

Using GitHub Copilot CHAT

 GITHUB

GitHub Fundamentals—with Interactivity

Published by [O'Reilly Media, Inc.](#)



 Interactive

[What you'll learn](#) [Is this live event for you?](#) [Schedule](#)

GitHub is a central hub for most open source projects, and it's the biggest hosting platform for storing source code versioned by Git. Yet it still manages to be highly underutilized. Correctly managed, GitHub can be a proven record of your work and interests, a résumé that can be used as leverage in salary negotiations, a hosting platform to promote yourself or your projects, a CI/CD platform to deliver your software to millions, and a fantastic collaborative tool for your team to facilitate communication among developers. And GitHub can also be your go-to place for solving daily programming challenges and fixations.

Join expert Lukasz Dynowski to learn everything you need to know to get started with GitHub. In a little over an hour, you'll build a complete open source project, create a web page and a wiki to promote it, and discover how to maintain and collaborate with others on your project.

YOUR INSTRUCTOR



Lukasz Dynowski

Lukasz Dynowski is an independent consultant who in his career was involved in over 150+ projects. Counting over 10 years of experience as a software engineer Lukasz was doing Full-Stack, DevOps, Software Architecture, as well as...

[Read more](#)



(••) WEB APIS

API Styles Fundamentals

Published by [O'Reilly Media, Inc.](#)



Beginner

Understanding trade-offs and choosing the correct solution for your architecture

In this course, you'll:

- Learn how a variety of APIs are designed
- Understand the differences among API communication methods
- Learn which API design decisions are best for which use cases

Course description

If you only have a hammer, everything begins to look like a nail, but sticking with a single API style is limiting. Nowadays, a service or microservice has several APIs, and they must all be well-defined.

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Topics

- **LLMs**
- **GitHub Copilot X**
- **Prompt Engineering**
- **Warning AI**
- **Labs**

OBJECTIVES

- ✓ Chat
- ✓ Copilot
- ✓ CLI

- ✓ Refactoring
- ✓ Testing
- ✓ Documentation
- ✓ Time complexity
- ✓ Secure
- ✓ Productivity
- ✓ LLMs
- ✓ Critical thinking



