

# Package ‘gert’

July 19, 2024

**Type** Package

**Title** Simple Git Client for R

**Version** 2.1.0

**Description** Simple git client for R based on 'libgit2' <<https://libgit2.org>> with support for SSH and HTTPS remotes. All functions in 'gert' use basic R data types (such as vectors and data-frames) for their arguments and return values. User credentials are shared with command line 'git' through the git-credential store and ssh keys stored on disk or ssh-agent.

**License** MIT + file LICENSE

**URL** <https://docs.ropensci.org/gert/>  
<https://ropensci.r-universe.dev/gert>

**BugReports** <https://github.com/r-lib/gert/issues>

**Imports** askpass, credentials (>= 1.2.1), openssl (>= 2.0.3),  
rstudioapi (>= 0.11), sys, zip (>= 2.1.0)

**Suggests** spelling, knitr, rmarkdown, testthat

**VignetteBuilder** knitr

**Encoding** UTF-8

**RoxygenNote** 7.2.3

**SystemRequirements** libgit2 (>= 1.0): libgit2-devel (rpm) or  
libgit2-dev (deb)

**Language** en-US

**NeedsCompilation** yes

**Author** Jeroen Ooms [aut, cre] (<<https://orcid.org/0000-0002-4035-0289>>),  
Jennifer Bryan [ctb] (<<https://orcid.org/0000-0002-6983-2759>>)

**Maintainer** Jeroen Ooms <jeroen@berkeley.edu>

**Repository** CRAN

**Date/Publication** 2024-07-19 09:10:01 UTC

## Contents

git_archive . . . . .	2
git_branch . . . . .	3
git_checkout_pull_request . . . . .	4
git_commit . . . . .	5
git_config . . . . .	7
git_diff . . . . .	9
git_fetch . . . . .	9
git_ignore . . . . .	12
git_merge . . . . .	13
git_open . . . . .	14
git_rebase . . . . .	15
git_remote . . . . .	16
git_repo . . . . .	17
git_reset . . . . .	18
git_signature . . . . .	19
git_stash . . . . .	20
git_submodule_list . . . . .	21
git_tag . . . . .	22
libgit2_config . . . . .	22
user_is_configured . . . . .	23
<b>Index</b>	<b>24</b>

---

git_archive	<i>Git Archive</i>
-------------	--------------------

---

### Description

Exports the files in your repository to a zip file that is returned by the function.

### Usage

```
git_archive_zip(file = NULL, repo = ".")
```

### Arguments

file	name of the output zip file. Default is returned by the function
repo	The path to the git repository. If the directory is not a repository, parent directories are considered (see <a href="#">git_find</a> ). To disable this search, provide the filepath protected with <code>I()</code> . When using this parameter, always explicitly call by name (i.e. <code>repo = </code> ) because future versions of gert may have additional parameters.

### Value

path to the zip file that was created

**See Also**

Other git: [git\\_branch\(\)](#), [git\\_commit\(\)](#), [git\\_config\(\)](#), [git\\_diff\(\)](#), [git\\_fetch\(\)](#), [git\\_ignore](#), [git\\_merge\(\)](#), [git\\_rebase\(\)](#), [git\\_remote](#), [git\\_repo](#), [git\\_reset\(\)](#), [git\\_signature\(\)](#), [git\\_stash](#), [git\\_tag](#)

---

 git\_branch

*Git Branch*


---

**Description**

Create, list, and checkout branches.

**Usage**

```
git_branch(repo = ".")
```

```
git_branch_list(local = NULL, repo = ".")
```

```
git_branch_checkout(branch, force = FALSE, orphan = FALSE, repo = ".")
```

```
git_branch_create(branch, ref = "HEAD", checkout = TRUE, repo = ".")
```

```
git_branch_delete(branch, repo = ".")
```

```
git_branch_move(branch, new_branch, force = FALSE, repo = ".")
```

```
git_branch_fast_forward(ref, repo = ".")
```

```
git_branch_set_upstream(upstream, branch = git_branch(repo), repo = ".")
```

```
git_branch_exists(branch, local = TRUE, repo = ".")
```

**Arguments**

repo	The path to the git repository. If the directory is not a repository, parent directories are considered (see <a href="#">git_find</a> ). To disable this search, provide the filepath protected with <a href="#">I()</a> . When using this parameter, always explicitly call by name (i.e. repo = ) because future versions of gert may have additional parameters.
local	set TRUE to only check for local branches, FALSE to check for remote branches. Use NULL to return all branches.
branch	name of branch to check out
force	ignore conflicts and overwrite modified files
orphan	if branch does not exist, checkout unborn branch
ref	string with a branch/tag/commit
checkout	move HEAD to the newly created branch

<code>new_branch</code>	target name of the branch once the move is performed; this name is validated for consistency.
<code>upstream</code>	remote branch from <a href="#">git_branch_list</a> , for example "origin/master"

**See Also**

Other git: [git\\_archive](#), [git\\_commit\(\)](#), [git\\_config\(\)](#), [git\\_diff\(\)](#), [git\\_fetch\(\)](#), [git\\_ignore](#), [git\\_merge\(\)](#), [git\\_rebase\(\)](#), [git\\_remote](#), [git\\_repo](#), [git\\_reset\(\)](#), [git\\_signature\(\)](#), [git\\_stash](#), [git\\_tag](#)

---

`git_checkout_pull_request`  
*GitHub Wrappers*

---

**Description**

Fetch and checkout pull requests.

