

git-pkgs

A git subcommand that indexes your dependency history into a local SQLite database, then lets you query it like git history.

```
$ brew tap git-pkgs/git-pkgs && brew install git-pkgs  
  
$ go install github.com/git-pkgs/git-pkgs@latest  
  
$ git pkgs --version  
git-pkgs version 0.11.4  
    commit faefea598fe88271224c668ca0b46716bbaf2dc7  
    date 2026-01-31T21:25:27Z
```

```
$ git pkgs help
```

Available Commands:

add	Add a dependency
bisect	Find the commit that introduced a dependency-related change
blame	Show who added each dependency
browse	Open installed package source in editor
diff	Compare dependencies between commits or working tree
ecosystems	List supported ecosystems
history	Show history of dependency changes
info	Show database information
init	Initialize git-pkgs database for this repository
licenses	Show license information for dependencies
list	List dependencies at a commit
log	List commits with dependency changes
outdated	Find packages with newer versions available
sbom	Generate Software Bill of Materials
search	Find dependencies matching a pattern
show	Show dependency changes in a commit
stats	Show dependency statistics
tree	Display dependencies as a tree
vulns	Vulnerability scanning commands
where	Find where a package is declared
why	Show why a dependency was added

Ecosystem	Manifest	Lockfiles	Managers	Registry
cargo	Cargo.toml	Cargo.lock	cargo	yes
composer	composer.json	composer.lock	composer	yes
gem	Gemfile	Gemfile.lock	bundler	yes
hex	mix.exs	mix.lock	mix	yes
npm	package.json	package-lock.json, yarn.lock...	npm, yarn...	yes
pypi	pyproject.toml	uv.lock, poetry.lock	uv, poetry	yes
pub	pubspec.yaml	pubspec.lock	pub	yes
cocoapods	Podfile	Podfile.lock	cocoapods	yes
maven	pom.xml	gradle.lockfile	maven, gradle	yes
nuget	packages.config	packages.lock.json	nuget	yes
cpan	cpanfile	cpanfile.snapshot	cpanm	yes
crystal	shard.yml	shard.lock	shards	no
swift	Package.swift	Package.resolved	swift	no
nix	flake.nix	flake.lock	nix	no
cran	DESCRIPTION	renv.lock	renv	yes
julia	Project.toml	Manifest.toml	pkg	yes
golang	go.mod		gomod	yes
deno	deno.json	deno.lock	deno	yes
conda	environment.yml		conda	yes
docker				no
...				

```
$ git pkgs init && git pkgs info
```

Database Info

Location: /Users/andrew/code/octobox/.git/pkgs.sqlite3

Size: 10.3 MB

Schema version: 7

Branch: master

Last analyzed: 7825978

Row Counts

Branches	1
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Commits	5237
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Branch-Commits	5237
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Manifests	9
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Dependency Changes	4775
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Dependency Snapshots	17932
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Total	33191
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Ecosystems: docker, gem, github-actions

```
$ git pkgs stats
```