ChatGPT



FORBES > INNOVATION > AI

ChatGPT Is The Fastest Growing App In The History Of Web Applications

Cindy Gordon Contributor

*CEO, Innovation Leader Passionate about
Modernizing via AI*

Follow

Feb 2, 2023, 06:24pm EST

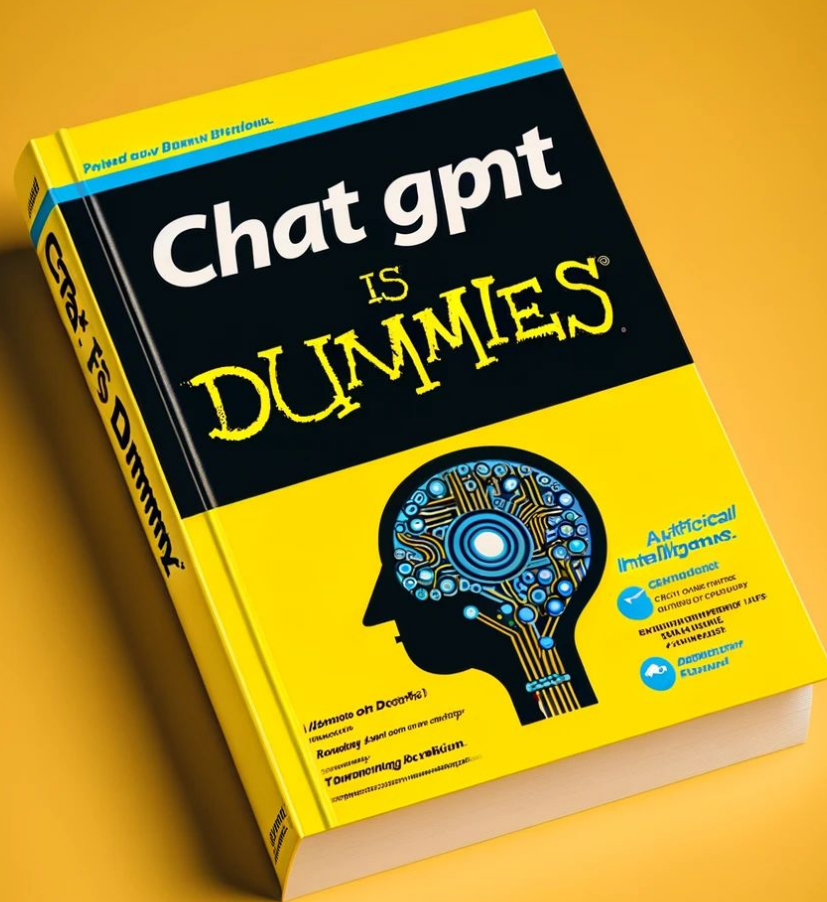


UBS research just confirmed that ChatGPT is the "fastest-growing consumer application in history," according to research from [UBS](#) research just announced that ChatGPT. "In 20 years following the Internet space, we cannot recall a faster ramp in a consumer internet app. By comparison, TikTok took nine months to reach 100 million monthly users, and Instagram about 2.5 years." Other popular online services have taken longer to hit the one million user mark. Instagram being the the closest. Another comparison is when [Netflix](#) was launched as a subscription service in 1999, the one million user mark took over 3.5 years to reach this many users.

Already at over one million users in just five days since launching in

The background is a deep navy blue space scene. It is filled with numerous small, bright white and light blue stars of varying sizes. Several constellations are faintly visible, with thin white lines connecting the stars. Notable constellations include a scorpion-like shape in the upper left and a more complex, multi-pointed star pattern in the upper right. The overall effect is a cosmic, starry night sky.

LLMs





Jun	2020	GPT-3
Jun	2021	GitHub Copilot
November	2022	ChatGPT
March	2023	Google PaLM
November	2023	GitHub Copilot Chat
February	2024	Google Gemini 1.5

Beware LLMs

Auto-Regressive LLMs Suck !

- ▶ **Auto-Regressive LLMs are good for**
 - ▶ Writing assistance, first draft generation, stylistic polishing.
 - ▶ Code writing assistance
- ▶ **What they *not* good for:**
 - ▶ Producing factual and consistent answers (hallucinations!)
 - ▶ Taking into account recent information (anterior to the last training)
 - ▶ Behaving properly (they mimic behaviors from the training set)
 - ▶ Reasoning, planning, math
 - ▶ Using “tools”, such as search engines, calculators, database queries...
- ▶ **We are easily fooled by their fluency.**
- ▶ **But they don't know how the world works.**

Y. LeCun

▶ But they don't know how



<https://www.youtube.com/watch?v=pd0JmT6rYcl>



GitHub

DEMO

🔍 path:**/dockerfile OR path:**/.dockerfile OR path:**/dockerfile.*



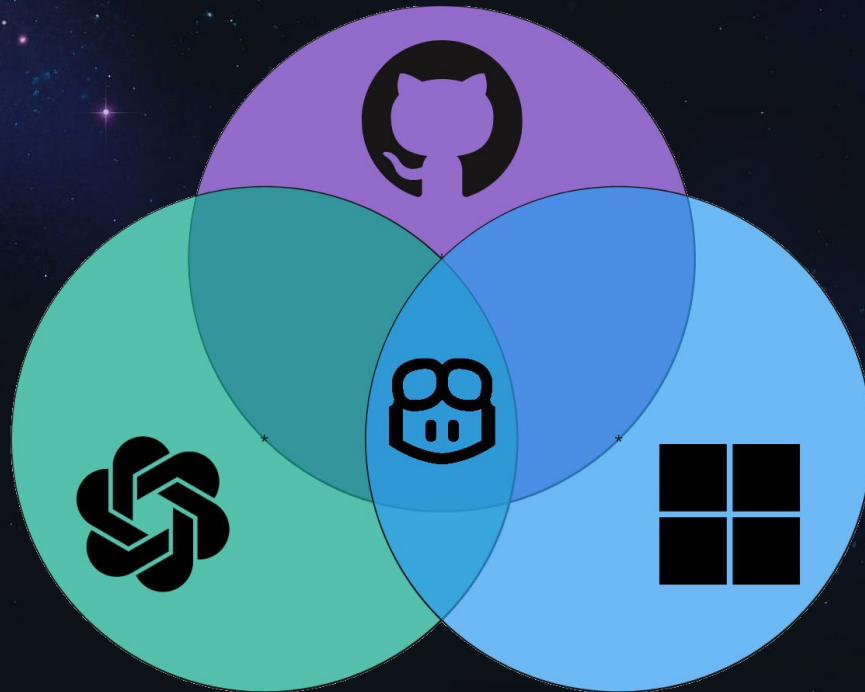
🔔 Tip For an [advanced search](#), use our [prefixes](#)