**Usage**

```
git_checkout_pull_request(pr = 1, remote = NULL, repo = ".")
```

```
git_fetch_pull_requests(pr = "*", remote = NULL, repo = ".")
```

**Arguments**

<code>pr</code>	number with PR to fetch or check out. Use "*" to fetch all pull requests.
<code>remote</code>	Optional. Name of a remote listed in <a href="#">git_remote_list()</a> . If unspecified and the current branch is already tracking branch a remote branch, that remote is honored. Otherwise, defaults to origin.
<code>repo</code>	The path to the git repository. If the directory is not a repository, parent directories are considered (see <a href="#">git_find</a> ). To disable this search, provide the filepath protected with <a href="#">I()</a> . When using this parameter, always explicitly call by name (i.e. <code>repo = </code> ) because future versions of gert may have additional parameters.

**Details**

By default `git_fetch_pull_requests` will download all PR branches. To remove these again simply use `git_fetch(prune = TRUE)`.

## Description

To commit changes, start by *staging* the files to be included in the commit using `git_add()` or `git_rm()`. Use `git_status()` to see an overview of staged and unstaged changes, and finally `git_commit()` creates a new commit with currently staged files.

`git_commit_all()` is a convenience function that automatically stages and commits all modified files. Note that `git_commit_all()` does **not** add new, untracked files to the repository. You need to make an explicit call to `git_add()` to start tracking new files.

`git_log()` shows the most recent commits and `git_ls()` lists all the files that are being tracked in the repository. `git_stat_files()`

## Usage

```
git_commit(message, author = NULL, committer = NULL, repo = ".")
```

```
git_commit_all(message, author = NULL, committer = NULL, repo = ".")
```

```
git_commit_info(ref = "HEAD", repo = ".")
```

```
git_commit_id(ref = "HEAD", repo = ".")
```

```
git_commit_stats(ref = "HEAD", repo = ".")
```

```
git_commit_descendant_of(ancestor, ref = "HEAD", repo = ".")
```

```
git_add(files, force = FALSE, repo = ".")
```

```
git_rm(files, repo = ".")
```

```
git_status(staged = NULL, pathspec = NULL, repo = ".")
```

```
git_conflicts(repo = ".")
```

```
git_ls(repo = ".", ref = NULL)
```

```
git_log(ref = "HEAD", max = 100, after = NULL, repo = ".")
```

```
git_stat_files(files, ref = "HEAD", repo = ".")
```

## Arguments

message            a commit message

author            A [git\\_signature](#) value, default is `git_signature_default()`.

committer	A <a href="#">git_signature</a> value, default is same as author
repo	The path to the git repository. If the directory is not a repository, parent directories are considered (see <a href="#">git_find</a> ). To disable this search, provide the filepath protected with <a href="#">I()</a> . When using this parameter, always explicitly call by name (i.e. <code>repo = </code> ) because future versions of gert may have additional parameters.
ref	revision string with a branch/tag/commit value
ancestor	a reference to a potential ancestor commit
files	vector of paths relative to the git root directory. Use "." to stage all changed files.
force	add files even if in gitignore
staged	return only staged (TRUE) or unstaged files (FALSE). Use NULL or NA to show both (default).
pathspec	character vector with paths to match
max	lookup at most latest n parent commits
after	date or timestamp: only include commits starting this date

### Value

- `git_status()`, `git_ls()`: A data frame with one row per file
- `git_log()`: A data frame with one row per commit
- `git_commit()`, `git_commit_all()`: A SHA

### See Also

Other git: [git\\_archive](#), [git\\_branch\(\)](#), [git\\_config\(\)](#), [git\\_diff\(\)](#), [git\\_fetch\(\)](#), [git\\_ignore](#), [git\\_merge\(\)](#), [git\\_rebase\(\)](#), [git\\_remote](#), [git\\_repo](#), [git\\_reset\(\)](#), [git\\_signature\(\)](#), [git\\_stash](#), [git\\_tag](#)

### Examples

```
oldwd <- getwd()
repo <- file.path(tempdir(), "myrepo")
git_init(repo)
setwd(repo)

# Set a user if no default
if(!user_is_configured()){
  git_config_set("user.name", "Jerry")
  git_config_set("user.email", "jerry@gmail.com")
}

writeLines(letters[1:6], "alphabet.txt")
git_status()

git_add("alphabet.txt")
git_status()
```

```

git_commit("Start alphabet file")
git_status()

git_ls()

git_log()

cat(letters[7:9], file = "alphabet.txt", sep = "\n", append = TRUE)
git_status()

git_commit_all("Add more letters")

# cleanup
setwd(oldwd)
unlink(repo, recursive = TRUE)

```

---

git\_config

*Get or set Git configuration*


---

### Description

Get or set Git options, as `git config` does on the command line. **Global** settings affect all of a user's Git operations (`git config --global`), whereas **local** settings are scoped to a specific repository (`git config --local`). When both exist, local options always win. Four functions address the four possible combinations of getting vs setting and global vs. local.

