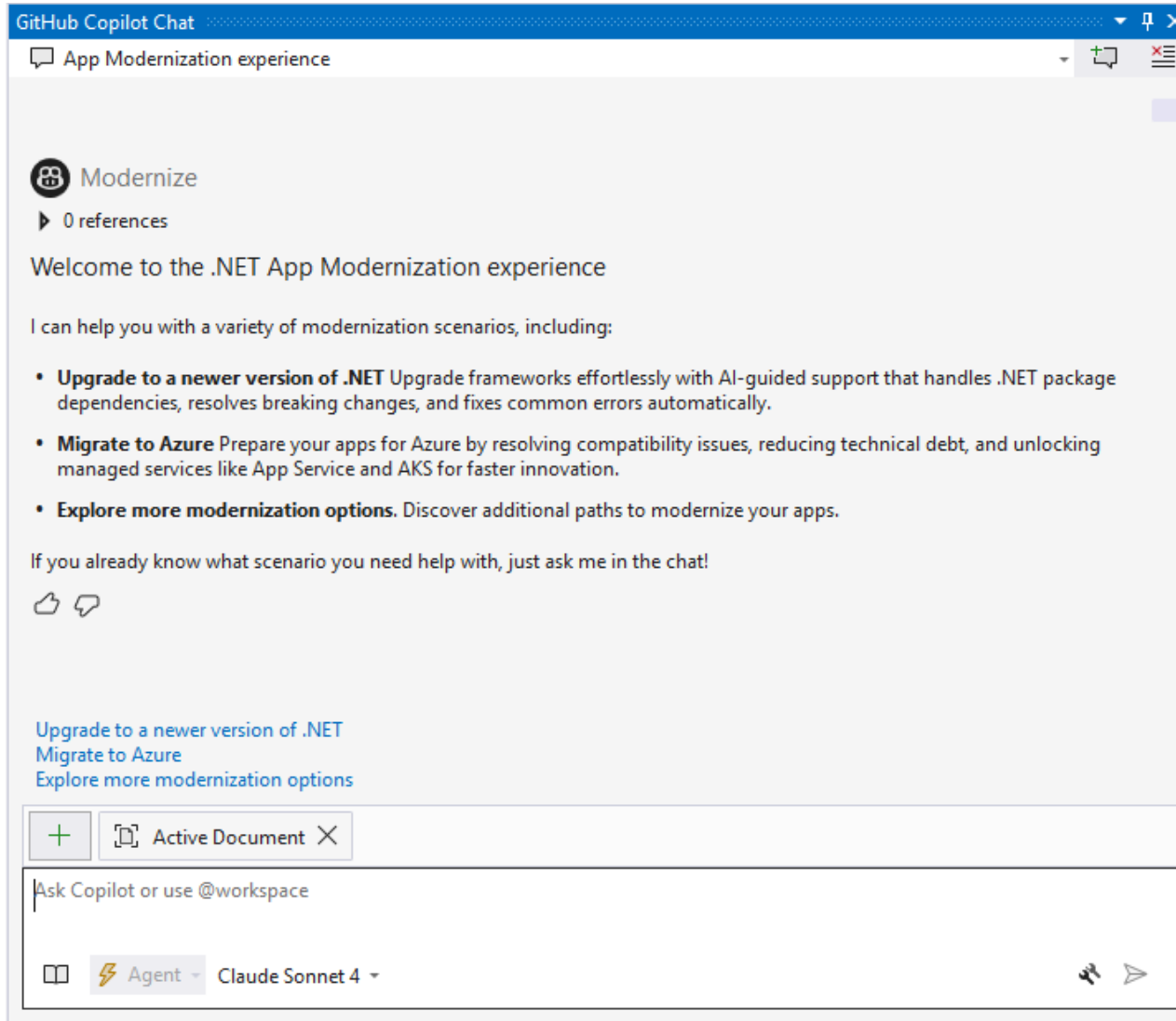
Chrome DevTools Install

Lets your coding agent (such as Gemini, Claude, Cursor or Copilot) control and inspect a live Chrome browser.