Branch: master

Commits analyzed: 5237

Commits with changes: 2545

Current Dependencies: 246

gem: 226, github-actions: 16, docker: 4

Dependency Changes: 4775

added: 399, modified: 4223, removed: 153

Most Changed Dependencies

rails: 133, pagy: 116, autoprefixer-rails: 109

oj: 90, skylight: 87, nokogiri: 85, puma: 74

Top Contributors

dependabot[bot]: 2816 changes

Andrew Nesbitt: 1282 changes

dependabot-preview[bot]: 467 changes

Mark Tareshtawy: 64 changes

```
$ git pkgs list --ecosystem=gem
Gemfile (gem):
  active_record_query_trace [development]
  attr_encrypted https://github.com/octobox/attr_encrypted.git
  benchmark
  better_errors [development]
  bootsnap
  bootstrap 4.6.2
  brakeman [development]
  bugsnag
  commonmarker 2.6.2
  dotenv-rails [development]
  factory_bot [test]
  faraday >= 2
  faraday-gzip
  faraday-retry
  gemoji <4
  jbuilder
  jquery-rails
  jwt
  listen [development]
  local_time 2.1.0
  ...
  ...
```

```
$ git pkgs tree --ecosystem=gem
Gemfile (gem)
├── development
│   ├── active_record_query_trace
│   ├── better_errors
│   ├── brakeman
│   ├── dotenv-rails
│   ├── listen
│   ├── rails-controller-testing
│   ├── spring
│   ├── sql_queries_count
│   └── web-console
└── runtime
    ├── attr_encrypted https://github.com/octobox/attr_encrypted.git
    ├── bootsnap
    ├── bootstrap 4.6.2
    ├── bugsnag
    ├── commonmarker 2.6.2
    ├── faraday >= 2
    ├── jbuilder
    ├── jquery-rails
    └── ...
└── test
    ├── factory_bot
    ├── mocha
    └── webmock
```

```
$ git pkgs search rails
autoprefixer-rails          10.4.21.0 (gem)
  First seen: 2016-12-16  Last changed: 2025-04-14
dotenv-rails                 3.2.0 (gem)
  First seen: 2016-12-16  Last changed: 2025-12-08
jquery-rails                  4.6.1 (gem)
  First seen: 2016-12-16  Last changed: 2025-10-22
omniauth-rails_csrf_protection 2.0.1 (gem)
  First seen: 2021-11-02  Last changed: 2025-12-11
rails                         8.1.2 (gem)
  First seen: 2016-12-16  Last changed: 2026-01-15
rails-controller-testing       1.0.5 (gem)
  First seen: 2016-12-16  Last changed: 2019-02-08
rails-dom-testing              2.3.0 (gem)
  First seen: 2016-12-16  Last changed: 2025-12-11
rails-html-sanitizer            1.6.2 (gem)
  First seen: 2016-12-16  Last changed: 2025-12-11
railties                       8.1.2 (gem)
  First seen: 2016-12-16  Last changed: 2026-01-15
```

```
$ git pkgs show e323669
Gemfile.lock:
~ active_record_query_trace 1.6.1 -> 1.9
~ brakeman 7.1.2 -> 8.0.1
~ bugsnag 6.28.0 -> 6.29.0
~ prism 1.8.0 -> 1.9.0
~ puma 7.1.0 -> 7.2.0
~ redis-client 0.26.3 -> 0.26.4
```

```
$ git pkgs history rails
History for rails:

2016-12-16 Added 5.0.0.1
  Package: rails (gem)
  Commit: e323669 Hello World
  Author: Andrew Nesbitt <andrewnez@gmail.com>

2016-12-16 Added 6.5.3.1
  Package: autoprefixer-rails (gem)
  Commit: e323669 Hello World
  Author: Andrew Nesbitt <andrewnez@gmail.com>

2016-12-16 Added 2.1.1
  Package: dotenv-rails (gem)
  Commit: e323669 Hello World
  Author: Andrew Nesbitt <andrewnez@gmail.com>

2016-12-16 Added 4.2.1
  Package: jquery-rails (gem)
  Commit: e323669 Hello World
  Author: Andrew Nesbitt <andrewnez@gmail.com>

...
```

```
$ git pkgs log
7825978 Ignore .gitattributes
  Author: Andrew Nesbitt <andrewnez@gmail.com>
  Date:  2026-01-31
  Changes: ~6

cb3e017 build(deps): Bump commonmarker from 2.6.1 to 2.6.2
  Author: dependabot[bot]
  Date:  2026-01-20
  Changes: ~2

d8d8666 build(deps): Bump github/codeql-action from 3.31.10 to 4...
  Author: dependabot[bot]
  Date:  2026-01-20
  Changes: ~3

9bd74ac Add zizmor workflow and fix security findings
  Author: Andrew Nesbitt <andrewnez@gmail.com>
  Date:  2026-01-19
  Changes: +2 ~11

f51f866 build(deps-dev): Bump listen from 3.9.0 to 3.10.0
  Author: dependabot[bot]
  Date:  2026-01-19
  Changes: ~1
```

```
$ git pkgs why rails
rails was added in commit e323669
Date:    2016-12-16
Author:   Andrew Nesbitt <andrewnez@gmail.com>
Manifest: Gemfile

$ git pkgs where dotenv-rails
Gemfile:48: gem 'dotenv-rails'
Gemfile.lock:126:   dotenv-rails (3.2.0)

$ git pkgs browse rails
Opening /Users/andrew/.gem/ruby/3.3.0/gems/rails-8.1.2...
```

```
$ git pkgs blame
```

```
.github/workflows/ci.yml (github-actions):
```