	<b>local</b>	<b>global</b>
get	<code>git_config()</code>	<code>git_config_global()</code>
set	<code>git_config_set()</code>	<code>git_config_global_set()</code>

### Usage

```

git_config(repo = ".")

git_config_global()

git_config_set(name, value, repo = ".")

git_config_global_set(name, value)

```

### Arguments

repo	The path to the git repository. If the directory is not a repository, parent directories are considered (see <a href="#">git_find</a> ). To disable this search, provide the filepath protected with <code>I()</code> . When using this parameter, always explicitly call by name (i.e. <code>repo = </code> ) because future versions of gert may have additional parameters.
name	Name of the option to set
value	Value to set. Must be a string, logical, number or NULL (to unset).

**Value**

- `git_config()`: a data.frame of the Git options "in force" in the context of repo, one row per option. The level column reveals whether the option is determined from global or local config.
- `git_config_global()`: a data.frame, as for `git_config()`, except only for global Git options.
- `git_config_set()`, `git_config_global_set()`: The previous value of name in local or global config, respectively. If this option was previously unset, returns NULL. Returns invisibly.

**Note**

All entries in the name column are automatically normalised to lowercase (see [https://libgit2.org/libgit2/#HEAD/type/git\\_config\\_entry](https://libgit2.org/libgit2/#HEAD/type/git_config_entry) for details).

**See Also**

Other git: [git\\_archive](#), [git\\_branch\(\)](#), [git\\_commit\(\)](#), [git\\_diff\(\)](#), [git\\_fetch\(\)](#), [git\\_ignore](#), [git\\_merge\(\)](#), [git\\_rebase\(\)](#), [git\\_remote](#), [git\\_repo](#), [git\\_reset\(\)](#), [git\\_signature\(\)](#), [git\\_stash](#), [git\\_tag](#)

**Examples**

```
# Set and inspect a local, custom Git option
r <- file.path(tempdir(), "gert-demo")
git_init(r)

previous <- git_config_set("aaa.bbb", "ccc", repo = r)
previous
cfg <- git_config(repo = r)
subset(cfg, level == "local")
cfg$value[cfg$name == "aaa.bbb"]

previous <- git_config_set("aaa.bbb", NULL, repo = r)
previous
cfg <- git_config(repo = r)
subset(cfg, level == "local")
cfg$value[cfg$name == "aaa.bbb"]

unlink(r, recursive = TRUE)

## Not run:
# Set global Git options
git_config_global_set("user.name", "Your Name")
git_config_global_set("user.email", "your@email.com")
git_config_global()

## End(Not run)
```



---

git_diff	<i>Git Diff</i>
----------	-----------------

---

### Description

View changes in a commit or in the current working directory.

### Usage

```
git_diff(ref = NULL, repo = ".")
```

```
git_diff_patch(ref = NULL, repo = ".")
```

### Arguments

ref	a reference such as "HEAD", or a commit id, or NULL to the diff the working directory against the repository index.
repo	The path to the git repository. If the directory is not a repository, parent directories are considered (see <a href="#">git_find</a> ). To disable this search, provide the filepath protected with <code>I()</code> . When using this parameter, always explicitly call by name (i.e. <code>repo = </code> ) because future versions of gert may have additional parameters.

### See Also

Other git: [git\\_archive](#), [git\\_branch\(\)](#), [git\\_commit\(\)](#), [git\\_config\(\)](#), [git\\_fetch\(\)](#), [git\\_ignore](#), [git\\_merge\(\)](#), [git\\_rebase\(\)](#), [git\\_remote](#), [git\\_repo](#), [git\\_reset\(\)](#), [git\\_signature\(\)](#), [git\\_stash](#), [git\\_tag](#)

---

git_fetch	<i>Push and pull</i>
-----------	----------------------

---

### Description

Functions to connect with a git server (remote) to fetch or push changes. The 'credentials' package is used to handle authentication, the [credentials vignette](#) explains the various authentication methods for SSH and HTTPS remotes.

### Usage

```
git_fetch(  
  remote = NULL,  
  refspec = NULL,  
  password = askpass,  
  ssh_key = NULL,  
  prune = FALSE,
```

```

    verbose = interactive(),
    repo = "."
)

git_remote_ls(
    remote = NULL,
    password = askpass,
    ssh_key = NULL,
    verbose = interactive(),
    repo = "."
)

git_push(
    remote = NULL,
    refspec = NULL,
    set_upstream = NULL,
    password = askpass,
    ssh_key = NULL,
    mirror = FALSE,
    force = FALSE,
    verbose = interactive(),
    repo = "."
)

git_clone(
    url,
    path = NULL,
    branch = NULL,
    password = askpass,
    ssh_key = NULL,
    bare = FALSE,
    mirror = FALSE,
    verbose = interactive()
)

git_pull(remote = NULL, rebase = FALSE, ..., repo = ".")

