



7 tips and hidden features to boost your productivity with GitHub



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“helping software development organizations to implement DevOps & benefit from Azure Cloud Services”

Specialist (Technical) Sales Unit:
Digitalization & Azure Application Innovation
Educational basis in networking industry,
Microsoft Certified Azure Developer & DevOps Engineer
Certified SCRUM Master, agile software development



Speaker at conferences (BUILD conference, TechX, DevInsider Tour, WeAreDevelopers World Congress & AI conference, Software Quality Days, Global Azure Bootcamp, internal conferences, ..)



Jürgen Etzlstorfer

<https://jetzlstorfer.github.io/>

Cloud, Azure, Kubernetes, Community

Developer Engagement Lead for Azure

Microsoft Austria



Maintainer of cloud-native project  **keptn**

Co-organizer of Cloud Native Linz meetup

Speaker at meetups & conferences (KubeCon North America, Global Azure Austria, cdCon 2021, Red Hat Summit, ...)



GitHub is the largest developer platform on Earth

83M+

Developers

4M+

Organizations

1,000s

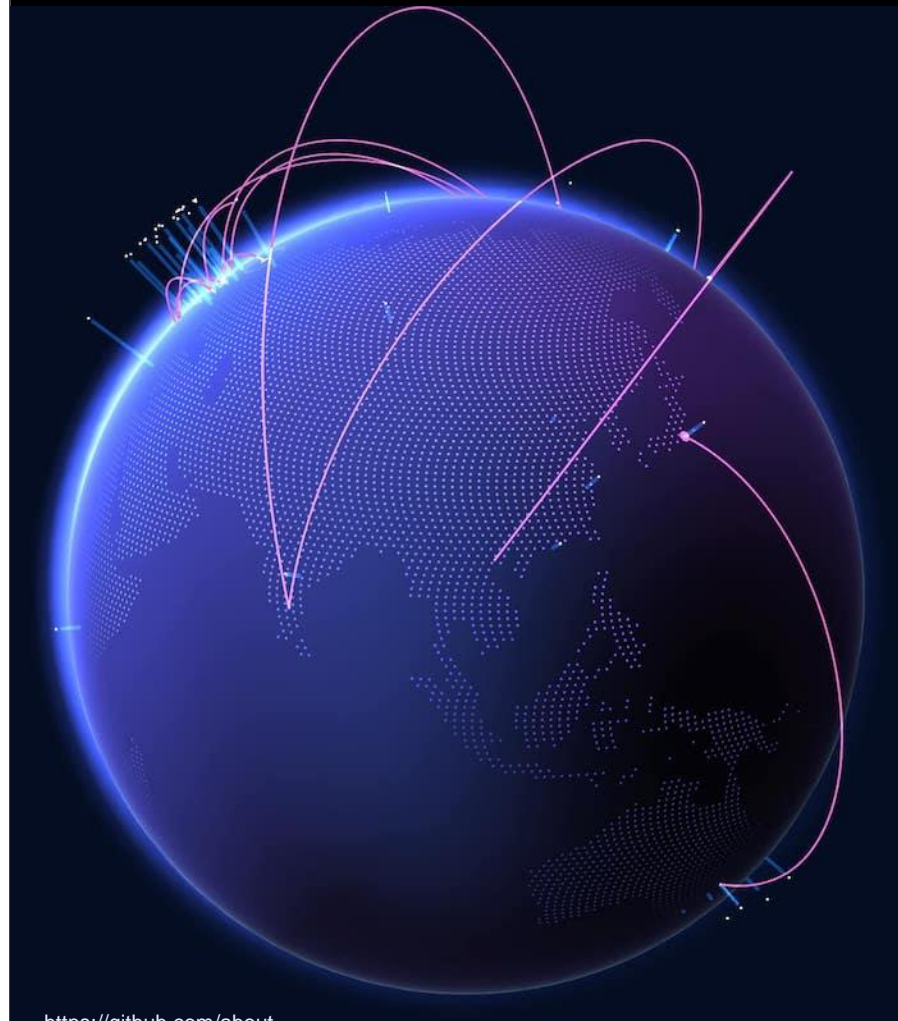
Top open source communities

1B+

Contributions
per year

200M+

Private and public
repositories



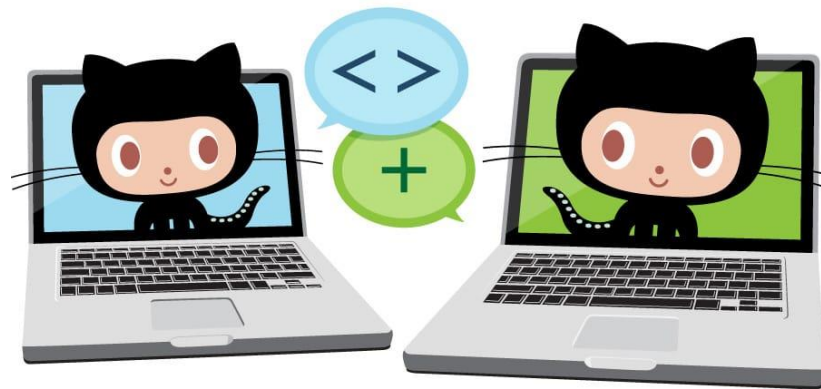
**Focus on providing a
developer experience that
enables them to do their
best work.**



github.dev

&

Codespaces



It's demo time!

🔄 Slides with details in your handout



github.dev

What is github.dev?