actions/checkout	Andrew Nesbitt	2021-04-05	a83996d
actions/setup-node	Andrew Nesbitt	2021-04-05	a83996d
docker://postgres	Andrew Nesbitt	2021-04-05	a83996d
docker://redis	Andrew Nesbitt	2021-04-05	a83996d
ruby/setup-ruby	Andrew Nesbitt	2021-04-05	a83996d

```
.github/workflows/codeql-analysis.yml (github-actions):
```

actions/checkout	Andrew Nesbitt	2021-11-09	464afc8
github/codeql-action/analyze	Andrew Nesbitt	2021-11-09	464afc8
github/codeql-action/autobuild	Andrew Nesbitt	2021-11-09	464afc8
github/codeql-action/init	Andrew Nesbitt	2021-11-09	464afc8

```
.github/workflows/docker-build.yml (github-actions):
```

actions/checkout	Andrew Nesbitt	2025-07-28	ed1b8d2
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```
.github/workflows/publish.yml (github-actions):
```

actions/checkout	Andrew Nesbitt	2023-04-18	e0a5436
docker/build-push-action	Andrew Nesbitt	2023-04-18	e0a5436
docker/login-action	Andrew Nesbitt	2023-04-18	e0a5436
docker/metadata-action	Andrew Nesbitt	2023-04-18	e0a5436

```
$ git pkgs outdated  
Found 10 outdated dependencies:
```

Major updates:

```
attr_encrypted 3.1.0 -> 4.2.0  
local_time 2.1.0 -> 3.0.2  
popper_js 1.16.1 -> 2.11.8  
bootstrap 4.6.2 -> 5.3.8  
emoji 3.0.1 -> 4.1.0
```

Minor updates:

```
ethon 0.15.0 -> 0.18.0  
numerizer 0.1.1 -> 0.2.0  
octicons 19.20.0 -> 19.21.2
```

Patch updates:

```
rake-compiler-dock 1.11.0 -> 1.11.1  
commonmarker 2.6.2 -> 2.6.3
```

```
$ git pkgs licenses
actions/checkout (github-actions): MIT
actions/setup-node (github-actions): MIT
active_record_query_trace (gem): MIT
attr_encrypted (gem): MIT
benchmark (gem): Ruby
better_errors (gem): MIT
bootsnap (gem): MIT
bootstrap (gem): MIT
brakeman (gem): QPL-1.0
bugsnag (gem): MIT
commonmarker (gem): MIT
docker/build-push-action (github-actions): Apache-2.0
docker/login-action (github-actions): Apache-2.0
docker/metadata-action (github-actions): Apache-2.0
dotenv-rails (gem): MIT
factory_bot (gem): MIT
faraday (gem): MIT
jbuilder (gem): MIT
jwt (gem): MIT
library/postgres (docker): Apache-2.0
library/redis (docker): Apache-2.0
...
```

```
$ git pkgs vulns scan  
No vulnerabilities found.
```

```
$ git pkgs vulns log  
Vulnerability changes in 1 commits:
```

```
edbc795 build(deps): Bump public_suffix from 7.0.0 to 7.0.2  
+ GHSA-g9jg-w8vm-g96v - action_text-trix@2.1.15 (low)
```



```
$ git pkgs bisect start HEAD v3.0.0
Bisecting: 847 dependency-changing commits between v3.0.0 and HEAD
[a4b2c8d] build(deps): Bump rails from 6.1.4 to 6.1.5

$ git pkgs bisect good
Bisecting: 423 commits left to test
[f8e9d1a] build(deps): Bump nokogiri from 1.12.0 to 1.13.0

$ git pkgs bisect bad
Bisecting: 211 commits left to test
[c3a7b2e] build(deps): Bump puma from 5.3.0 to 5.4.0