```

### Arguments

remote	Optional. Name of a remote listed in <a href="#">git_remote_list()</a> . If unspecified and the current branch is already tracking branch a remote branch, that remote is honored. Otherwise, defaults to origin.
refspec	string with mapping between remote and local refs. Default uses the default refspec from the remote, which usually fetches all branches.
password	a string or a callback function to get passwords for authentication or password protected ssh keys. Defaults to <a href="#">askpass</a> which checks <code>getOption('askpass')</code> .
ssh_key	path or object containing your ssh private key. By default we look for keys in <code>ssh-agent</code> and <a href="#">credentials::ssh_key_info</a> .

prune	delete tracking branches that no longer exist on the remote, or are not in the refspec (such as pull requests).
verbose	display some progress info while downloading
repo	The path to the git repository. If the directory is not a repository, parent directories are considered (see <a href="#">git_find</a> ). To disable this search, provide the filepath protected with <code>I()</code> . When using this parameter, always explicitly call by name (i.e. <code>repo = </code> ) because future versions of gert may have additional parameters.
set_upstream	change the branch default upstream to remote. If NULL, this will set the branch upstream only if the push was successful and if the branch does not have an upstream set yet.
mirror	use the <code>--mirror</code> flag
force	use the <code>--force</code> flag
url	remote url. Typically starts with <code>https://github.com/</code> for public repositories, and <code>https://yourname@github.com/</code> or <code>git@github.com/</code> for private repos. You will be prompted for a password or pat when needed.
path	Directory of the Git repository to create.
branch	name of branch to check out locally
bare	use the <code>--bare</code> flag
rebase	if TRUE we try to rebase instead of merge local changes. This is not possible in case of conflicts (you will get an error).
...	arguments passed to <a href="#">git_fetch</a>

### Details

Use [git\\_fetch\(\)](#) and [git\\_push\(\)](#) to sync a local branch with a remote branch. Here [git\\_pull\(\)](#) is a wrapper for [git\\_fetch\(\)](#) which then tries to [fast-forward](#) the local branch after fetching.

### See Also

Other git: [git\\_archive](#), [git\\_branch\(\)](#), [git\\_commit\(\)](#), [git\\_config\(\)](#), [git\\_diff\(\)](#), [git\\_ignore](#), [git\\_merge\(\)](#), [git\\_rebase\(\)](#), [git\\_remote](#), [git\\_repo](#), [git\\_reset\(\)](#), [git\\_signature\(\)](#), [git\\_stash](#), [git\\_tag](#)

### Examples

```
{# Clone a small repository
git_dir <- file.path(tempdir(), 'antiword')
git_clone('https://github.com/ropensci/antiword', git_dir)

# Change into the repo directory
olddir <- getwd()
setwd(git_dir)

# Show some stuff
git_log()
git_branch_list()
git_remote_list()
```

```
# Add a file
write.csv(iris, 'iris.csv')
git_add('iris.csv')

# Commit the change
jerry <- git_signature("Jerry", "jerry@hotmail.com")
git_commit('added the iris file', author = jerry)

# Now in the log:
git_log()

# Cleanup
setwd(olddir)
unlink(git_dir, recursive = TRUE)
}
```

---

git\_ignore

*Git Ignore*

---

## Description

Test if files would be ignored by .gitignore rules

## Usage

```
git_ignore_path_is_ignored(path, repo = ".")
```

## Arguments

path	A character vector of paths to test within the repo
repo	The path to the git repository. If the directory is not a repository, parent directories are considered (see <a href="#">git_find</a> ). To disable this search, provide the filepath protected with <a href="#">I()</a> . When using this parameter, always explicitly call by name (i.e. repo = ) because future versions of gert may have additional parameters.

## Value

A logical vector the same length as path, indicating if the paths would be ignored.

## See Also

Other git: [git\\_archive](#), [git\\_branch\(\)](#), [git\\_commit\(\)](#), [git\\_config\(\)](#), [git\\_diff\(\)](#), [git\\_fetch\(\)](#), [git\\_merge\(\)](#), [git\\_rebase\(\)](#), [git\\_remote](#), [git\\_repo](#), [git\\_reset\(\)](#), [git\\_signature\(\)](#), [git\\_stash](#), [git\\_tag](#)

---

`git_merge`*Merging tools*

---

### Description

Use `git_merge` to merge a branch into the current head. Based on how the branches have diverged, the function will select a fast-forward or merge-commit strategy.

### Usage

```
git_merge(ref, commit = TRUE, squash = FALSE, repo = ".")
```

```
git_merge_stage_only(ref, squash = FALSE, repo = ".")
```

```
git_merge_find_base(ref, target = "HEAD", repo = ".")
```

```
git_merge_analysis(ref, repo = ".")
```

```
git_merge_abort(repo = ".")
```

### Arguments

<code>ref</code>	branch or commit that you want to merge
<code>commit</code>	automatically create a merge commit if the merge succeeds without conflicts. Set this to <code>FALSE</code> if you want to customize your commit message/author.
<code>squash</code>	omits the second parent from the commit, which make the merge a regular single-parent commit.
<code>repo</code>	The path to the git repository. If the directory is not a repository, parent directories are considered (see <a href="#">git_find</a> ). To disable this search, provide the filepath protected with <code>I()</code> . When using this parameter, always explicitly call by name (i.e. <code>repo = </code> ) because future versions of gert may have additional parameters.
<code>target</code>	the branch where you want to merge into. Defaults to current HEAD.

### Details

By default `git_merge` automatically commits the merge commit upon success. However if the merge fails with merge-conflicts, or if `commit` is set to `FALSE`, the changes are staged and the repository is put in merging state, and you have to manually run `git_commit` or `git_merge_abort` to proceed.

Other functions are more low-level tools that are used by `git_merge`. `git_merge_find_base` looks up the commit where two branches have diverged (i.e. the youngest common ancestor). The `git_merge_analysis` is used to test if a merge can simply be fast forwarded or not.

