

The background features a dark blue gradient with large, overlapping, curved shapes in shades of purple, pink, and orange, creating a dynamic and modern aesthetic.

# AWS re:Invent

NOV. 27 – DEC. 1, 2023 | LAS VEGAS, NV

AIM203-S

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# How GitHub operationalizes AI for team collaboration and productivity

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he/him

Chief Operating Officer

GitHub



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 GitHub

# Home for all developers

# Collaboration by default

Seamlessly connecting teams  
to build their best together



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# The age of AI



# The age of AI



No organization  
can grow, thrive, and win  
without empowered developers.

Empowered developers start with developer experience.  
So they can do their best work, enter the  
flow state, and drive impact.

It starts with investing in a great developer experience.

The developer experience formula



We ran a survey of 500 U.S.-based  
enterprise developers to learn

1. more about developer experience and productivity
2. how leaders can remove barriers and encourage greater innovation among engineering and development teams

AI is here and it's being used at scale

92%

of U.S.-based developers are already  
using AI coding tools both in and  
outside of work.

Developers  
think AI will  
enhance their  
performance

Where team would focus  
most time if team used AI coding tools



Developers  
think AI will make  
their teams more

Level of collaboration with AI coding tools



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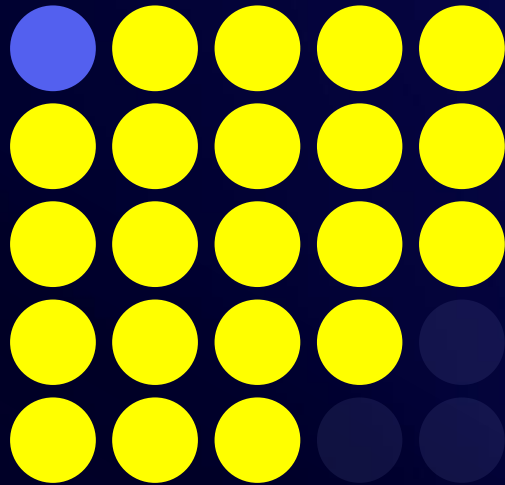
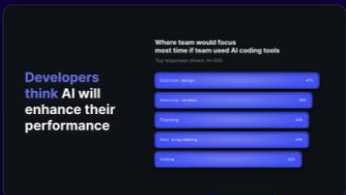
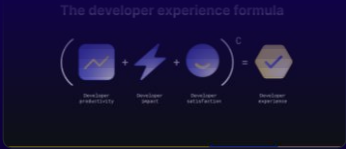
Level of collaboration with AI coding tools



AI is here and it's being used at scale

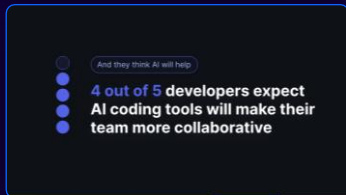
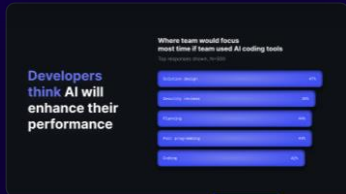
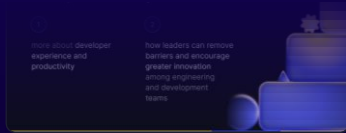
92%

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outside of work



Developers want more collaboration

Developers work with an average of 21 other engineers on projects



And they think AI will help

# 4 out of 5 developers expect AI coding tools will make their team more collaborative



**More AI =  
more collaboration**

# 67% faster

Code Reviews after using GitHub Copilot



# 45% increase

In first CI build success



# 60% – 75%

of GitHub Copilot users reported they feel

✓ more fulfilled

✓ less frustrated

✓ able to focus on more satisfying work

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**AI increases teams'  
productivity, collaboration  
& innovation**