$ git pkgs bisect reset
Returning to HEAD at 7825978
```

```
$ git pkgs add redis
Adding redis to Gemfile...
Running bundle install...
  Installing redis 5.4.0
Added redis 5.4.0 to Gemfile.lock
```

```
$ git pkgs update rails
Updating rails...
  rails 8.1.1 -> 8.1.2
  actionable 8.1.1 -> 8.1.2
  actionmailer 8.1.1 -> 8.1.2
  activerecord 8.1.1 -> 8.1.2
Updated 12 dependencies
```

```
$ git pkgs remove unused-gem
Removing unused-gem from Gemfile...
Removed unused-gem and 3 unused transitive dependencies
```

```
-----  
    id          INTEGER  PK  
    branch_id   INTEGER  
    commit_id   INTEGER  
    position    INTEGER
```

branches

```
-----  
    id          INTEGER  PK  
    name        TEXT      NOT NULL  
    last_analyzed_sha TEXT
```

commits

```
-----  
    id          INTEGER  PK  
    sha         TEXT      NOT NULL  
    message     TEXT  
    author_name TEXT  
    author_email TEXT  
    committed_at DATETIME
```

dependency_changes

```
-----  
    id          INTEGER  PK  
    commit_id   INTEGER  
    manifest_id INTEGER  
    name        TEXT  
    change_type TEXT  
    old_version TEXT
```

