# Boost developer experience with GitHub

WRITTEN BY GITHUB WITH ♥

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# Seamless and unified developer platform

Creating an empowered developer experience is crucial, especially given the increase in remote and hybrid working environments. Happy developers are more productive, making it a good idea for enterprises to prioritize a great developer experience. GitHub provides developers with a seamless, streamlined platform and encourages them to push the boundaries of what's possible, leading to innovation and faster development times.

GitHub's user-friendly interface and powerful features are trusted by more than 100 million developers and over 90% of Fortune 100 companies.[1] Developers prefer working with tools they're familiar with to perform at their best. This includes GitHub's intuitive interface and powerful debugging and development tools. Additionally, GitHub provides access to a wealth of information and resources.

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Developers are almost 60% more likely to feel equipped to do their job when they can easily find what they need. Plus, they can get an 11% productivity bump simply by having a team repo that is easy to search.[2]

Providing a working environment where developers feel empowered to do their best work is equally important, as the developer experience isn't just about productivity. With GitHub, developers can think creatively, experiment with new technologies, and improve collaboration—helping organizations to stay competitive in today's fast-paced business environment.

1:   https://github.com/customer-stories
2:   https://octoverse.github.com/2021

# Boost developer experience with GitHub Enterprise

GitHub Enterprise meets companies where they are, available in the cloud or on-premises. It helps create a cohesive developer experience, enabling companies to find opportunities and grow in areas they have been impacted the most.

## Collaborative working environment

GitHub enables better communication within organizations that helps foster a more collaborative, agile, and productive working environment. With GitHub, organizations can enable better collaboration by implementing an innersource development approach. This allows organizations to apply the lessons learned from the open source community in dealing with challenges and implementing similar practices within their own structure. This presents a chance for organizations to transform and rethink the way they work together to achieve better collaboration.

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The workplace is shifting: survey respondents were asked where they worked before the pandemic and where they expect to work with others after the pandemic. Only about 11% of respondents expect to go back to working collocated, a 30% drop from 41% working in an office before.[3]

## Streamlined solution

Disconnected technological solutions have become increasingly prevalent despite the constantly evolving technology landscape. However, GitHub Enterprise streamlines workflows and enhances productivity by offering a centralized platform that allows engineering teams to collaborate effortlessly throughout the development cycle—from planning to release. With the benefits of GitHub's centralized platform, businesses can reduce the challenges posed by disconnected tech solutions and enable a more efficient and effective development process.

3: https://octoverse.github.com/2021/#lets-look-back-at-the-code-and-communities-built-on-git-hub-this-year

## Attracting and retaining top talent

At a time when the industry is encountering a developer skills shortage, providing a positive developer experience is critical for attracting and retaining top talent and driving business success. GitHub prioritizes developer experience as a key factor in delivering high-quality software products and better customer outcomes. GitHub invests in tools that developers love and consistently ranks at the top of their lists, creating a pathway to success for all developers.

To help solve their own challenges, GitHub migrated their engineering teams to GitHub Codespaces. New hires were able to go from zero to a functioning development environment in less time than it takes to install Slack.

The upcoming generation of developers is already on GitHub, with more than 4.3 million students[4] interacting with different GitHub Education programs. Students use GitHub for their school projects and anticipate using it in their future careers. Providing a working environment that fosters happiness and empowers developers to do their best work is equally important as boosting productivity. By investing in the tools that developers love, organizations can contribute to their happiness and overall developer experience, creating a pathway to success for everyone.