GitHub Copilot Upgrade Assistants & Visual Studio “dedicated” Agents



Upgrade a .NET app with GitHub Copilot in VS



- <https://learn.microsoft.com/en-us/dotnet/core/porting/github-copilot-app-modernization/how-to-upgrade-with-github-copilot>
- <https://learn.microsoft.com/en-us/dotnet/azure/migration/appmod/quickstart?toc=%2Fazure%2Fdeveloper%2Fgithub-copilot-app-modernization%2Ftoc.json&bc=%2Fazure%2Fdeveloper%2Fgithub-copilot-app-modernization%2Fbreadcrumb%2Ftoc.json>

Upgrade and modernize Java projects

Upgrade Java Project

Project Information

- Project path: /Users/alacolombiadev/Documents/code/spring-webflow
- Java version: 21
- Build tool type: Gradle Wrapper
- Build tool path: /Users/alacolombiadev/Documents/code/spring-webflow

Goals

- Upgrade Java to 21

Changes

Test Changes

	Total	Passed	Failed	Skipped	Errors
Before	1177	1177	0	0	0
After	1177	1177	0	0	0

Dependency Changes

Upgraded Dependencies

Dependency	Original Version	Current Version	Module
Java	17	21	Root Module

CHAT

are minor and safe

- ✓ **Test Results:** All tests pass with no failures

Migration Benefits

- Performance:** Java 21 provides performance improvements and optimizations
- Security:** Latest JVM security updates and patches
- Modern APIs:** Code now uses non-deprecated, modern Java APIs
- Future-Proofing:** Ready for upcoming Spring Framework versions that require Java 21

Risk Assessment

- Risk Level:** LOW - All changes are minor API modernizations
- Compatibility:** Fully backward compatible
- Testing:** Comprehensive test suite passes completely

Next Steps for Production

- Environment Updates:** Ensure all deployment environments support Java 21
- CI/CD Pipeline:** Update build pipelines to use Java 21
- Documentation:** Update deployment documentation to reflect Java 21 requirement
- Monitoring:** Monitor application performance after deployment

The upgrade is **production-ready** and maintains full functionality while modernizing the codebase for Java 21 compatibility.

🔄 🌟 🗣️

Add Context...

Edit files in your workspace in agent mode

Agent: Claude Sonnet 4

- <https://github.blog/ai-and-ml/github-copilot/a-step-by-step-guide-to-modernizing-java-projects-with-github-copilot-agent-mode/>
- <https://marketplace.visualstudio.com/items?itemName=vscjava.vscode-java-upgrade>

Integrations with GitHub Enterprise



GitHub Copilot inside github.com

The screenshot displays the GitHub Copilot interface within the github.com web application. The top navigation bar includes the GitHub logo, the word "Copilot", a search bar, and various utility icons. The left sidebar contains navigation links for "Home", "Spaces", and "Spark", along with a "New conversation" button. The main chat area shows a conversation with the repository "geniodelmale/lorenzobarbieriinfo". The chat message describes the repository as a GitHub repository owned by the user geniodelmale, containing Hugo sources for the personal homepage lorenzobarbieri.info. The chat message also includes a prompt to describe the repository. The bottom input bar contains the text "How can I help you?" and a "GPT-4.1" model selector.