```
$ sqlite3 .git/pkgs.sqlite3 "SELECT name, COUNT(*)
    FROM dependency_changes GROUP BY name ORDER BY 2 DESC LIMIT 10;"
```

rails 133
pagy 116
autoprefixer-rails 109
oj 90
skylight 87
nokogiri 85
puma 74
actioncable 72
actionmailer 72
actionpack 72

Go Modules

- github.com/git-pkgs/managers - Wrapping package manager CLIs behind a common interface
- github.com/git-pkgs/manifests - Parsing manifest and lockfiles
- github.com/git-pkgs/purl - Package URL construction, parsing, and registry URL mapping
- github.com/git-pkgs/registries - Fetching package metadata from registry APIs
- github.com/git-pkgs/spdx - SPDX license expression parsing and normalization
- github.com/git-pkgs/vers - Version range parsing and comparison per the VERS spec

Thanks!

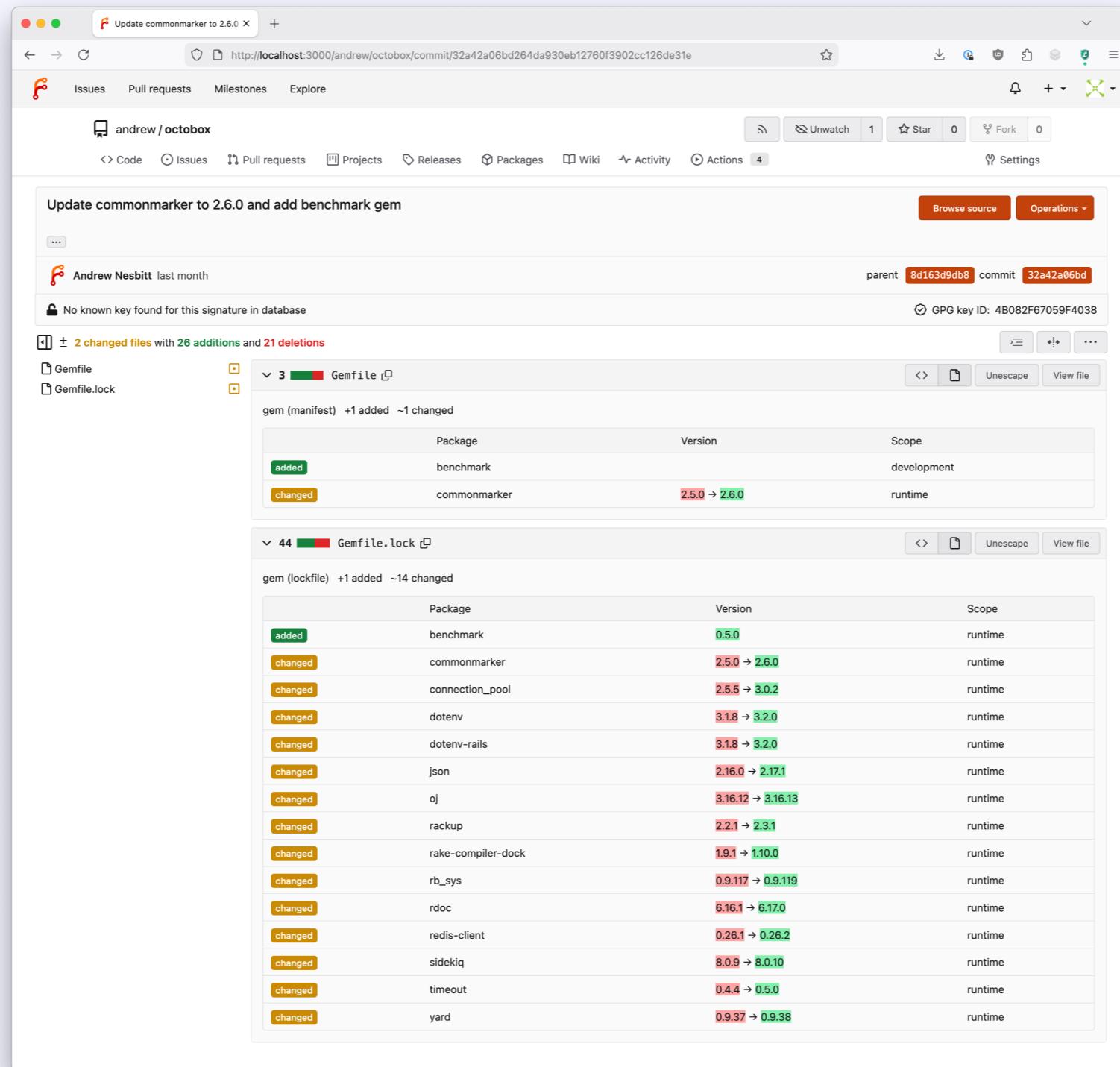


git-pkgs.dev

github.com/git-pkgs/git-pkgs

andrew@ecosyste.ms

Coming soon...



Dependencies - andrew/octobox

http://localhost:3000/andrew/octobox/dependencies

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Dependencies

243 Total	130 Direct	2 Ecosystems	4 Manifests
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docker

5 packages

Name	Version	Type	Manifest
octobox/octobox	latest	runtime	docker-compose.yml
postgres	16-alpine	runtime	docker-compose.yml
redis	7-alpine	runtime	docker-compose.yml
ruby	4.0.0-alpine	runtime	Dockerfile
ruby	4.0.0-alpine	runtime	Dockerfile

gem

238 packages

Name	Version	Type	Manifest
action_text-trix	2.1.16	runtime	Gemfile.lock
actioncable	8.1.2	runtime	Gemfile.lock
actionmailbox	8.1.2	runtime	Gemfile.lock
actionmailer	8.1.2	runtime	Gemfile.lock
actionpack	8.1.2	runtime	Gemfile.lock
actiontext	8.1.2	runtime	Gemfile.lock
actionview	8.1.2	runtime	Gemfile.lock
active_record_query_trace	1.6.1	runtime	Gemfile.lock
active_record_query_trace	-	dev	Gemfile
activejob	8.1.2	runtime	Gemfile.lock
activemodel	8.1.2	runtime	Gemfile.lock
activerecord	8.1.2	runtime	Gemfile.lock
activestorage	8.1.2	runtime	Gemfile.lock
activesupport	8.1.2	runtime	Gemfile.lock
addressable	2.8.8	runtime	Gemfile.lock
attr_encrypted	https://github.com/octobox/attr_encrypted.git	runtime	Gemfile
attr_encrypted	3.1.0	runtime	Gemfile.lock
autoprefixer-rails	10.4.21.0	runtime	Gemfile.lock
base64	0.3.0	runtime	Gemfile.lock
benchmark	0.5.0	runtime	Gemfile.lock