- 🕒 web-based editor
- 🕒 lightweight editing experience
- 🕒 runs entirely in your browser
- 🕒 navigate files and source code repositories from GitHub, make and commit code changes

There are two ways to go directly to a VS Code environment in your browser and start coding:

- 🕒 Press the . key on any repository or pull request
- 🕒 Swap .com with .dev in the URL



GitHub Codespaces

- 🕒 Your powerful development environment in the cloud, currently up to 32 cores, 64GB RAM (expansion of options in the works, e.g. GPU versions)
- 🕒 Quick onboarding of new project members
- 🕒 The right development environment per project, per role
- 🕒 Available for Team & Enterprise plans in GitHub, individual accounts are in Beta
- 🕒 Containerized: Standard GitHub image (35GB in size) starts in under 10s
- 🕒 Connect in browser or via Visual Studio Code Remote
- 🕒 Remote debugging (port forwarding)



Customization of DevContainers

- 🔗 Customization via config files in the repo
- 🔗 [Standard images](#) to cover different project types
- 🔗 Customization options
 - Customize container base image (.devcontainer/dockerfile)
 - Post create commands (dotfiles, scripts, devcontainer.json)
 - Install VS Code Extensions (devcontainer.json)
 - Port forwards (devcontainer.json)
 - VS Code settings (.vscode/settings.json)
- 🔗 All-in-one repo vs. one microservice = one repo
 - Repo can now hold more than one Codespace config per subfolders in .devcontainer/
 - Authorize access to multiple repos in one Codespace



