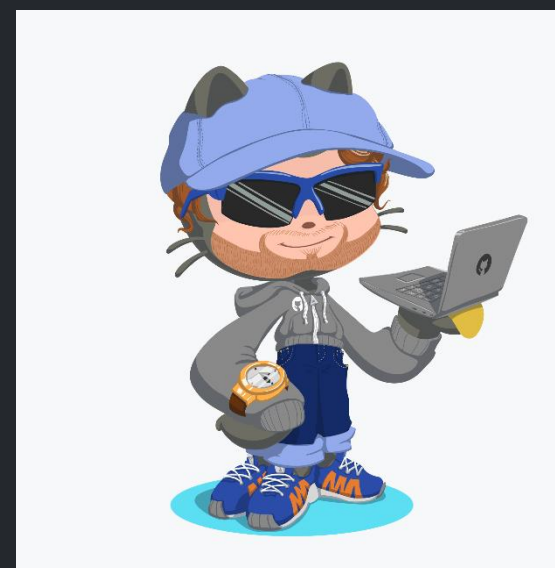


Feel free to tweet along with the show: **@mickey_gousset**

GitHub Actions



Mickey Gousset
DevOps Architect – GitHub
github.com/mickeygousset



GitHub is the largest developer platform on Earth

65M+

Developers

200M+

Private and public
repositories

1,000s

Top open source
communities

1B+

Contributions
per year

3M+

Organizations

72%

Fortune 500
companies

The most innovative companies

stripe

Spotify

airbnb

lyft

slack

Uber

twilio

shopify

NETFLIX

The top open source projects



docker

TensorFlow



APACHE

elasticsearch

npm

GraphQL

mongoDB

Leading global enterprises

American Airlines

Disney

Nationwide

COMCAST

HSBC

Walmart

Ford

QUALCOMM

DOW JONES

Largest DevOps ecosystem

RapidAPI

percy

GitKraken

SENTRY

ZenHub

Codecov

Jira

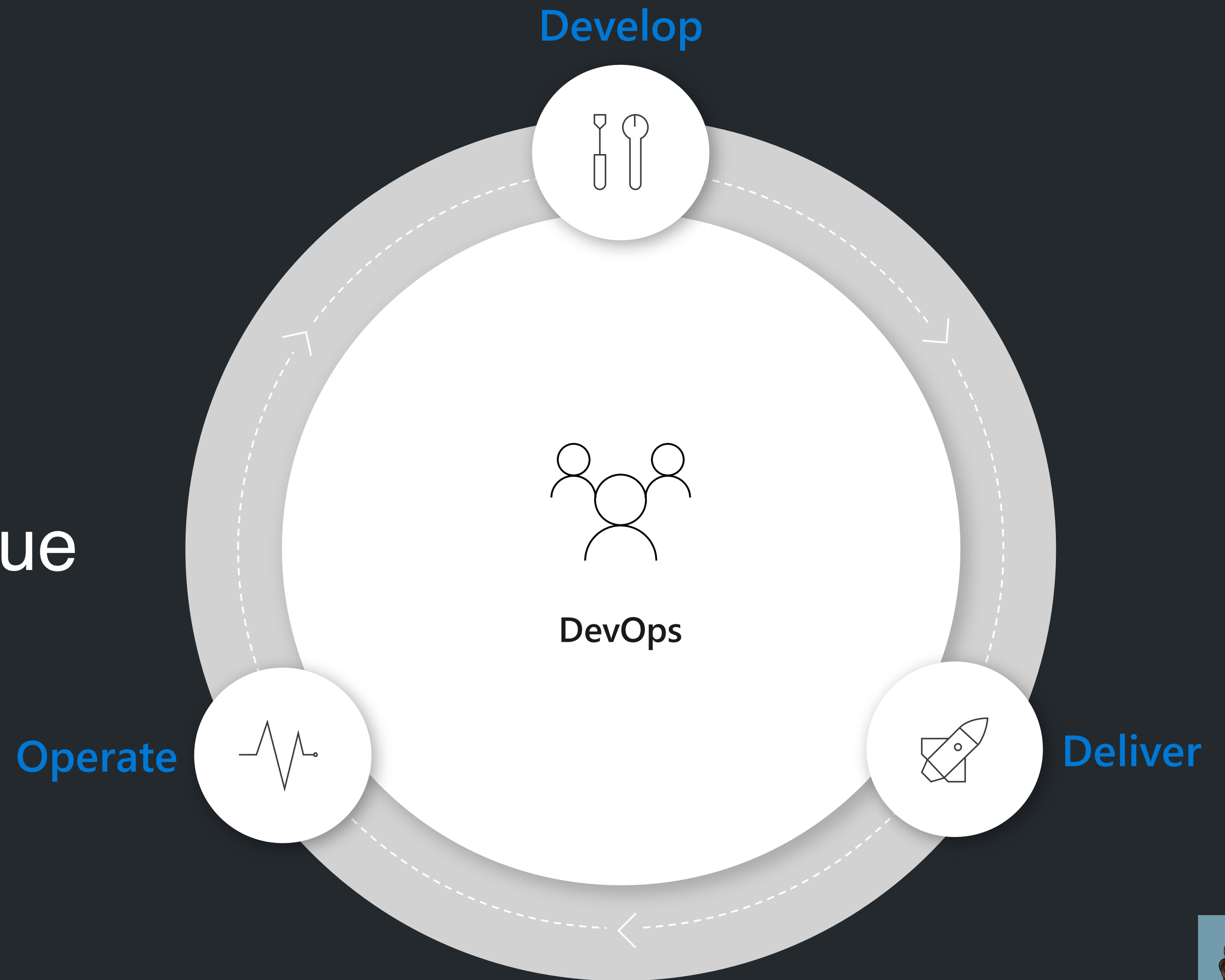
HOUND

HashiCorp



What is DevOps

DevOps is the union of **people, process, and products** to enable continuous delivery of value to your end users.



What are GitHub Actions?

#1

CI on GitHub

- Custom workflows triggered on any GitHub event
 - Not just for CI/CD
- Workflows stored as `yaml` files
- Live logs and visualized workflow execution
- Community powered workflows
- Linux, macOS, and Windows hosted runners
- Self hosted runners
- Built-in secret store
- GitHub Enterprise Server support
- Any platform, any language, any cloud

10,000+

Actions in GitHub Marketplace



Why GitHub Actions is(are?) Important To You – Some Stats

- Open Source projects using GitHub Actions merged **34%** more pull requests
- Open Source projects using GitHub Actions decreased time to merge by **18%**