## Developer-first security

GitHub is a secure platform that provides developers with an efficient way to develop secure code and protect their applications from potential threats. With GitHub Advanced Security, organizations can build more secure code faster using integrated tooling such as secret scanning and code scanning with CodeQL. Developers can rely on GitHub for essential security features and ensure the security of their code, applications, and secrets.
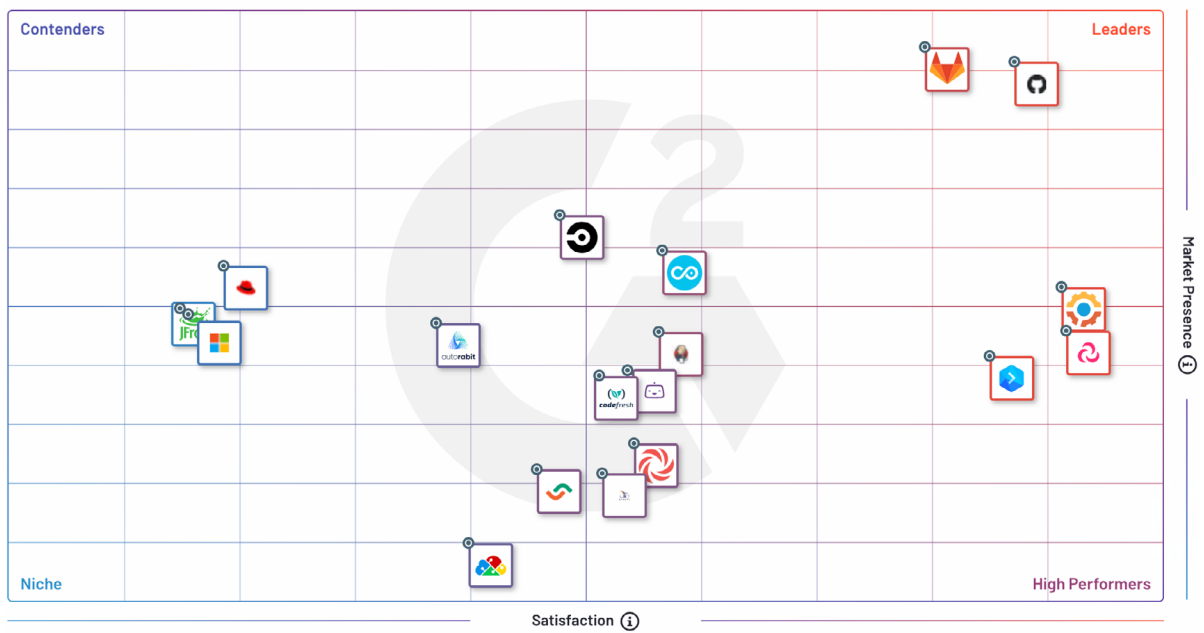
4:   https://github.blog/2022-09-20-transform-your-software-engineering-practices-with-github-enterprise/

# GitHub is the #1 DevOps platform

According to G2's findings, 99% of reviewers rated GitHub 4 or 5 stars for customer satisfaction and market presence in the most recent G2 collection of data. In the Winter 2023 G2 Grid Report for DevOps Platforms, GitHub ranked #1 and at the top in categories such as time to implement and deploy, average user adoption, return on investment, automation, integration, and orchestration features, as well as pipeline control, workflow visualization, and continuous deployment.

When compared to the competition, GitHub tops the ranks with very high developer satisfaction scores and a strong market presence.



Figure 1: G2 Grid® Scoring[5]

5:    G2 Grid® Report for DevOps Platforms | Fall 2022 – Get the Winter 2022 Grid Report

# GitHub saves time

A fully integrated developer toolchain prevents unnecessary context switching, keeping developers in flow. According to the latest Forrester report, after using GitHub Enterprise Cloud and GitHub Advanced Security for three years, composite organizations see greater than 22% gains overall.[6]

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**Because when you can do what you love, better, easier, with more help, this creates a pathway for your happiness. And everyone, not just developers, should care about developer happiness."[7]**

GitHub's CEO, Thomas Dohmke

What if you could remove days from the onboarding process and have developers up and running in minutes? Or save developer hours per week with more automation? How much more work could developers get done if they spent less time switching between different tools and tasks?

These are common struggles developer teams face and were some of the challenges Canadian communications and IT provider TELUS experienced with their fragmented tech stack and engineering teams. They constantly had to define, maintain, and provision development environments, making it so that developers spent too much time context-switching between different tools and not enough time writing code. But when they decided to use GitHub Enterprise as their one centralized and integrated platform for end-to-end software development, they were able to:

- Onboard developers **in minutes**.

- **Save two hours** per developer each week.

- **Save one minute** per GitHub Action executed.