The `git_merge_stage_only` function applies and stages changes, without committing or fast-forwarding.

**See Also**

Other git: [git\\_archive](#), [git\\_branch\(\)](#), [git\\_commit\(\)](#), [git\\_config\(\)](#), [git\\_diff\(\)](#), [git\\_fetch\(\)](#), [git\\_ignore](#), [git\\_rebase\(\)](#), [git\\_remote](#), [git\\_repo](#), [git\\_reset\(\)](#), [git\\_signature\(\)](#), [git\\_stash](#), [git\\_tag](#)

---

git_open	<i>Open local repository</i>
----------	------------------------------

---

**Description**

Returns a pointer to a libgit2 repository object. This function is mainly for internal use; users should simply reference a repository in gert by the path to the directory.

**Usage**

```
git_open(repo = ".")
```

**Arguments**

repo	The path to the git repository. If the directory is not a repository, parent directories are considered (see <a href="#">git_find</a> ). To disable this search, provide the filepath protected with <a href="#">I()</a> . When using this parameter, always explicitly call by name (i.e. <code>repo = </code> ) because future versions of gert may have additional parameters.
------	---

**Value**

an pointer to the libgit2 repository

**Examples**

```
r <- tempfile(pattern = "gert")
git_init(r)
r_ptr <- git_open(r)
r_ptr
git_open(r_ptr)
git_info(r)

# cleanup
unlink(r, recursive = TRUE)
```

git\_rebase

*Cherry-Pick and Rebase***Description**

A cherry-pick applies the changes from a given commit (from another branch) onto the current branch. A rebase resets the branch to the state of another branch (upstream) and then re-applies your local changes by cherry-picking each of your local commits onto the upstream commit history.

**Usage**

```
git_rebase_list(upstream = NULL, repo = ".")
```

```
git_rebase_commit(upstream = NULL, repo = ".")
```

```
git_cherry_pick(commit, repo = ".")
```

```
git_ahead_behind(upstream = NULL, ref = "HEAD", repo = ".")
```

**Arguments**

upstream	branch to which you want to rewind and re-apply your local commits. The default uses the remote upstream branch with the current state on the git server, simulating <a href="#">git_pull</a> .
repo	The path to the git repository. If the directory is not a repository, parent directories are considered (see <a href="#">git_find</a> ). To disable this search, provide the filepath protected with <code>I()</code> . When using this parameter, always explicitly call by name (i.e. <code>repo = </code> ) because future versions of gert may have additional parameters.
commit	id of the commit to cherry pick
ref	string with a branch/tag/commit

**Details**

`git_rebase_list` shows your local commits that are missing from the upstream history, and if they conflict with upstream changes. It does so by performing a rebase dry-run, without committing anything. If there are no conflicts, you can use `git_rebase_commit` to rewind and rebase your branch onto upstream. Gert only support a clean rebase; it never leaves the repository in unfinished "rebasing" state. If conflicts arise, `git_rebase_commit` will raise an error without making changes.

**See Also**

Other git: [git\\_archive](#), [git\\_branch\(\)](#), [git\\_commit\(\)](#), [git\\_config\(\)](#), [git\\_diff\(\)](#), [git\\_fetch\(\)](#), [git\\_ignores](#), [git\\_merge\(\)](#), [git\\_remote](#), [git\\_repo](#), [git\\_reset\(\)](#), [git\\_signature\(\)](#), [git\\_stash](#), [git\\_tag](#)

---

`git_remote`*Git Remotes*

---

### Description

List, add, configure, or remove remotes.

### Usage

```
git_remote_list(repo = ".")
```

```
git_remote_add(url, name = "origin", refspec = NULL, repo = ".")
```

```
git_remote_remove(remote, repo = ".")
```

```
git_remote_info(remote = NULL, repo = ".")
```

```
git_remote_set_url(url, remote = NULL, repo = ".")
```

```
git_remote_set_pushurl(url, remote = NULL, repo = ".")
```

```
git_remote_refspecs(remote = NULL, repo = ".")
```

### Arguments

<code>repo</code>	The path to the git repository. If the directory is not a repository, parent directories are considered (see <a href="#">git_find</a> ). To disable this search, provide the filepath protected with <code>I()</code> . When using this parameter, always explicitly call by name (i.e. <code>repo = </code> ) because future versions of gert may have additional parameters.
<code>url</code>	server url (https or ssh)
<code>name</code>	unique name for the new remote
<code>refspec</code>	optional string with the remote fetch value
<code>remote</code>	name of an existing remote. Default NULL means the remote from the upstream of the current branch.

### See Also

Other git: [git\\_archive](#), [git\\_branch\(\)](#), [git\\_commit\(\)](#), [git\\_config\(\)](#), [git\\_diff\(\)](#), [git\\_fetch\(\)](#), [git\\_ignore](#), [git\\_merge\(\)](#), [git\\_rebase\(\)](#), [git\\_repo](#), [git\\_reset\(\)](#), [git\\_signature\(\)](#), [git\\_stash](#), [git\\_tag](#)



---

`git_repo`*Create or discover a local Git repository*

---

### Description

Use `git_init()` to create a new repository or `git_find()` to discover an existing local repository. `git_info()` shows basic information about a repository, such as the SHA and branch of the current HEAD.