GitHub Copilot X

GitHub Copilot





55%



**Faster
Coding**



46%



**Code
written**



75%



**More
fulfilled**

Using GitHub Copilot Chat correlates with better code quality

85% of developers felt more confident in their code quality when authoring code with GitHub Copilot and GitHub Copilot Chat

85%



Code reviews were more actionable and completed 15% faster than without GitHub Copilot Chat

15%

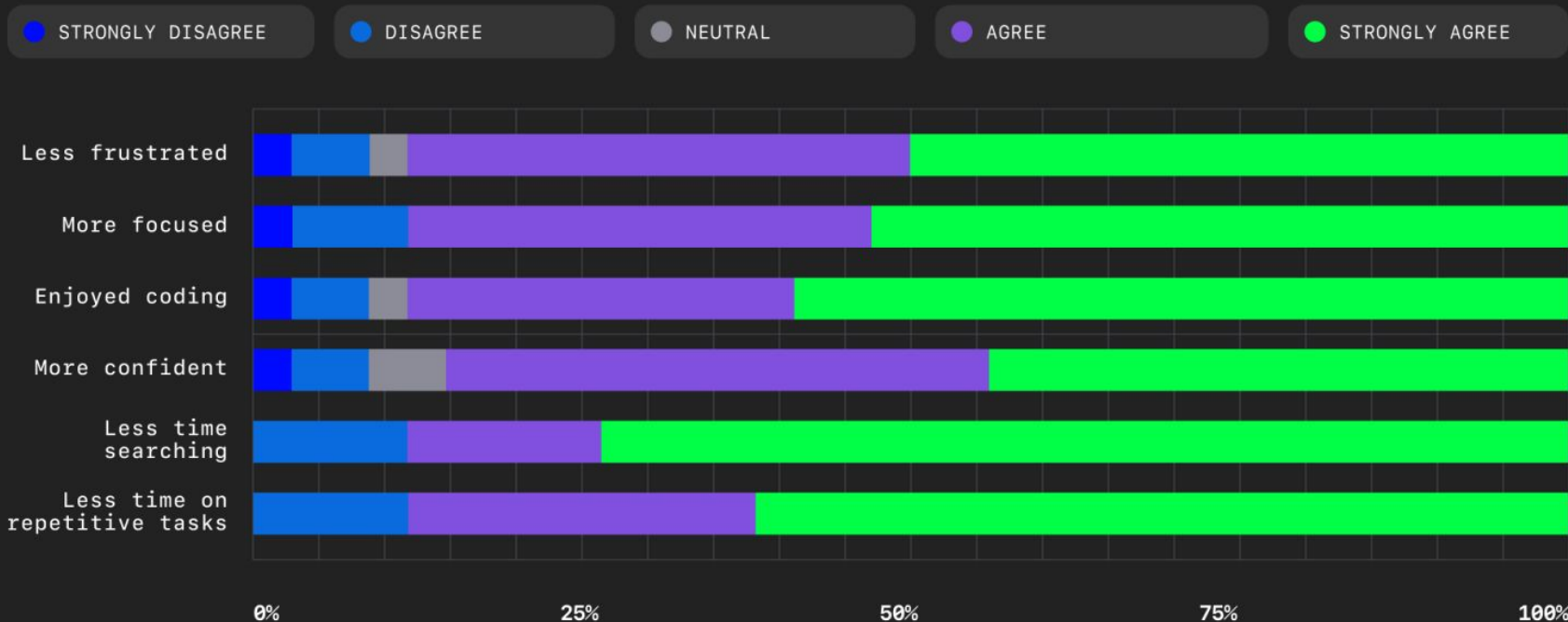


88% of developers reported maintaining flow state with GitHub Copilot Chat

88%



Participant rating: authoring & reviewing code with GitHub Copilot Chat





GitHub Copilot

Codex > Chat GPT 3.5 Turbo > GPT 4*




Copilot Chat Can

- **Generate unit test**
- **Generate documentation**
- **Generate code for a specific task**
- **Explain code**
- **Propose code fixes**
- **Answer coding questions**