GitHub Copilot

Search: Type / to search

Home Spaces Spark

Today

New conversation

geniodelmale/lorenzobarbieriinfo

describe this repository

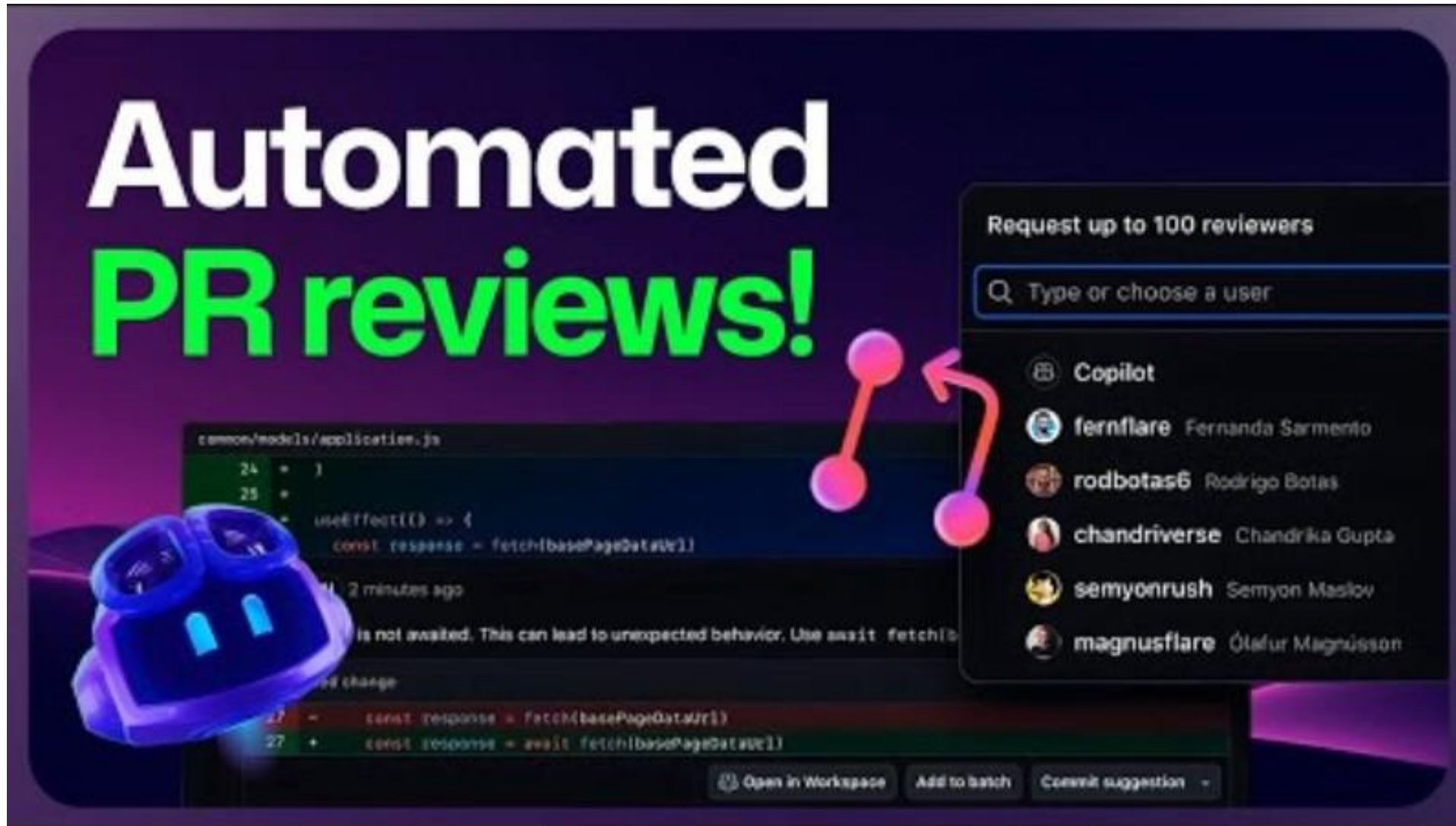
geniodelmale/lorenzobarbieriinfo is a GitHub repository owned by the user geniodelmale. To provide a detailed description of this repository, I will look for a README or other documentation file that usually contains an overview of the project, its purpose, and usage instructions. The repository geniodelmale/lorenzobarbieriinfo contains the Hugo sources for the personal homepage lorenzobarbieri.info. It is a private repository, primarily using HTML, and serves as the source code for building and maintaining the personal website of Lorenzo Barbieri. The repository was created in February 2021 and is actively maintained, with the latest update in January 2025.

If you need a more detailed breakdown of its structure or content, let me know!

How can I help you?