GitHub Actions

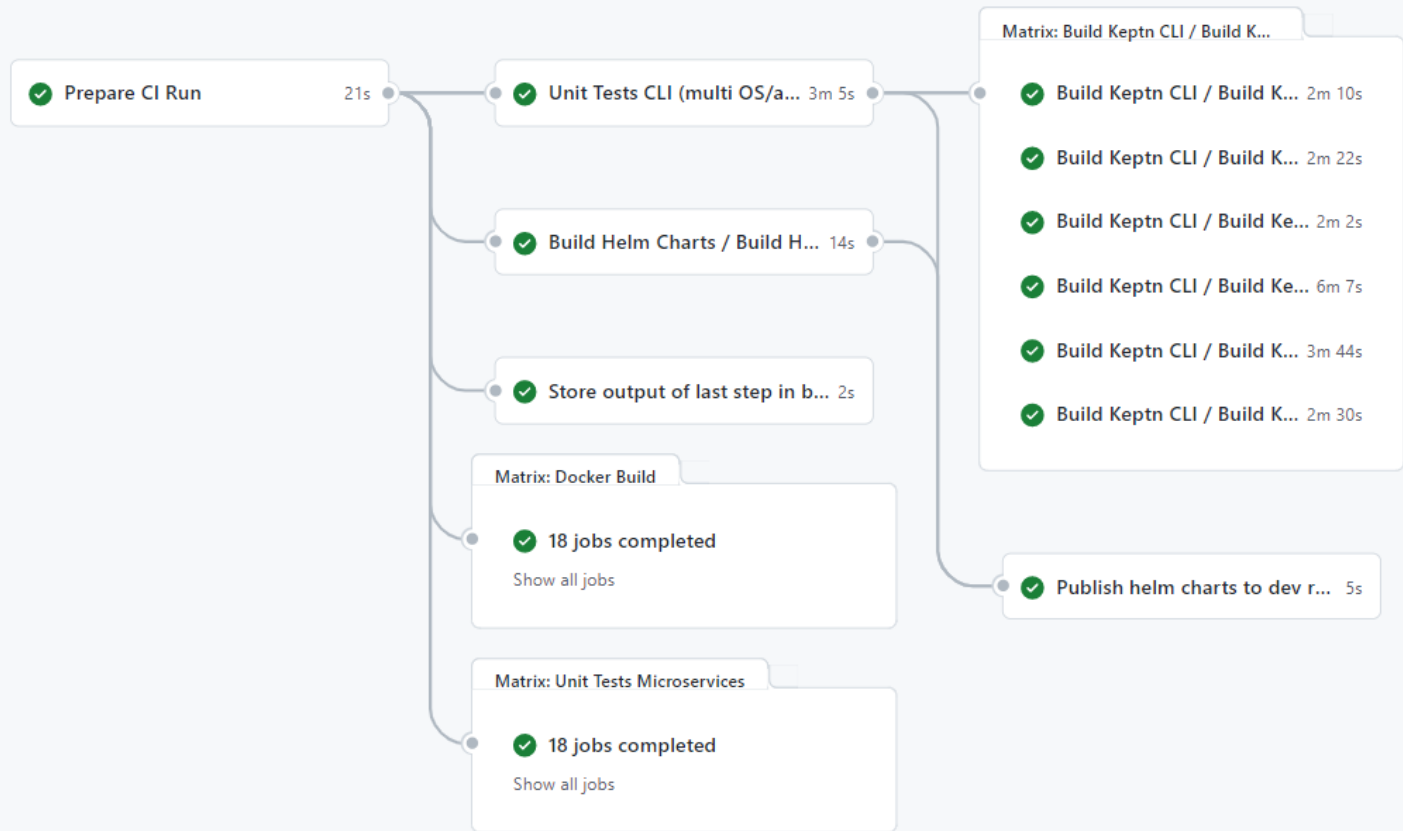
- 🕒 Optimize code delivery time from idea to deployment on a community-powered platform
- 🕒 Workflow system in GitHub which can also be used for CI/CD but as well for general workflows (additional event triggers)
- 🕒 free for public repos & self-hosted runners
- 🕒 Private repos have free minutes (add. mins.: 0,8 cent USD)
 - 🕒 Free: 2.000 minutes
 - 🕒 Team: 3.000 minutes
 - 🕒 Enterprise Cloud: 50.000 minutesEnterprise Server supports private runners & more to come
- 🕒 yaml is part of the repo, over 13.000 actions in the marketplace which are a reference to another clear text readable repo



GitHub Actions

CI.yml

on: pull_request



GitHub Actions

```
113 defaults:
114   run:
115     shell: bash
116 jobs:
117   prepare_ci_run:
118     name: Prepare CI Run
119     # Prepare CI Run looks at what has been changed in this commit/PR/... and determines which artifacts should be
120     # built afterwards (in other jobs that depend on this one).
121     runs-on: ubuntu-20.04
122     outputs: # declare what this job outputs (so it can be re-used for other jobs)
123       # build config
124       BUILD_EVERYTHING: ${{ steps.build_everything.outputs.BUILD_EVERYTHING }}
125       BUILD_INSTALLER: ${{ steps.check_modified_files.outputs.BUILD_INSTALLER }}
126       BUILD_CLI: ${{ steps.check_modified_files.outputs.BUILD_CLI }}
127       BUILD_MATRIX: ${{ steps.check_modified_files.outputs.BUILD_MATRIX }}
128       BUILD_MATRIX_EMPTY: ${{ steps.check_modified_files.outputs.BUILD_MATRIX_EMPTY }}
129       # metadata
130       GIT_SHA: ${{ steps.extract_branch.outputs.GIT_SHA }}
131       BRANCH: ${{ steps.extract_branch.outputs.BRANCH }}
132       BRANCH_SLUG: ${{ steps.extract_branch.outputs.BRANCH_SLUG }}
133       VERSION: ${{ steps.get_version.outputs.VERSION }}
134       KEPTN_SPEC_VERSION: ${{ steps.get_version.outputs.KEPTN_SPEC_VERSION }}
135       DATE: ${{ steps.get_datetime.outputs.DATE }}
136       TIME: ${{ steps.get_datetime.outputs.TIME }}
137       DATETIME: ${{ steps.get_datetime.outputs.DATETIME }}
138
139   steps:
140     - name: Check out code
141       uses: actions/checkout@v2.4.0
142       with:
143         fetch-depth: 0 # need to checkout "all commits" for certain features to work (e.g., get all changed files)
144         submodules: 'true'
```



