

Key Metrics for Dev Teams from GitHub API Endpoints

Workflow & CI/CD Metrics

(From `/actions/workflows`, `/actions/runs`, `/actions/runs/{run_id}/jobs`)

- Number of workflow runs
 - Workflow run status (success, failure, cancelled)
 - Workflow run duration (start time to completion)
 - Average build/deploy/test time
 - Job duration per workflow run (granular, per step)
 - Failed/passed job count per run
 - Trigger type (push, pull request, schedule, manual)
 - Time to first job start after trigger
 - Number of re-runs per workflow
 - Workflow frequency (runs per day/week/month)
 - Queue time (if available)
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Pull Request (PR) Metrics

(From `/pulls`, `/pulls/{number}`, `/pulls/{number}/reviews`)

- Number of open/closed/merged PRs
 - PR throughput (created/merged per period)
 - Average PR review time (open to first review)
 - Average PR cycle time (open to merge/close)
 - Number of reviews per PR
 - Reviewer assignment count
 - PR approval rate
 - Average comments per PR
 - Merge rate (merged/total PRs)
 - Reopened PRs
 - Average lines changed per PR
 - Top PR submitters/reviewers
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Commit Metrics

(From /commits)

- Total commits per repo/user/timeframe
 - Commits per day/week/month
 - Top committers
 - Average commit size (lines added/removed, if diff is parsed)
 - Time of day/week with highest commit activity
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Issue Metrics

(From /issues)

- Number of open/closed issues
 - Issue creation and closure rate
 - Average issue resolution time
 - Number of comments per issue
 - Top issue creators/responders
 - Labels/tags frequency
 - Reopened issues
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Contributor Metrics

(From /contributors)

- Active contributors (code, PR, issue activity)
 - Contribution type breakdown (commits, PRs, reviews, issues)
 - New vs. returning contributors
 - Contributor “bus factor” (how many contributors per repo/module)
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Organization/Repo Metrics

(From /orgs/{org}/repos, /orgs/{org}/members)

- Total repositories
- Active repositories (with activity in period)
- Total org members
- Repo activity ranking (most/least active)

Table for Reporting/Monitoring

Metric Name	API Endpoint(s)	Description / Use Case
Workflow Metrics		
Workflow runs total	/repos/{owner}/{repo}/actions/runs	Total workflow runs in a repo
Workflow runs by status	/repos/{owner}/{repo}/actions/runs	Runs grouped by success, failure, cancelled, etc.
Workflow run success rate	/repos/{owner}/{repo}/actions/runs	% of successful workflow runs
Average workflow run duration	/repos/{owner}/{repo}/actions/runs	Avg. time for a workflow to execute
Workflow run duration (min/max/median)	/repos/{owner}/{repo}/actions/runs	Min, max, median workflow execution time
Workflow run frequency	/repos/{owner}/{repo}/actions/runs	Number of runs per day/week/month
Workflow trigger types	/repos/{owner}/{repo}/actions/runs	How workflows are triggered (push, PR, schedule, manual)
Number of workflow re-runs	/repos/{owner}/{repo}/actions/runs	Times a workflow run was re-run
Jobs per workflow run	/repos/{owner}/{repo}/actions/runs/{run_id}/jobs	Number of jobs executed per run
Job duration (per job)	/repos/{owner}/{repo}/actions/runs/{run_id}/jobs	Duration of individual jobs per run
Job status breakdown	/repos/{owner}/{repo}/actions/runs/{run_id}/jobs	Jobs grouped by status (success, failure, skipped)
Longest running job	/repos/{owner}/{repo}/actions/runs/{run_id}/jobs	The job with highest duration in a run
Shortest running job	/repos/{owner}/{repo}/actions/runs/{run_id}/jobs	The job with lowest duration in a run
Average queue time	/repos/{owner}/{repo}/actions/runs	Time from trigger to workflow/job start (if available)
Workflow with most failures	/repos/{owner}/{repo}/actions/runs	Workflow definition with highest failure count
Time to first job start	/repos/{owner}/{repo}/actions/runs	Delay from trigger to first job execution
Pull Request (PR) Metrics		
Total PRs opened	/repos/{owner}/{repo}/pulls	PRs created in period
Total PRs merged	/repos/{owner}/{repo}/pulls	PRs merged in period
Total PRs closed (not merged)	/repos/{owner}/{repo}/pulls	PRs closed without merging
PR open-to-merge time (cycle time)	/repos/{owner}/{repo}/pulls	Duration from PR open to merge
PR open-to-first-review time	/repos/{owner}/{repo}/pulls/{pr}/reviews	Time from open to first review