Terminology



Key Components

SECRETS

Events

Environments

Workflow

Job 1

Step 1

Action

Step 2

Action

Job 2

Step 1

Action

Step 2

Action

Runner 1

Run Action

Log Results

Runner 2

Run Action

Log Results



Runners



GitHub-hosted runner



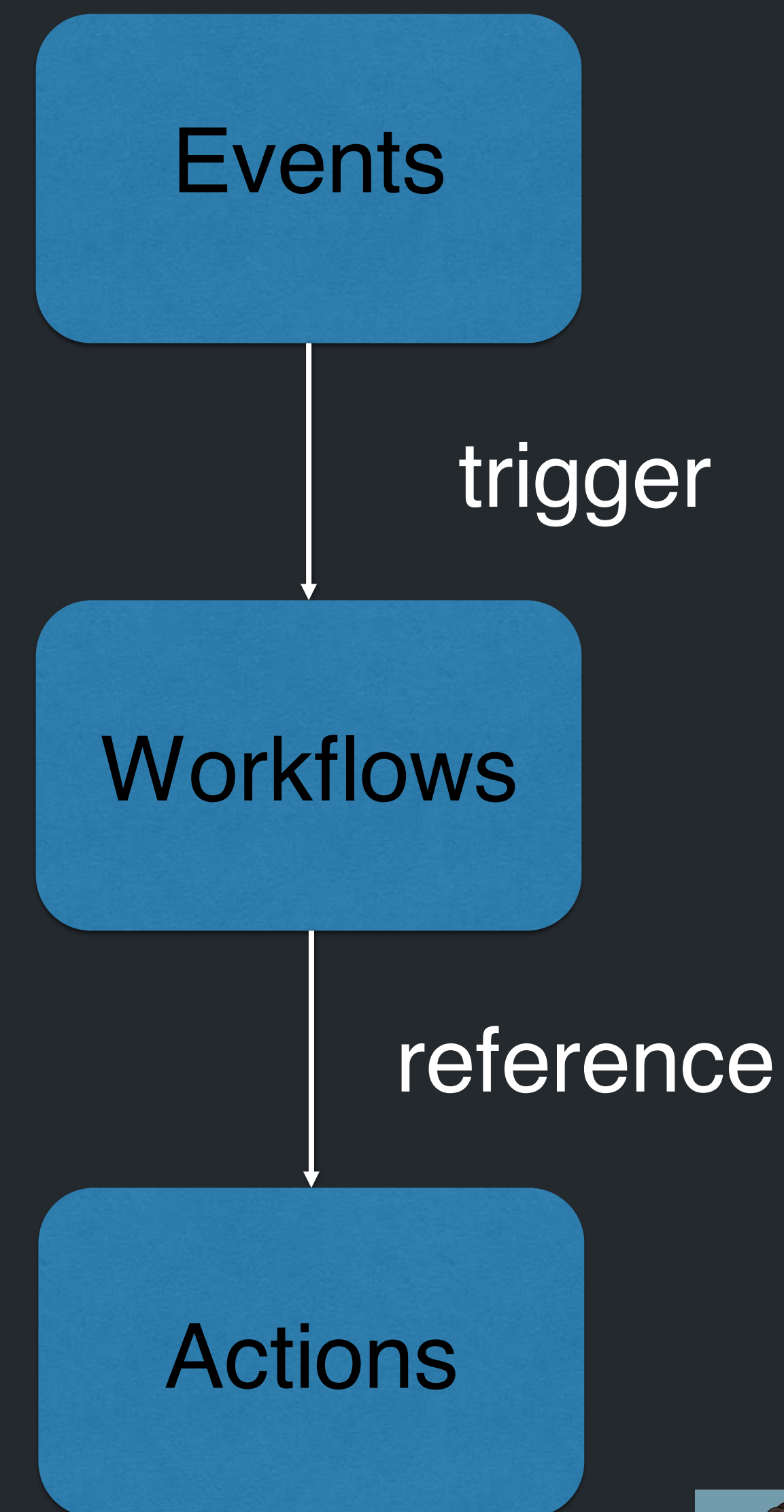
Self-hosted runner

<https://github.com/actions/runner>




Quick summary

- Events trigger workflows, e.g. a push to a branch
- Workflows contain one or more jobs, which contains one or more steps
- These steps can reference actions or execute commands
- The term “***GitHub Actions***” include all components, not just the Actions themselves



GitHub Marketplace

- Discover open-source Actions across multiple domains
- > 10,000 Actions (and counting)
- Verified creators 
- Reference these Actions directly in your workflow
- Integrated into the GitHub editor

[Pull requests](#) [Issues](#) [Marketplace](#) [Explore](#)

Extend GitHub

Add tools to help you build and grow

[Explore apps](#)



Types

[Apps](#)

[Actions](#)

Categories

[API management](#)

[Chat](#)

[Code quality](#)

[Code review](#)

[Continuous integration](#)

[Dependency management](#)

[Deployment](#)

[IDEs](#)

[Learning](#)

[Localization](#)

[Mobile](#)

[Monitoring](#)

[Project management](#)