Try it yourself:

<https://github.com/gerwaldo/GAA2022>

GitHub Actions

It's not only CI/CD!

gerwaldo / GAA2022 (Public)

Pin Unwatch 1 Fork 0 Star 0

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main 1 branch 0 tags

Go to file Add file <> Code

gerwaldo Update README.md 6358964 now 19 commits

.github/workflows Update ratings.yml 17 minutes ago

README.md Update README.md now

README.md

Global Azure Austria 2022

<http://globalazure.at/sessions/>

7 tips and hidden features to boost your productivity with GitHub

This session will uncover the best hidden productivity features of GitHub including GitHub Actions, GitHub Codespaces, GitHub Pages, GitHub Discussions, GitHub Issue templates, and much more. Join us if you want to learn how to start development directly in your browser and how to make GitHub work for you!

<https://github.com/gerwaldo/GAA2022>

We hope that you enjoy the session:

About

No description, website, or topics provided.

Readme

0 stars

1 watching

0 forks

Releases

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[Publish your first package](#)

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GitHub Co-Pilot

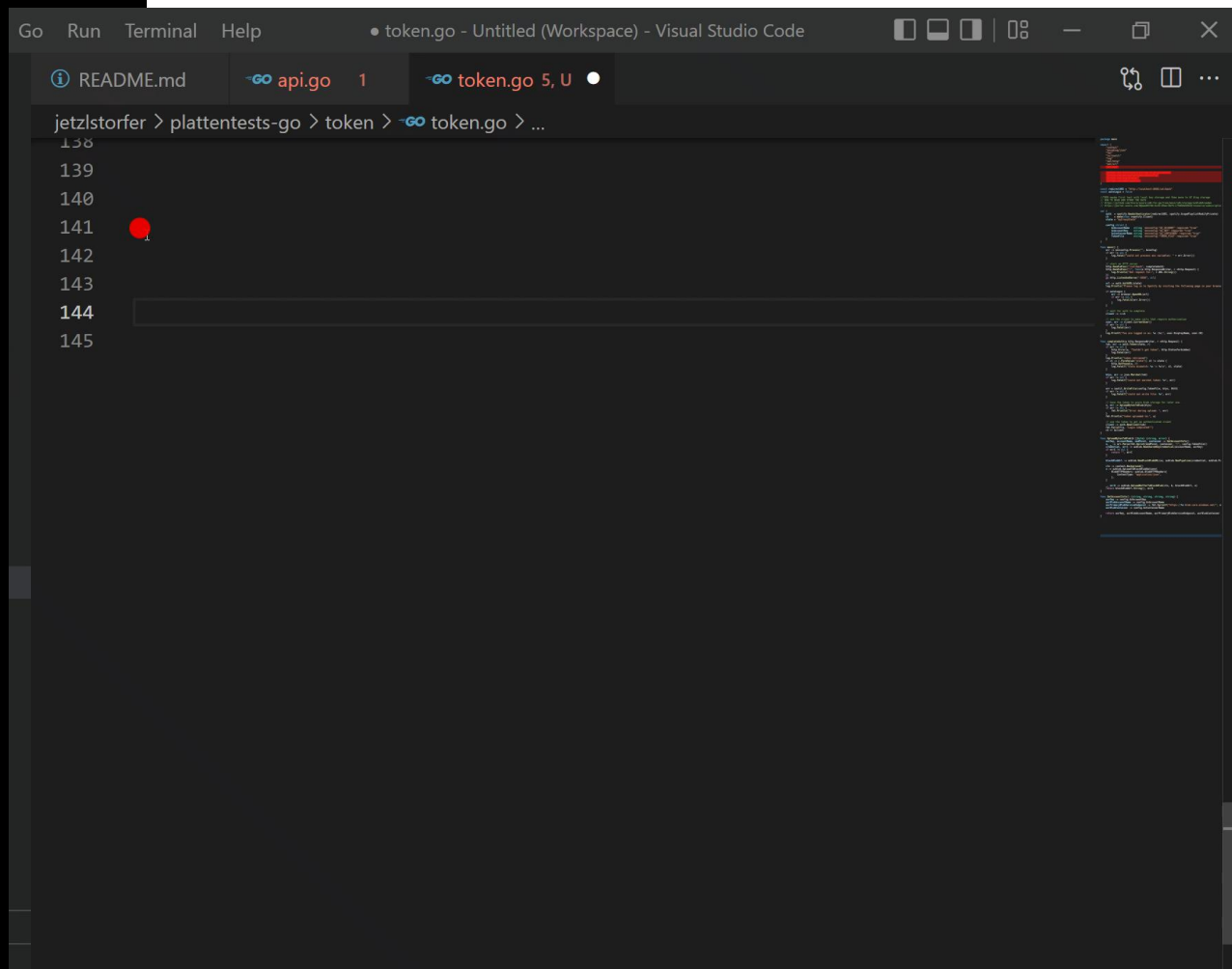
(technical preview)

