# Package 'pkgdown'

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**Title** Make Static HTML Documentation for a Package **Version** 2.1.3

**Description** Generate an attractive and useful website from a source package. 'pkgdown' converts your documentation, vignettes, 'README', and more to 'HTML' making it easy to share information about your package online.

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URL https://pkgdown.r-lib.org/, https://github.com/r-lib/pkgdown

BugReports https://github.com/r-lib/pkgdown/issues

**Depends** R (>= 4.0.0)

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as\_pkgdown

Generate pkgdown data structure

# Description

You will generally not need to use this unless you need a custom site design and you're writing your own equivalent of build\_site().

# Usage

Index

```
as_pkgdown(pkg = ".", override = list())
```

# **Arguments**

pkg Path to package.

override An optional named list used to temporarily override values in \_pkgdown.yml

build\_articles Build articles section

# Description

build\_articles() renders each R Markdown file underneath vignettes/ and saves it to articles/. There are two exceptions:

- Files that start with \_ (e.g., \_index.Rmd) are ignored, enabling the use of child documents.
- Files in vignettes/tutorials are handled by build\_tutorials()

Vignettes are rendered using a special document format that reconciles rmarkdown::html\_document() with the pkgdown template. This means articles behave slightly differently to vignettes, particularly with respect to external files, and custom output formats. See below for more details.

Note that when you run build\_articles() directly (outside of build\_site()) vignettes will use the currently installed version of the package, not the current source version. This makes iteration quicker when you are primarily working on the text of an article.

# Usage

```
build_articles(
  pkg = ".",
  quiet = TRUE,
  lazy = TRUE,
  seed = 1014L,
  override = list(),
  preview = FALSE
)
build_article(
  name,
  pkg = ".",
  lazy = FALSE,
  seed = 1014L,
  new_process = TRUE,
  pandoc_args = character(),
  override = list(),
  quiet = TRUE
)
build_articles_index(pkg = ".", override = list())
```

# **Arguments**

pkg	Path to package.
quiet	Set to FALSE to display output of knitr and pandoc. This is useful when debugging.
lazy	If TRUE, will only re-build article if input file has been modified more recently than the output file.
seed	Seed used to initialize random number generation in order to make article output reproducible. An integer scalar or NULL for no seed.
override	An optional named list used to temporarily override values in _pkgdown.yml
preview	If TRUE, or is. na(preview) && interactive(), will preview freshly generated section in browser.
name	Name of article to render. This should be either a path relative to vignettes/ without extension, or index or README.
new_process	Build the article in a clean R process? The default, TRUE, ensures that every article is build in a fresh environment, but you may want to set it to FALSE to make debugging easier.
pandoc_args	Pass additional arguments to pandoc. Used for testing.

### Index and navbar

You can control the articles index and navbar with a articles field in your \_pkgdown.yml. If you use it, pkgdown will check that all articles are included, and will error if you have missed any.

The articles field defines a list of sections, each of which can contain four fields:

- title (required): title of section, which appears as a heading on the articles index.
- desc (optional): An optional markdown description displayed underneath the section title.
- navbar (optional): A couple of words used to label this section in the navbar. If omitted, this section of vignettes will not appear in the navbar.
- contents (required): a list of article names to include in the section. This can either be names of individual vignettes or a call to starts\_with(). The name of a vignette includes its path under vignettes without extension so that the name of the vignette found at vignettes/pizza/slice. Rmd is pizza/slice.

The title and description of individual vignettes displayed on the index comes from title and description fields of the YAML header in the Rmds.

For example, this yaml might be used for some version of dplyr:

# articles: - title: Main verbs navbar: ~ contents: - one-table - two-table

rowwisecolwise

```
title: Developerdesc: Vignettes aimed at package developerscontents:programmingpackages
```

Note the use of the navbar fields. navbar: ~ means that the "Main verbs" will appear in the navbar without a heading; the absence of the navbar field in the developer vignettes means that they will only be accessible via the articles index.

The navbar will include a link to the articles index if one or more vignettes are not available through the navbar. If some vignettes appear in the navbar drop-down list and others do not, the list will automatically include a "More ..." link at the bottom; if no vignettes appear in the the navbar, it will link directly to the articles index instead of providing a drop-down.