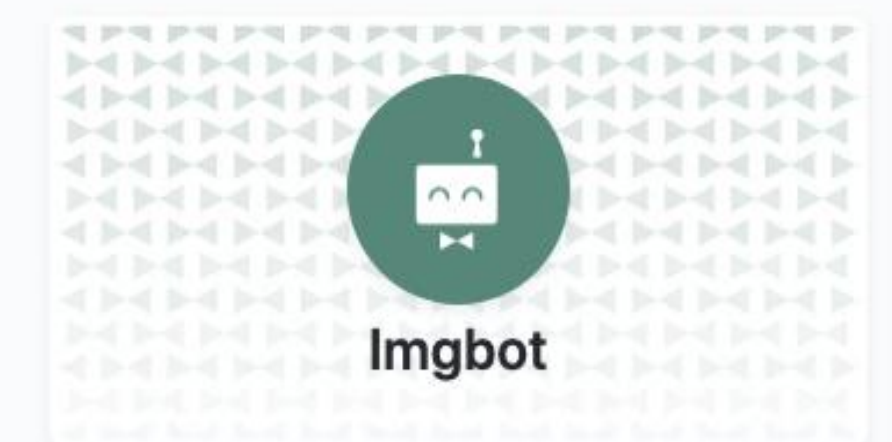
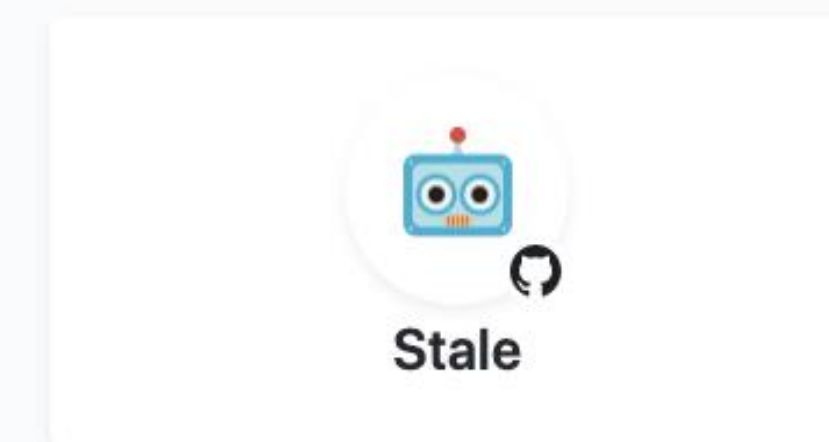
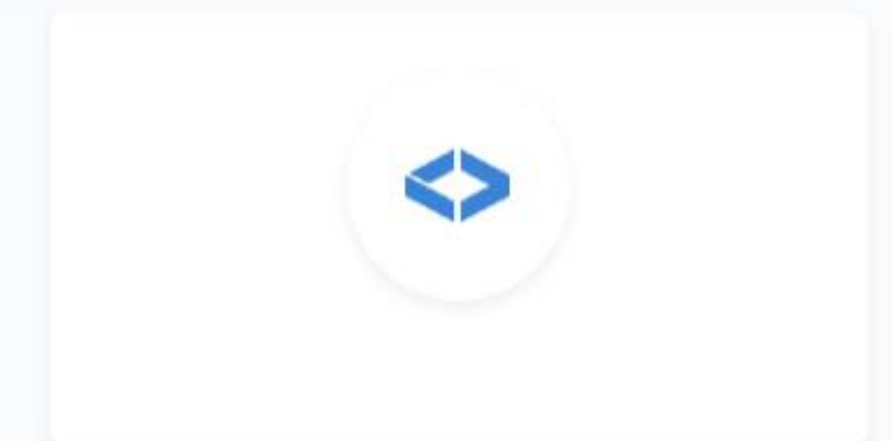
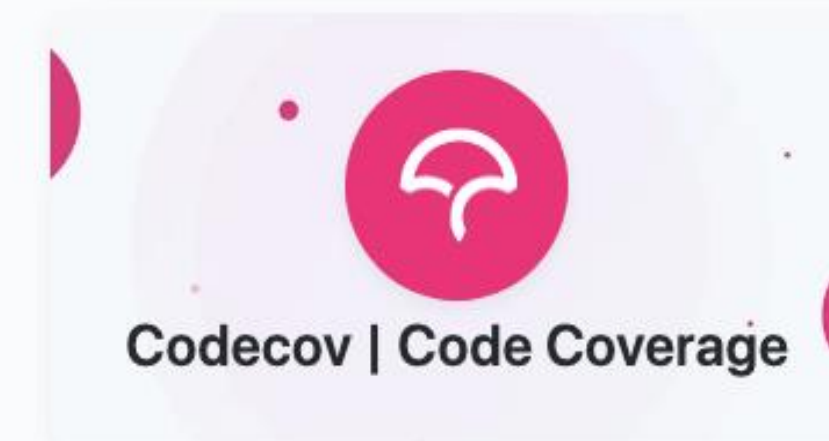
[Publishing](#)

[Recently added](#)

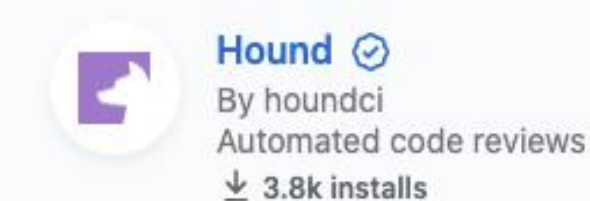
[Security](#)

[Support](#)

Recommended for you



Trending



By houndci

Automated code reviews

↓ 3.8k installs

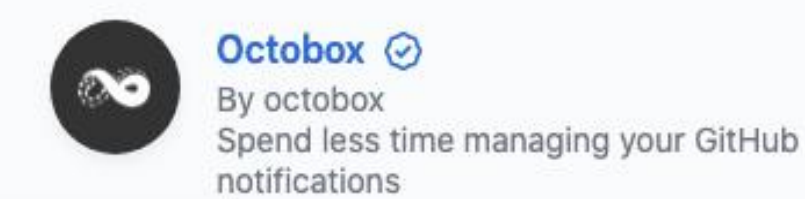


By Moesif

Understand API usage and take action with

user-centric API observability

↓ 698 installs



By octobox

Spend less time managing your GitHub

notifications

↓ 4.4k installs



By whitesource

Detect open source vulnerabilities in re

time with suggested fixes for quick

remediation

↓ 3.6k installs



Writing your own Actions

- 3 types of Actions
 - JavaScript
 - Docker
 - Composite
- Metadata defined in `action.yml` file
 - Inputs
 - Outputs
 - Branding
 - Pre/Post Scripts

```
./path/to/action/action.yml
```

```
name: "Hello Action"
description: "Greet someone"
author: "octocat@github.com"

inputs:
  MY_NAME:
    description: "Who to greet"
    required: true
    default: "World"

outputs:
  GREETING:
    description: "Full greeting"

runs:
  using: "docker"
  image: "Dockerfile"

branding:
  icon: "mic"
  color: "purple"
```



That's enough to get us started...

Demos

- Basic workflow
- Chaining Jobs
- Variables





Q&A



Mickey Gousset

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