Attach GPT-4.1

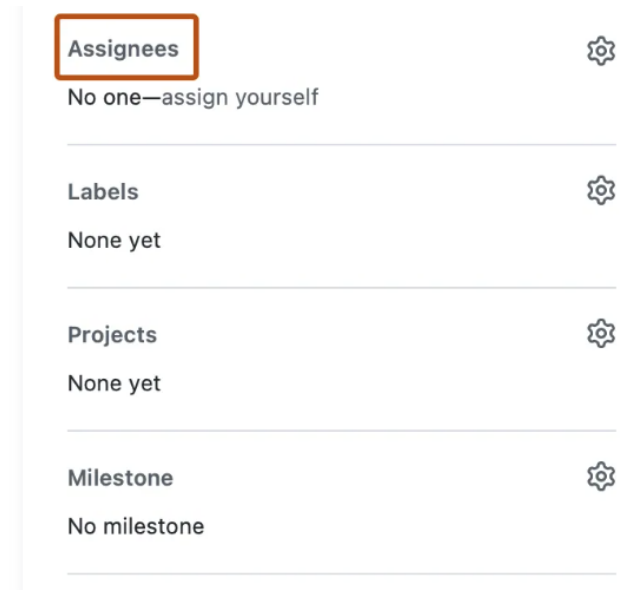
GitHub Copilot Code Review



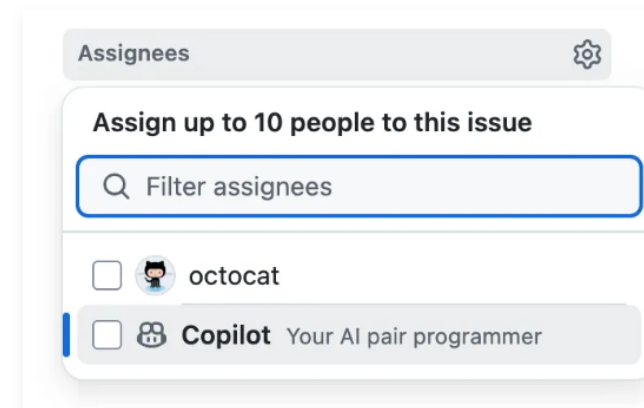
<https://docs.github.com/en/copilot/how-to/use-copilot-agents/request-a-code-review/use-code-review>

Assign Issues to Copilot Coding Agent

- You can assign Issues to Copilot
- Copilot will create a Pull Request and will work on the issue.
- If you need to «change» the Issue, you need to comment the Pull Request, not the Issue
- Codespaces should be enabled
- Agentic Workflows as an alternative.

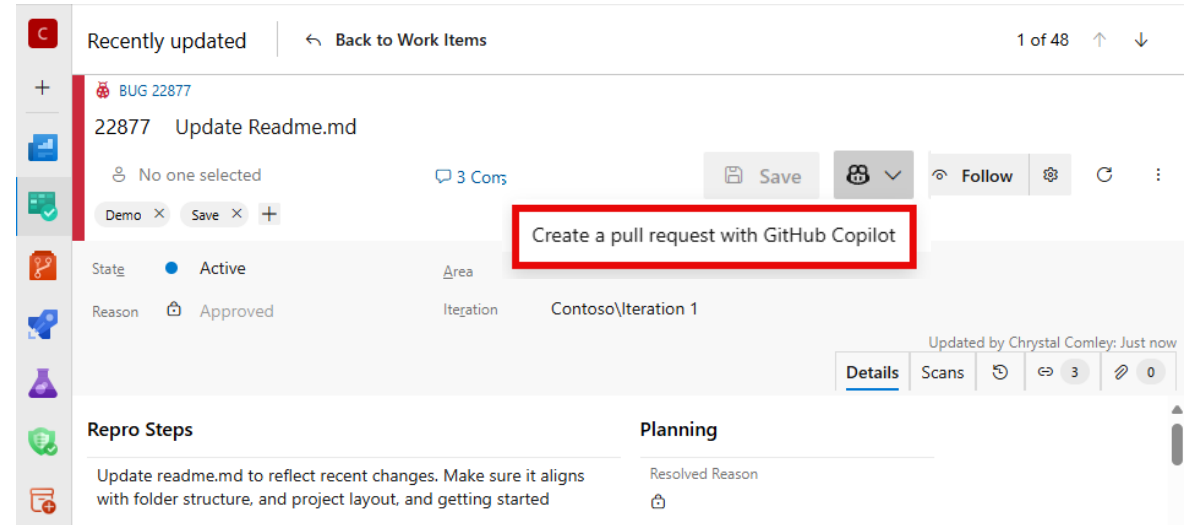


5 Click Copilot from assignees list.



Azure DevOps and Atlassian integrations

- Azure Boards integration:
<https://learn.microsoft.com/en-us/azure/devops/boards/github/work-item-integration-github-copilot>
- Atlassian BitBucket, Jira and Confluence integrations:
<https://www.atlassian.com/blog/bitbucket/github-copilot-bitbucket-jira-and-confluence>