6:    https://github.blog/2022-12-20-increase-developer-productivity-save-time-on-developer-onboarding-and-drive
      -roi-in-2023/#key-challenges
7:    https://www.linkedin.com/pulse/technology-sake-happiness-thomas-dohmke/

GitHub features such as [GitHub Actions](#) and GitHub Codespaces help save countless hours of development cycles. Actions can be used to create predictable, repeatable builds for CI/CD, but it can also do so much more! At GitHub, we use Actions to handle day-to-day tasks such as generating and sending automated status reports, automatically asking for follow-ups or closure of stale issues and pull requests, and parsing chat commands in issues and pull requests to run a job.

As mentioned earlier, Codespaces is an incredibly powerful resource for quickly onboarding new developers and empowering existing developers with more powerful and consistent machines. Codespaces practically eliminates the "it works on my PC" scenario, since each Codespace created for a repository is made with the same starting template. This can be customized as many times as required, ensuring that everyone who is working on the codebase is working in a similar environment. GitHub has moved their GitHub.com development to Codespaces so that it takes developers merely five minutes to have a fresh, bootstrapped development environment.[8] Before Codespaces, it would take hours to prepare a new laptop for development.

And if we're talking about saving time, don't forget about GitHub Copilot!

8:   https://github.blog/2021-08-11-githubs-engineering-team-moved-codespaces/

# GitHub Copilot for developer productivity and happiness

GitHub Copilot and GitHub Copilot for Business (a business offering for Copilot with additional enterprise features) are transformative, AI pair programmer tools. Trained on billions of lines of code, GitHub Copilot turns natural language prompts into coding suggestions across dozens of languages. This allows developers to spend less time creating boilerplate and repetitive code patterns and more time on what matters—building great software.

During an experiment, developers were asked to try out GitHub Copilot, where it was measured—on average—how successful each group was in completing the task and how long each group took to finish. One group used GitHub Copilot to complete the task, and the other one didn't:

- The group that used GitHub Copilot had a higher rate of completing the task—78%, compared to 70% in the group without Copilot.

- The striking difference was that developers who used GitHub Copilot completed the task significantly faster—55% faster than the developers who didn't use GitHub Copilot. Specifically, the developers using GitHub Copilot took on average 1 hour and 11 minutes to complete the task, while the developers who didn't use GitHub Copilot took on average 2 hours and 41 minutes. These results are statistically significant ($P=.0017$), and the 95% confidence interval for the percentage speed gain is [21%, 89%].

We recruited

$\underset{\text{developers, and split them randomly into two groups.}}{\displaystyle \text{95}}$

We recruited

**95**

developers, and split them randomly into two groups.

We gave them the task of writing a web server in JavaScript

**45 Used**
GitHub Copilot

**50 Did not use**
GitHub Copilot

**78%**
finished

**70%**
finished

**1 hour, 11 minutes**
average to complete the task

**2 hours, 41 minutes**
average to complete the task

71 minutes | that's 55% less time!