GitHub Copilot Chat

Preview

GitHub  github.com |  5,049,233 installs |      (86) | Free Trial

AI chat features powered by Copilot

Installation

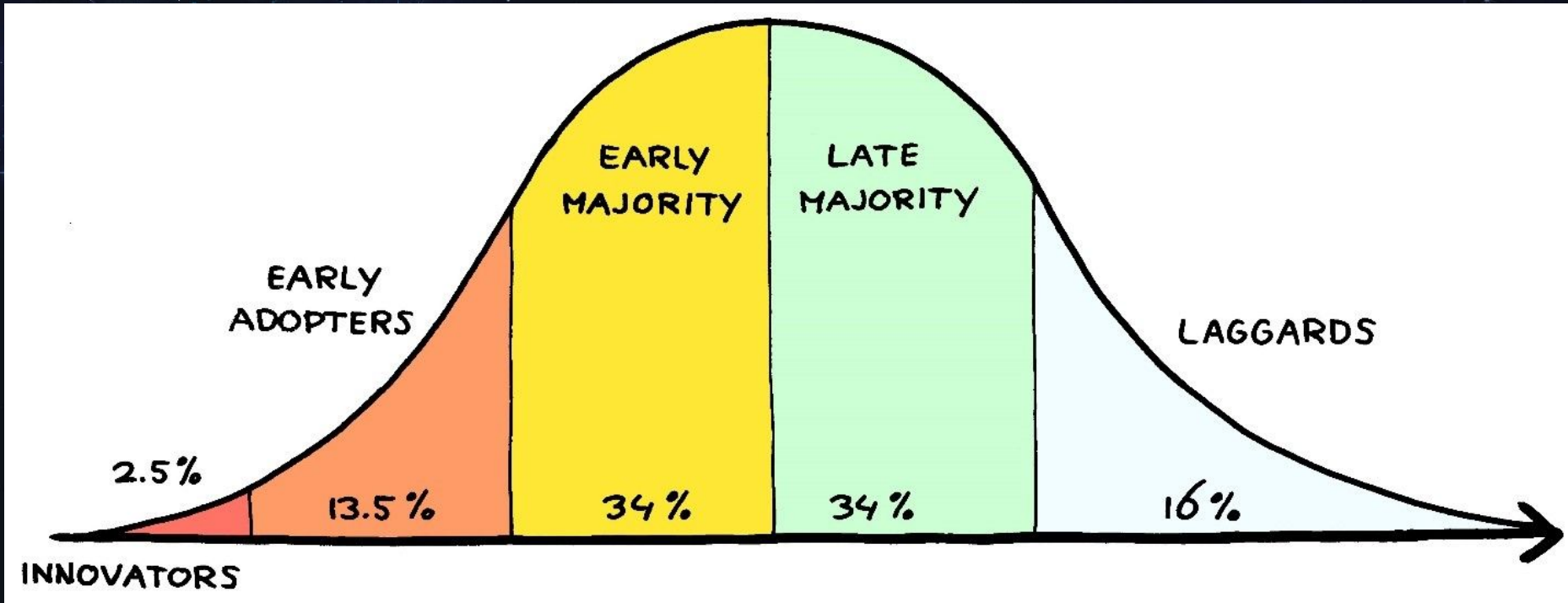
Launch VS Code Quick Open (Ctrl+P), paste the following command, and press enter.

```
ext install GitHub.copilot-chat
```

Copy


[More Info](#)

Adoption Life Cycle



EXTENSIONS: MARKETPLACE

Copilot




GitHub Copilot

Your AI pair programmer

GitHub

436ms




GitHub Copilot Chat

AI chat features powered by Copilot

GitHub

32ms




GitHub Copilot Labs

Experimental features for GitHub ...

GitHub

98ms




Copilot Theme

A VSCode implementation of the t...

Benjamin Benals

185K ★ 5

Install




GitHub Copilot Voice

A voice assistant for VS Code

GitHub

40K ★ 5

Install




ChatGPT Copilot

An VS Code ChatGPT Copilot Exte...

Pengfei Ni

40K ★ 5

Install




clara-copilot

Clara Copilot V3

BadBoy17G

18K ★ 4.5

Install




Copilot for VS Code

JavaScript/TypeScript developmen...

Metatype

40K ★ 3.5

Install




YouAI Copilot

An AI powered assistant to autoco...

YouAI

597 ★ 5

Install




Fex Copilot

Fex AI Buddy

Fex Copilot

25 ★ 5

Install




TyPy Copilot

Visual Studio Code extension to su...

typy

13 ★ 5

Install




极智副驾Geek Copilot

用极智副驾轻松写代码

bopoda

85

Install



Jui Copilot

用于使用Jui时的代码补全

文

92 ★ 5

Install

Visual Studio Code

Editing evolved

Start

New File...