### Usage

```
git_init(path = ".", bare = FALSE)
```

```
git_find(path = ".")
```

```
git_info(repo = ".")
```

### Arguments

<code>path</code>	the location of the git repository, see details.
<code>bare</code>	if true, a Git repository without a working directory is created
<code>repo</code>	The path to the git repository. If the directory is not a repository, parent directories are considered (see <code>git_find</code> ). To disable this search, provide the filepath protected with <code>I()</code> . When using this parameter, always explicitly call by name (i.e. <code>repo = </code> ) because future versions of gert may have additional parameters.

### Details

For `git_init()` the `path` parameter sets the directory of the git repository to create. If this directory already exists, it must be empty. If it does not exist, it is created, along with any intermediate directories that don't yet exist. For `git_find()` the `path` arguments specifies the directory at which to start the search for a git repository. If it is not a git repository itself, then its parent directory is consulted, then the parent's parent, and so on.

### Value

The path to the Git repository.

### See Also

Other git: [git\\_archive](#), [git\\_branch\(\)](#), [git\\_commit\(\)](#), [git\\_config\(\)](#), [git\\_diff\(\)](#), [git\\_fetch\(\)](#), [git\\_ignore](#), [git\\_merge\(\)](#), [git\\_rebase\(\)](#), [git\\_remote](#), [git\\_reset\(\)](#), [git\\_signature\(\)](#), [git\\_stash](#), [git\\_tag](#)

**Examples**

```

# directory does not yet exist
r <- tempfile(pattern = "gert")
git_init(r)
git_find(r)

# create a child directory, then a grandchild, then search
r_grandchild_dir <- file.path(r, "aaa", "bbb")
dir.create(r_grandchild_dir, recursive = TRUE)
git_find(r_grandchild_dir)

# cleanup
unlink(r, recursive = TRUE)

# directory exists but is empty
r <- tempfile(pattern = "gert")
dir.create(r)
git_init(r)
git_find(r)

# cleanup
unlink(r, recursive = TRUE)

```

---

`git_reset`*Reset your repo to a previous state*

---

**Description**

- `git_reset_hard()` reverts to a point in history
- `git_reset_soft()` uncommits changes, but keeps the change uncommitted
- `git_reset_mixed()` performs a simple git reset.

**Usage**

```

git_reset_hard(ref = "HEAD", repo = ".")

git_reset_soft(ref = "HEAD", repo = ".")

git_reset_mixed(ref = "HEAD", repo = ".")

```

**Arguments**

<code>ref</code>	string with a branch/tag/commit
<code>repo</code>	The path to the git repository. If the directory is not a repository, parent directories are considered (see <code>git_find</code> ). To disable this search, provide the filepath protected with <code>I()</code> . When using this parameter, always explicitly call by name (i.e. <code>repo = </code> ) because future versions of <code>gert</code> may have additional parameters.

**See Also**

Other git: [git\\_archive](#), [git\\_branch\(\)](#), [git\\_commit\(\)](#), [git\\_config\(\)](#), [git\\_diff\(\)](#), [git\\_fetch\(\)](#), [git\\_ignore](#), [git\\_merge\(\)](#), [git\\_rebase\(\)](#), [git\\_remote](#), [git\\_repo](#), [git\\_signature\(\)](#), [git\\_stash](#), [git\\_tag](#)

---

git_signature	<i>Author Signature</i>
---------------	-------------------------

---

**Description**

A signature contains the author and timestamp of a commit. Each commit includes a signature of the author and committer (which can be identical).

**Usage**

```
git_signature_default(repo = ".")
git_signature(name, email, time = NULL)
git_signature_parse(sig)
```

**Arguments**

repo	The path to the git repository. If the directory is not a repository, parent directories are considered (see <a href="#">git_find</a> ). To disable this search, provide the filepath protected with <code>I()</code> . When using this parameter, always explicitly call by name (i.e. <code>repo = </code> ) because future versions of gert may have additional parameters.
name	Real name of the committer
email	Email address of the committer
time	timestamp of class POSIXt or NULL
sig	string in proper "First Last <your@email.com>" format, see details.

**Details**

A signature string has format "Real Name <email> timestamp tzoffset". The timestamp tzoffset piece can be omitted in which case the current local time is used. If not omitted, timestamp must contain the number of seconds since the Unix epoch and tzoffset is the timezone offset in hhmm format (note the lack of a colon separator)

**See Also**

Other git: [git\\_archive](#), [git\\_branch\(\)](#), [git\\_commit\(\)](#), [git\\_config\(\)](#), [git\\_diff\(\)](#), [git\\_fetch\(\)](#), [git\\_ignore](#), [git\\_merge\(\)](#), [git\\_rebase\(\)](#), [git\\_remote](#), [git\\_repo](#), [git\\_reset\(\)](#), [git\\_stash](#), [git\\_tag](#)

**Examples**

```
# Your default user
try/git_signature_default()

# Specify explicit name and email
git_signature("Some committer", "sarah@gmail.com")

# Create signature for an hour ago
(sig <- git_signature("Han", "han@company.com", Sys.time() - 3600))

# Parse a signature
git_signature_parse(sig)
git_signature_parse("Emma <emma@mu.edu>")
```

---

**git\_stash***Stashing changes*

---

**Description**

Temporary stash away changed from the working directory.