<i>Number of reviews per PR</i>	/repos/{owner}/{repo}/pulls/{pr}/reviews	Collaboration and review coverage
<i>Average review comments per PR</i>	/repos/{owner}/{repo}/pulls/{pr}/reviews	Depth of review/discussion
<i>PRs reviewed by user</i>	/repos/{owner}/{repo}/pulls/{pr}/reviews	Number of PRs reviewed by each contributor
<i>PRs created by user</i>	/repos/{owner}/{repo}/pulls	Number of PRs opened by user
<i>PR approval rate</i>	/repos/{owner}/{repo}/pulls/{pr}/reviews	PRs with "approved" state
<i>PRs with changes requested</i>	/repos/{owner}/{repo}/pulls/{pr}/reviews	PRs with requested changes
<i>Reopened PRs</i>	/repos/{owner}/{repo}/pulls	PRs that were closed and then reopened
<i>PR merge rate</i>	/repos/{owner}/{repo}/pulls	% of PRs merged vs. total PRs
<i>PRs merged without review</i>	/repos/{owner}/{repo}/pulls	Number of PRs merged directly without code review
<i>Average lines changed per PR</i>	/repos/{owner}/{repo}/pulls/{pr}	Additions + deletions (needs parsing)
Commit Metrics		
<i>Total commits</i>	/repos/{owner}/{repo}/commits	Commits in period
<i>Commits per user</i>	/repos/{owner}/{repo}/commits	Commits grouped by user
<i>Commit frequency</i>	/repos/{owner}/{repo}/commits	Commits per day/week/month
<i>Commits per branch</i>	/repos/{owner}/{repo}/commits	Commits grouped by branch
<i>Average commit size</i>	/repos/{owner}/{repo}/commits	Lines added/deleted per commit (needs diff parsing)
<i>Top committers</i>	/repos/{owner}/{repo}/commits	Users with most commits
<i>Peak commit times (hour/day)</i>	/repos/{owner}/{repo}/commits	When most commits are made
<i>Commits with PRs vs. direct to main</i>	/repos/{owner}/{repo}/commits, /pulls	Ratio of commits via PRs vs. direct
Issue Metrics		
<i>Issues opened (total, per user)</i>	/repos/{owner}/{repo}/issues	Issue creation count
<i>Issues closed (total, per user)</i>	/repos/{owner}/{repo}/issues	Issue closure count
<i>Average issue resolution time</i>	/repos/{owner}/{repo}/issues	Open to close duration
<i>Issue comment count</i>	/repos/{owner}/{repo}/issues	Collaboration on issues
<i>Top issue creators/responders</i>	/repos/{owner}/{repo}/issues	Users most active in issues
<i>Issues with most comments</i>	/repos/{owner}/{repo}/issues	Most discussed issues
<i>Reopened issues</i>	/repos/{owner}/{repo}/issues	Issues closed and reopened
<i>Issues with/without labels</i>	/repos/{owner}/{repo}/issues	Issues organization, label usage
<i>Bugs vs. enhancement issues</i>	/repos/{owner}/{repo}/issues	Count by label (if using "bug", "enhancement", etc.)
Contributor Metrics		

<i>Active contributors (any activity)</i>	/repos/{owner}/{repo}/contributors	Unique users with commits/PRs/issues
<i>New contributors</i>	/repos/{owner}/{repo}/contributors	First-time contributors in period
<i>Returning contributors</i>	/repos/{owner}/{repo}/contributors	Users with prior contributions
<i>Contribution breakdown</i>	/repos/{owner}/{repo}/contributors	Commits, PRs, issues per user
<i>Contributor "bus factor"</i>	/repos/{owner}/{repo}/contributors	Ratio of active contributors to total
Organization/Repo Metrics		
<i>Total repositories</i>	/orgs/{org}/repos	Number of repos in org
<i>Active repositories</i>	/orgs/{org}/repos, /commits	Repos with activity in period
<i>Org member count</i>	/orgs/{org}/members	Total users in org
<i>Repo activity ranking</i>	/orgs/{org}/repos, /commits	Most/least active repos
<i>Repos by language</i>	/orgs/{org}/repos	Primary language usage
CI/CD Billing & Usage (Cloud only)	/orgs/{org}/actions/usage	Minutes used, usage per OS, storage