- 🔄 AI powered pair programming
- 🔄 Suggests individual code snippets and whole functions
- 🔄 Fully integrated in developer workflow
- 🔄 Plugins available for major IDEs including VS Code
- 🔄 Technical preview open



GitHub Co-Pilot

Demo



GitHub pages

GitHub Pages are public webpages hosted & published through GitHub

- 🐙 Static content
- 🐙 Custom domains or *name.github.io*
- 🐙 Themes/templates (Jekyll)



Personal profile page

If you name a repo equal to your username the readme file in this repo will be displayed in your profile page

 Use markdown

 *username/README.md*

Also available for organizations

 *orgname/.github/profile/README.md*



Personal profile page



Jürgen Etzlstorfer

jetzlstorfer

Cloud and Developer Advocate
@microsoft | @keptn maintainer ||
likes penguins 🐧

Edit profile

🔗 31 followers · 1 following

📁 @microsoft
📍 Linz, Austria
🔗 <https://twitter.com/jetzlstorfer>
🐦 @jetzlstorfer

📖 Overview

📁 Repositories 53

📁 Projects

...

jetzlstorfer / README.md



Hi there 🐧

My name is Jürgen and I'm the Developer Engagement Lead for Microsoft Austria. I also a maintainer of [Keptn](#) and I've been a [mentor for cloud-native projects](#) in the [LFX initiative](#) (read what mentees are saying [1](#) [2](#) [3](#)).

👥 With Keptn, we are always happy to receive new contributions, checkout our [source code](#) and our [tutorials](#) to get started!

💬 Ask me about Azure, how to be get started and get productive in the cloud, or anything about my cat.

🗣️ How to reach me:

- Twitter [@jetzlstorfer](#)
- LinkedIn [juergenetzlstorfer](#)

Jürgen Etzlstorfer's GitHub Stats




★ Total Stars Earned:	3
🕒 Total Commits (2022):	26
🔗 Total PRs:	636
⚠️ Total Issues:	202
📁 Contributed to:	22



GitHub Gists

Easy way to instantly share codes, notes, and snippets.

<https://gist.github.com>

-  Markdown
-  Code snippets
-  Notes



Win a backpack



**How fast is GitHub's
own dev image
starting in GitHub
codespaces?**

**Blazing fast cloud
developer environments**

Visual Studio Code backed by high performance VMs that start in seconds.

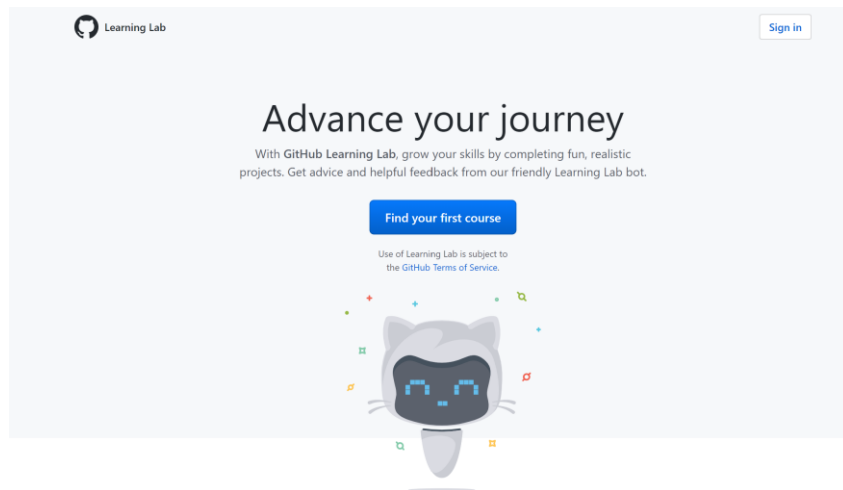
Answer this question in the Microsoft virtual booth and get the chance to win a backpack
Terms and condition apply (to be found in the Microsoft virtual booth)