**Usage**

```
git_stash_save(
  message = "",
  keep_index = FALSE,
  include_untracked = FALSE,
  include_ignored = FALSE,
  repo = "."
)

git_stash_pop(index = 0, repo = ".")

git_stash_drop(index = 0, repo = ".")

git_stash_list(repo = ".")
```

**Arguments**

message	optional message to store the stash
keep_index	changes already added to the index are left intact in the working directory
include_untracked	untracked files are also stashed and then cleaned up from the working directory
include_ignored	ignored files are also stashed and then cleaned up from the working directory

repo	The path to the git repository. If the directory is not a repository, parent directories are considered (see <a href="#">git_find</a> ). To disable this search, provide the filepath protected with <code>I()</code> . When using this parameter, always explicitly call by name (i.e. <code>repo = </code> ) because future versions of gert may have additional parameters.
index	The position within the stash list. 0 points to the most recent stashed state.

**See Also**

Other git: [git\\_archive](#), [git\\_branch\(\)](#), [git\\_commit\(\)](#), [git\\_config\(\)](#), [git\\_diff\(\)](#), [git\\_fetch\(\)](#), [git\\_ignore](#), [git\\_merge\(\)](#), [git\\_rebase\(\)](#), [git\\_remote](#), [git\\_repo](#), [git\\_reset\(\)](#), [git\\_signature\(\)](#), [git\\_tag](#)

---

git\_submodule\_list      *Submodules*

---

**Description**

Interact with submodules in the repository.

**Usage**

```
git_submodule_list(repo = ".")

git_submodule_info(submodule, repo = ".")

git_submodule_init(submodule, overwrite = FALSE, repo = ".")

git_submodule_set_to(submodule, ref, checkout = TRUE, repo = ".")

git_submodule_add(url, path = basename(url), ref = "HEAD", ..., repo = ".")

git_submodule_fetch(submodule, ..., repo = ".")
```

**Arguments**

repo	The path to the git repository. If the directory is not a repository, parent directories are considered (see <a href="#">git_find</a> ). To disable this search, provide the filepath protected with <code>I()</code> . When using this parameter, always explicitly call by name (i.e. <code>repo = </code> ) because future versions of gert may have additional parameters.
submodule	name of the submodule
overwrite	overwrite existing entries
ref	a branch or tag or hash with
checkout	actually switch the contents of the directory to this commit
url	full git url of the submodule
path	relative of the submodule
...	extra arguments for <a href="#">git_fetch</a> for authentication things

---

git_tag	<i>Git Tag</i>
---------	----------------

---

### Description

Create and list tags.

### Usage

```
git_tag_list(match = "*", repo = ".")

git_tag_create(name, message, ref = "HEAD", repo = ".")

git_tag_delete(name, repo = ".")

git_tag_push(name, ..., repo = ".")
```

### Arguments

match	pattern to filter tags (use * for wildcard)
repo	The path to the git repository. If the directory is not a repository, parent directories are considered (see <a href="#">git_find</a> ). To disable this search, provide the filepath protected with <a href="#">I()</a> . When using this parameter, always explicitly call by name (i.e. repo = ) because future versions of gert may have additional parameters.
name	tag name
message	tag message
ref	target reference to tag
...	other arguments passed to <a href="#">git_push</a>

### See Also

Other git: [git\\_archive](#), [git\\_branch\(\)](#), [git\\_commit\(\)](#), [git\\_config\(\)](#), [git\\_diff\(\)](#), [git\\_fetch\(\)](#), [git\\_ignore](#), [git\\_merge\(\)](#), [git\\_rebase\(\)](#), [git\\_remote](#), [git\\_repo](#), [git\\_reset\(\)](#), [git\\_signature\(\)](#), [git\\_stash](#)

---

libgit2_config	<i>Show libgit2 version and capabilities</i>
----------------	--

---

### Description

`libgit2_config()` reveals which version of libgit2 gert is using and which features are supported, such whether you are able to use ssh remotes.

**Usage**

```
libgit2_config()
```

**Examples**

```
libgit2_config()
```

---

```
user_is_configured    Test if a Git user is configured
```

---

**Description**

This function exists mostly to guard examples that rely on having a user configured, in order to make commits. `user_is_configured()` makes no distinction between local or global user config.

**Usage**

```
user_is_configured(repo = ".")
```

**Arguments**

`repo`            An optional repo, in the sense of `git_open()`.

**Value**

TRUE if `user.name` and `user.email` are set locally or globally, FALSE otherwise.