Open File...

Open Folder...

Clone Git Repository...

Connect to...

Recent

Code (Workspace) ~/Code

learning-api-styles ~/Code/Oreilly

Walkthroughs

Get Started with VS Code

Discover the best customizations to make VS Code yours.

Learn the Fundamentals

Boost your Productivity

GitHub Copilot Updated

Get Started with Python Development Updated

More...

main*

0 0 0

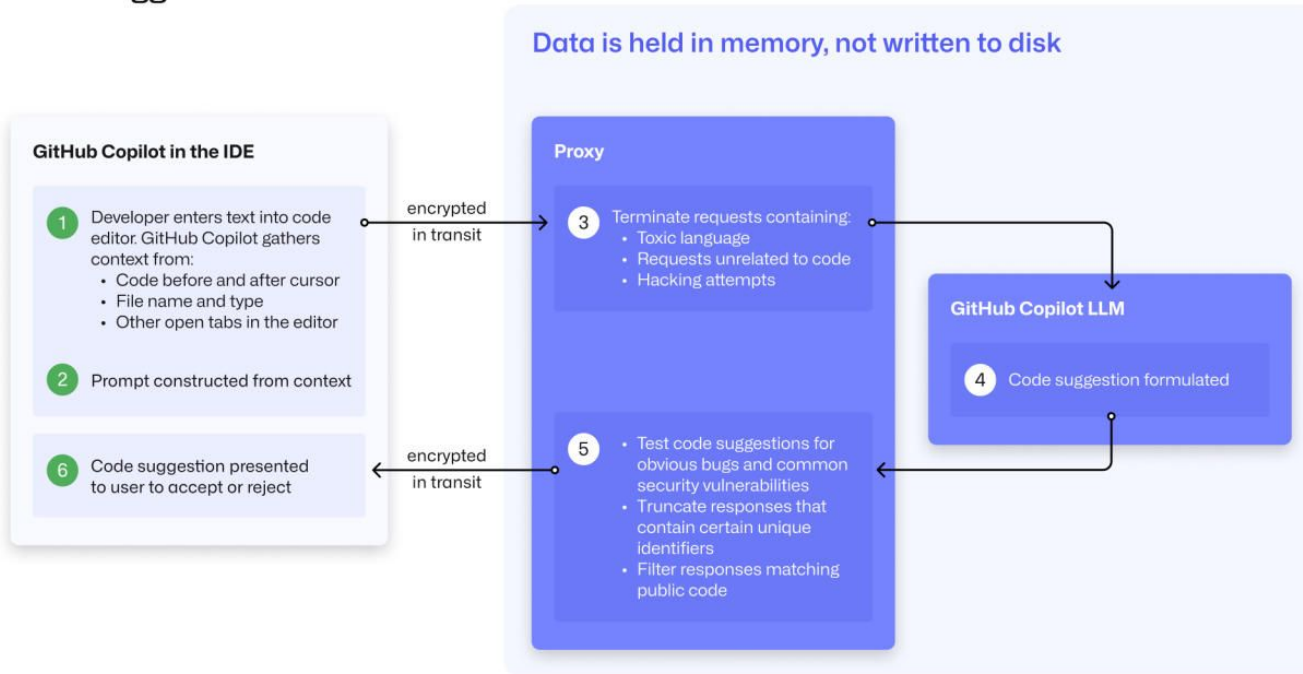
0 0

Live Share

✓ Spell

tabnine starter

The life cycle of a GitHub Copilot code suggestion in the IDE



Prompt Engineering Tips

1. **Goal**
2. **Clarity**
3. **Context**
4. **Refine**

WARNING Copilot Chat

- Limited scope
- Potential for bias
- Security risks
- Inaccurate code
- Matches with public code



Amazon CodeWhisperer

Gemini Code Assist

Codey: Google AI's

Code Llama



The background is a deep navy blue, speckled with numerous small white stars of varying sizes. Several prominent stars have bright, multi-pointed diffraction patterns. Faint, thin white lines connect some of the stars, forming parts of celestial constellations. The overall effect is that of a vast, starry night sky.

LABS



Does it work?

*"60% of the time, It
works every time"*

And what
happened
next?



He shipped it
to PROD!