GitHub Copilot Spaces

The screenshot displays the GitHub Copilot Spaces interface. On the left is a sidebar with the GitHub logo, navigation links for 'New chat', 'Agents', and 'Spaces' (which is highlighted), and a section for 'Agent sessions' with a '+ This week' link. At the bottom of the sidebar are 'Collapse' and user information for 'geniodelmale Copilot Max'. The main area is titled 'Spaces / Space 1'. It contains a chat prompt 'How can I help you?' with a '+' button and settings for 'Auto' and 'Optimized for: Balance'. Below this is an 'Instructions' section with a text area for defining Copilot's role. At the bottom, there are tabs for 'Sources' (0) and 'Conversations' (0), and a '+ Add sources' button. A modal is open over the 'Add sources' button, showing options: 'Repository' (Add repository, Add files from repository, Link files, pull requests, and issues) and 'Local' (Upload a file, Add text content).

<https://docs.github.com/en/copilot/how-tos/copilot-on-github/customize-copilot/copilot-spaces/create-copilot-spaces>

Copilot AutoFix for Code Scanning

The screenshot displays the Copilot Workspace interface. The main editor shows a TypeScript file `src/server/main.ts` with imports for `express`, `ViteExpress`, `cookie-parser`, `body-parser`, `lusca`, and `updateHighscore`. The code includes a GET route for `/hello` and a POST route for `/submitHighscore`. The terminal at the bottom shows the command `arcade-invaders@0.0.0 test` and the output of `vitest run`, indicating that 14 tests passed. On the right, the 'Suggestions' panel shows a 'Check failure' for 'Code scanning / CodeQL' with the message 'Missing CSRF middleware (High)'. Below this, the 'Copilot Autofix' section provides a detailed explanation of the vulnerability and a list of steps to resolve it: 1. Install the `lusca` package, 2. Import the `csrf` middleware from `lusca`, and 3. Add the `csrf` middleware to the Express application before the route handlers. At the bottom of the suggestions panel, a 'Suggested changeset' shows the specific code changes to be applied to `src/server/main.ts`, including adding `import csrf from 'lusca';` and `app.use(csrf());`.

<https://docs.github.com/en/code-security/code-scanning/managing-code-scanning-alerts/responsible-use-autofix-code-scanning>

Which plan includes GitHub Copilot Autofix?

GitHub Copilot Autofix provides contextual explanations and code suggestions to help developers fix vulnerabilities in code and is included in GitHub Advanced Security.

Copilot Autofix for Partners, to extend the same functionality to partner tools.

***Requires GH Advanced Security**

Agentic Workflows

***compatible with
GH Copilot, Codex,
Claude Code, etc...**



Agentic Workflows

- You can create GitHub Agentic Workflows with a coding agent (recommended) or manually.
- A workflow is a markdown file in **.github/workflows/** that contains YAML frontmatter for configuration and natural language instructions for the AI agent.
- To create an agentic workflow, you define the workflow in markdown, compile it into a `.lock.yml` file, commit both files, then run it through GitHub Actions triggers or the GitHub CLI.

Agentic Workflows: example

```
---  
on: weekly on monday  
  
permissions:  
  issues: read  
  copilot-requests: write  
  
network: defaults  
  
tools:  
  github:  
    toolsets: [issues]  
  
safe-outputs:  
  create-issue:  
  
---
```

Weekly issue activity report

Review issue activity from the last 7 days in this repository.

Create a GitHub issue that includes:

- Total issues opened and closed this week.
- The top recurring themes from issue titles and descriptions.
- A short list of notable issues that still need attention.
- Two or three actionable recommendations for maintainers.

Keep the report concise and action-oriented.



Lorenzo Barbieri
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www.linkedin.com/in/geniodelmale/



Thank you!

Let's get in touch!

softwareone