**Examples**

```
user_is_configured()
```

# Index

- \* **git**
  - git\_archive, 2
  - git\_branch, 3
  - git\_commit, 5
  - git\_config, 7
  - git\_diff, 9
  - git\_fetch, 9
  - git\_ignore, 12
  - git\_merge, 13
  - git\_rebase, 15
  - git\_remote, 16
  - git\_repo, 17
  - git\_reset, 18
  - git\_signature, 19
  - git\_stash, 20
  - git\_tag, 22
- askpass, 10
- credentials::ssh\_key\_info, 10
- fast-forward, 11
- git\_add (git\_commit), 5
- git\_ahead\_behind (git\_rebase), 15
- git\_archive, 2, 4, 6, 8, 9, 11, 12, 14–17, 19, 21, 22
- git\_archive\_zip (git\_archive), 2
- git\_branch, 3, 3, 6, 8, 9, 11, 12, 14–17, 19, 21, 22
- git\_branch\_checkout (git\_branch), 3
- git\_branch\_create (git\_branch), 3
- git\_branch\_delete (git\_branch), 3
- git\_branch\_exists (git\_branch), 3
- git\_branch\_fast\_forward (git\_branch), 3
- git\_branch\_list, 4
- git\_branch\_list (git\_branch), 3
- git\_branch\_move (git\_branch), 3
- git\_branch\_set\_upstream (git\_branch), 3
- git\_checkout\_pull\_request, 4
- git\_cherry\_pick (git\_rebase), 15
- git\_clone (git\_fetch), 9
- git\_commit, 3, 4, 5, 8, 9, 11, 12, 14–17, 19, 21, 22
- git\_commit\_all (git\_commit), 5
- git\_commit\_descendant\_of (git\_commit), 5
- git\_commit\_id (git\_commit), 5
- git\_commit\_info (git\_commit), 5
- git\_commit\_stats (git\_commit), 5
- git\_config, 3, 4, 6, 7, 9, 11, 12, 14–17, 19, 21, 22
- git\_config\_global (git\_config), 7
- git\_config\_global\_set (git\_config), 7
- git\_config\_set (git\_config), 7
- git\_conflicts (git\_commit), 5
- git\_diff, 3, 4, 6, 8, 9, 11, 12, 14–17, 19, 21, 22
- git\_diff\_patch (git\_diff), 9
- git\_fetch, 3, 4, 6, 8, 9, 9, 11, 12, 14–17, 19, 21, 22
- git\_fetch(), 11
- git\_fetch\_pull\_requests (git\_checkout\_pull\_request), 4
- git\_find, 2–4, 6, 7, 9, 11–19, 21, 22
- git\_find (git\_repo), 17
- git\_ignore, 3, 4, 6, 8, 9, 11, 12, 14–17, 19, 21, 22
- git\_ignore\_path\_is\_ignored (git\_ignore), 12
- git\_info (git\_repo), 17
- git\_init (git\_repo), 17
- git\_log (git\_commit), 5
- git\_ls (git\_commit), 5
- git\_merge, 3, 4, 6, 8, 9, 11, 12, 13, 15–17, 19, 21, 22
- git\_merge\_abort (git\_merge), 13
- git\_merge\_analysis (git\_merge), 13
- git\_merge\_find\_base (git\_merge), 13
- git\_merge\_stage\_only (git\_merge), 13



`git_open`, 14  
`git_open()`, 23  
`git_pull`, 15  
`git_pull (git_fetch)`, 9  
`git_pull()`, 11  
`git_push`, 22  
`git_push (git_fetch)`, 9  
`git_push()`, 11  
`git_rebase`, 3, 4, 6, 8, 9, 11, 12, 14, 15, 16, 17, 19, 21, 22  
`git_rebase_commit (git_rebase)`, 15  
`git_rebase_list (git_rebase)`, 15  
`git_remote`, 3, 4, 6, 8, 9, 11, 12, 14, 15, 16, 17, 19, 21, 22  
`git_remote_add (git_remote)`, 16  
`git_remote_info (git_remote)`, 16  
`git_remote_list (git_remote)`, 16  
`git_remote_list()`, 4, 10  
`git_remote_ls (git_fetch)`, 9  
`git_remote_refsspecs (git_remote)`, 16  
`git_remote_remove (git_remote)`, 16  
`git_remote_set_pushurl (git_remote)`, 16  
`git_remote_set_url (git_remote)`, 16  
`git_repo`, 3, 4, 6, 8, 9, 11, 12, 14–16, 17, 19, 21, 22  
`git_reset`, 3, 4, 6, 8, 9, 11, 12, 14–17, 18, 19, 21, 22  
`git_reset_hard (git_reset)`, 18  
`git_reset_mixed (git_reset)`, 18  
`git_reset_soft (git_reset)`, 18  
`git_rm (git_commit)`, 5  
`git_signature`, 3–6, 8, 9, 11, 12, 14–17, 19, 19, 21, 22  
`git_signature_default (git_signature)`, 19  
`git_signature_default()`, 5  
`git_signature_parse (git_signature)`, 19  
`git_stash`, 3, 4, 6, 8, 9, 11, 12, 14–17, 19, 20, 22  
`git_stash_drop (git_stash)`, 20  
`git_stash_list (git_stash)`, 20  
`git_stash_pop (git_stash)`, 20  
`git_stash_save (git_stash)`, 20  
`git_stat_files (git_commit)`, 5  
`git_status (git_commit)`, 5  
`git_submodule_add (git_submodule_list)`, 21  
`git_submodule_fetch`  
`git_submodule_list`, 21  
`git_submodule_info`  
`git_submodule_init`  
`git_submodule_list`, 21  
`git_submodule_set_to`  
`git_tag`, 3, 4, 6, 8, 9, 11, 12, 14–17, 19, 21, 22  
`git_tag_create (git_tag)`, 22  
`git_tag_delete (git_tag)`, 22  
`git_tag_list (git_tag)`, 22  
`git_tag_push (git_tag)`, 22  
`I()`, 2–4, 6, 7, 9, 11–19, 21, 22  
`libgit2_config`, 22  
`user_is_configured`, 23