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 GitHub

AI at  
GitHub

CL<sup>oud</sup>Z<sup>ero</sup>

AI at  
CloudZero

stripe

AI at  
Stripe

 **GitHub**

**AI at  
GitHub**

**CLOUDZERO**

**AI at  
CloudZero**

**stripe**

**AI at  
Stripe**

# IT at GitHub





# 625+

inquiries per IT teammate  
per quarter



# 30%

of those inquiries are now addressed by  
our AI chatbot, OctoBot



Impact of OctoBot in IT

# IT staff is more efficient

30% more time for strategic initiatives



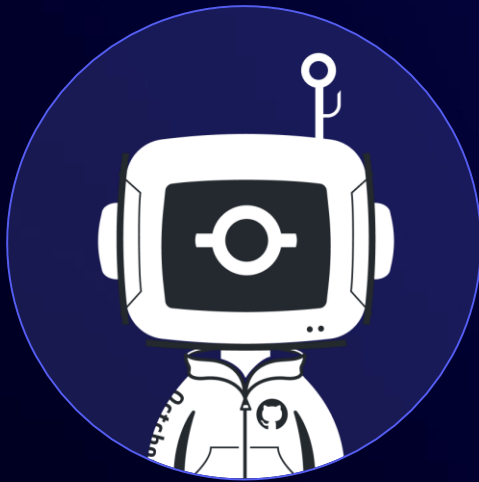
Impact of OctoBot in IT

# IT's customer satisfaction



86% before AI

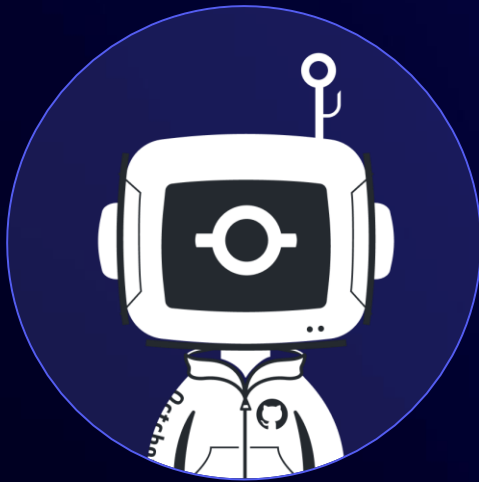
98% with AI



✓ Efficiency & consistency

✓ Time back

✓ Exceptional employee experience



✓ Efficiency & consistency

✓ Time back

✓ Exceptional employee experience

# Learning at GitHub





# 30%

of developers say learning and  
development can have a negative impact  
on their overall workday

GitHub DevX Research



```
imenmahjoubi@Imens-MacBook-Pro ~ % gh copilot suggest
Welcome to GitHub Copilot CLI, version 0.0.2 (2023-09-28)!
I'm powered by AI, so surprises and mistakes are possible. Make sure to verify any generated code or suggestions,
and share feedback so that we can learn and improve.

? What kind of command can I help you with?
> gh command

? What would you like the gh command to do?
> █
```

# Flow state at GitHub



hookable

hookable.rb x

hookable.rb > ...

```
1 require "bundler/setup"
2 ENV["RACK_ENV"] ||= "development"
3 Bundler.require(:default, ENV["RACK_ENV"].to_sym)
4 Dotenv.load
5
6 require "./hook_delivery"
7
8 configure do
9   MongoMapper.setup({'production' => {'uri' => ENV['MONGOLAB_URI']}}, 'production')
10 end
11
12 post "/" do
13   headers = {
14     "X-GitHub-Event" => env["HTTP_X_GITHUB_EVENT"],
15     "X-GitHub-Delivery" => env["HTTP_X_GITHUB_DELIVERY"],
16     "X-Hub-Signature" => env["HTTP_X_HUB_SIGNATURE"]
17   }.to_json
18   payload = request.body.read
19
20   HookDelivery.create(
21     :payload => payload,
22     :headers => headers
23   )
24
25   status 200
26 end
27
28 get "/" do
29   @hook_deliveries = HookDelivery.sort(:created_at.desc).limit(8)
30   erb :index
31 end
```

CHAT: GITHUB COPILOT

GitHub Copilot

Welcome @kdaigle, I'm your Copilot and I'm here to help you get things done faster. You can also [start an inline chat session](#).

I'm powered by AI, so surprises and mistakes are possible. Make sure to verify any generated code or suggestions, and [share feedback](#) so that we can learn and improve. Check out the [Copilot documentation](#) to learn more.

[/fix the problems in my code](#)

[/tests add unit tests for my code](#)

[/explain how the selected code works](#)

Ask Copilot or type '/' for commands

master 0 0 0

Ln 1, Col 24 Spaces: 2 UTF-8 LF Ruby

**Start**

**Learn**

**Stay  
in flow**

 GitHub

AI at  
GitHub

CL<sup>oud</sup>Z<sup>ero</sup>

AI at  
CloudZero

stripe

AI at  
Stripe

# CLOUDZERO



Erik Peterson  
Founder of CloudZero



 GitHub

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GitHub

CLLOUDZERO

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CloudZero

stripe

AI at  
Stripe

# stripe



Scott MacVicar  
Head of Developer Infrastructure



**AI increases teams'  
productivity, collaboration  
& innovation**



**AI increases teams'  
productivity, collaboration  
& innovation**



Achieve more with AI

**Start small, but  
start now**



Achieve more with AI

# Learning on the job



Achieve more with AI

# The best AI tools are in the flow



# The AI-powered developer platform

Visit GitHub at Booth #1196 to see GitHub Copilot  
in action and chat with a SME.



# Thank you!

Kyle Daigle

 @kdaigle



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