161 minutes

Results are statistically significant (*P=.0017*) and the 95% confidence interval is [21%, 89%]
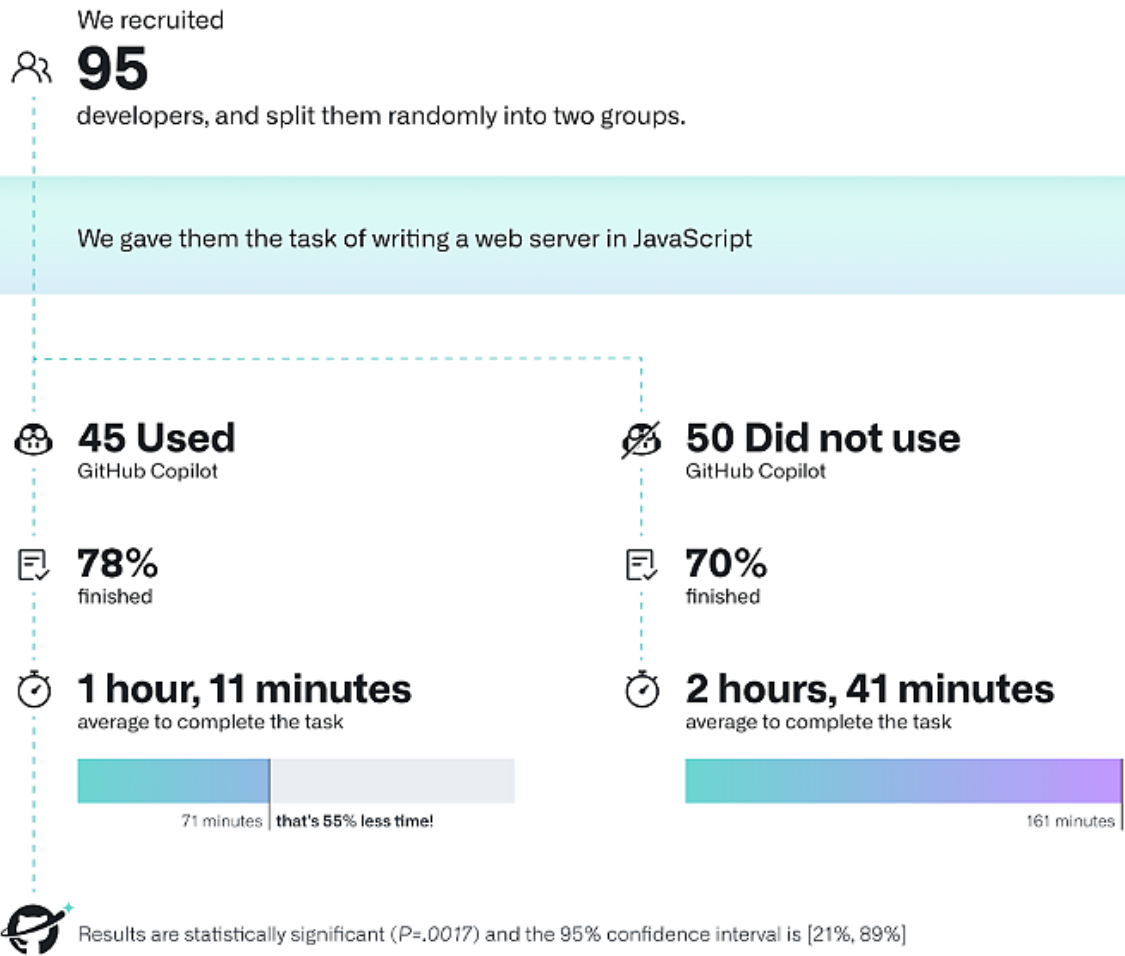
Figure 2: Summary of the experiment process and results

Copilot is the perfect developer tool, tightly integrating into development environments and allowing developers to stay in the zone. It helps resolve the most frustrating parts of development by allowing developers to spend more of their creative efforts on implementing solutions as opposed to language syntax minutia. By enabling developers to concentrate on problem-solving, GitHub offers a truly immersive development experience.

# GitHub is best in class for developer experience

With its powerful tools and strong community support, GitHub is an essential platform for any developer looking to build high-quality software projects in today's ever-changing technology landscape. Developers are empowered to create and manage code with the use of a Git-based source code management solution. Developers collaborate by creating issues or pull requests to enhance or fix codebases—both in enterprise and open source communities. Through the use of automation, development practices are made more efficient and allowed to scale. With software playing such a crucial role in daily life, securing the developer supply chain and writing secure code is a top priority. And finally, by being near the open source community, enterprises can take advantage of tried-and-true industry solutions, use community feedback to enhance those solutions, and contribute back to that vibrant community.

By providing tools that enable developers to work together, share knowledge, and build better software faster and more securely, GitHub has become a vital platform for over 100 million developers worldwide. The platform's success is a testament to the importance of collaboration, automation, security, and community in the software development process.

# Resources

- [How to transform your business in a digital world](#)

- [How to increase developer productivity](#)

- [How to build a consistent workflow for development and operations teams](#)

- [Transform your software engineering practices with GitHub Enterprise](#)

- [Increase developer productivity, save time on developer onboarding, and drive ROI in 2023](#)

- [What is GitHub Actions? How CI/CD & automation work on GitHub](#)

- What do other customers say? Check out our [customer stories](#) to see first-hand accounts of how and where GitHub is being used in an enterprise.

Find out why more than 90% of Fortune 100 companies use GitHub Enterprise. Read the [comparison](#).

**Interested in bringing GitHub Enterprise to your organization?**

# We can help.

Start your <u>free trial</u> of GitHub Enterprise for 30 days and increase your team's collaboration. $21 per user/month after trial expires.

Curious about <u>other plans</u>?