Learning Lab

[GitHub Learning Lab](#)

Free courses with hands-on experience
supported by a learning bot



Our most popular courses

Introduction to GitHub

by The GitHub Training Team

If you are looking for a quick and fun introduction to GitHub, you've found it. This class will get you started using GitHub in less than an hour.

by GitHub Actions • GitHub Docs • GitHub Pages

GitHub Actions: Hello World

by The GitHub Training Team

Create a GitHub Action and use it in a workflow.

by GitHub Actions • Workflows

Communicating using Markdown

by The GitHub Training Team

This course will walk you through everything you need to start organizing ideas and collaborating using Markdown, a lightweight language for



Education

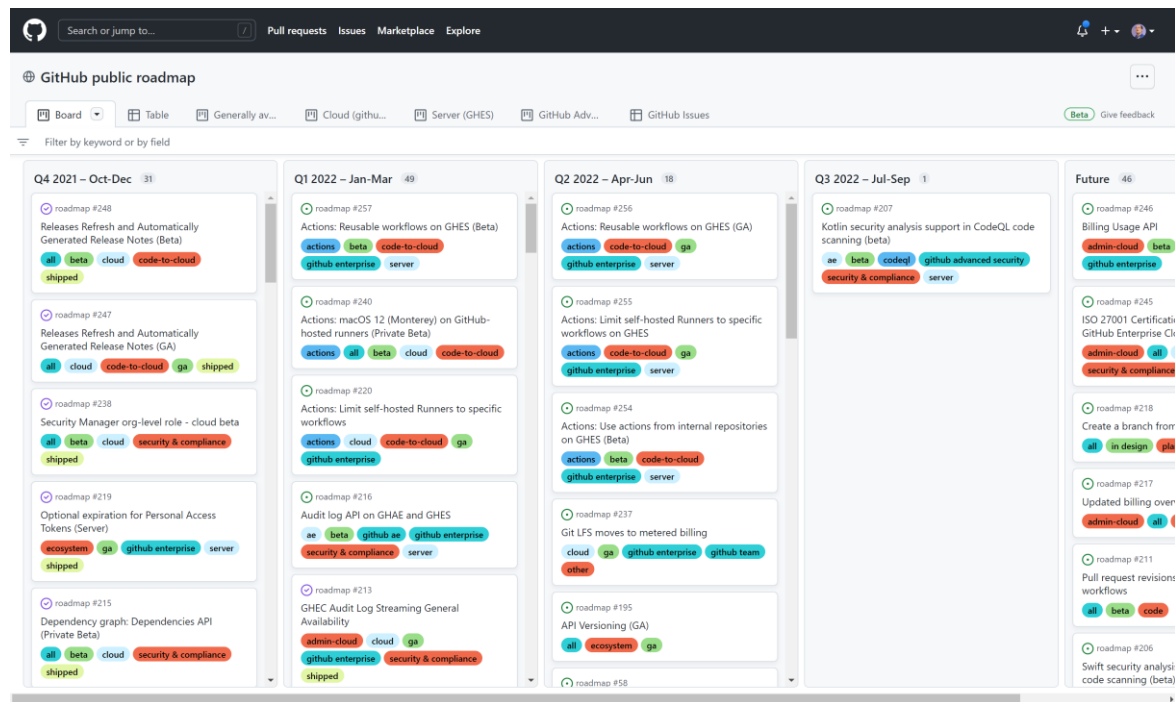
Special offers for students & teachers

- 🐙 <https://education.github.com/>
- 🐙 Student programs (> 13yrs): [Students - GitHub Education](#)
- 🐙 Teacher programs: [Teachers - GitHub Education](#)
- 🐙 GitHub Classroom: [GitHub Classroom](#),
manage assignments in your dashboard, grade work automatically
- 🐙 Enroll your Education organization for free (students with the
school domain can automatically
access student benefits):
[Schools - GitHub Education](#)



Roadmap

[GitHub public roadmap](#)



GHEC: GitHub Enterprise Cloud (SaaS version)

GHES: GitHub Enterprise Server

GHAS: GitHub Advanced Security



Thank you!

Answer our question from this session at our booth & you get the chance to win a backpack



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