# Get started:

Note that a vignette with the same name as the package (e.g., vignettes/pkgdown.Rmd or vignettes/articles/pkgdown automatically becomes a top-level "Get started" link, and will not appear in the articles drop-down.

(If your package name includes a., e.g. pack.down, use a - in the vignette name, e.g. pack-down.Rmd.)

### Missing articles:

pkgdown will warn if there are (non-internal) articles that aren't listed in the articles index. You can suppress such warnings by listing the affected articles in a section with title: internal (case sensitive); this section will not be displayed on the index page.

### **External articles:**

You can link to arbitrary additional articles by adding an external-articles entry to \_pkgdown.yml. It should contain an array of objects with fields name, title, href, and description.

```
external-articles:
- name: subsampling
  title: Subsampling for Class Imbalances
  description: Improve model performance in imbalanced data sets through undersampling or oversampling
```

href: https://www.tidymodels.org/learn/models/sub-sampling/

If you've defined a custom articles index, you'll need to include the name in one of the contents fields.

### **External files**

pkgdown differs from base R in its handling of external files. When building vignettes, R assumes that vignettes are self-contained (a reasonable assumption when most vignettes were PDFs) and only copies files explicitly listed in .install\_extras. pkgdown takes a different approach based on rmarkdown::find\_external\_resources(), and it will also copy any images that you link to. If for some reason the automatic detection doesn't work, you will need to add a resource\_files field to the yaml metadata, e.g.:

title: My Document

```
resource_files:
    - data/mydata.csv
    - images/figure.png
---
```

Note that you can not use the fig.path to change the output directory of generated figures as its default value is a strong assumption of rmarkdown.

# **Embedding Shiny apps**

If you would like to embed a Shiny app into an article, the app will have to be hosted independently, (e.g. https://www.shinyapps.io). Then, you can embed the app into your article using an <iframe>, e.g. <iframe src = "https://gallery.shinyapps.io/083-front-page" class="shiny-app">.

See https://github.com/r-lib/pkgdown/issues/838#issuecomment-430473856 for some hints on how to customise the appearance with CSS.

# **Output formats**

By default, pkgdown builds all articles using the <code>rmarkdown::html\_document()</code> output format, ignoring whatever is set in your YAML metadata. This is necessary because pkgdown has to integrate the HTML/CSS/JS from the vignette with the HTML/CSS/JS from rest of the site. Because of the challenges of combining two sources of HTML/CSS/JS, there is limited support for other output formats and you have to opt-in by setting the <code>as\_is</code> field in your <code>.Rmd</code> metadata:

```
pkgdown:
   as_is: true
```

If the output format produces a PDF, you'll also need to specify the extension field:

```
pkgdown:
   as_is: true
   extension: pdf
```

To work with pkgdown, the output format must accept template, theme, and self\_contained arguments, and must work without any additional CSS or JSS files. Note that if you use \_output.yml or \_site.yml you'll still need to add as\_is: true to each individual vignette.

Additionally, htmlwidgets do not work when as\_is: true.

# **Suppressing vignettes**

If you want articles that are not vignettes, use usethis::use\_article() to create it. An articles link will be automatically added to the default navbar if the vignettes directory is present: if you do not want this, you will need to customise the navbar. See build\_site() details.

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# **Figures**

You can control the default rendering of figures by specifying the figures field in \_pkgdown.yml. The default settings are equivalent to:

```
figures:
    dev: ragg::agg_png
    dpi: 96
    dev.args: []
    fig.ext: png
    fig.width: 7.2916667
    fig.height: ~
    fig.retina: 2
    fig.asp: 1.618
    bg: NA
    other.parameters: []
```

Most of these parameters are interpreted similarly to knitr chunk options. other parameters is a list of parameters that will be available to custom graphics output devices such as HTML widgets.

### See Also

Other site components: build\_home(), build\_news(), build\_reference(), build\_tutorials()

build\_favicons

Initialise favicons from package logo

# **Description**

This function auto-detects the location of your package logo (with the name logo.svg (recommended format) or logo.png, created with usethis::use\_logo()) and runs it through the https://realfavicongenerator.net API to build a complete set of favicons with different sizes, as needed for modern web usage.

You only need to run the function once. The favicon set will be stored in pkgdown/favicon and copied by init\_site() to the relevant location when the website is rebuilt.

Once complete, you should add pkgdown/ to .Rbuildignore to avoid a NOTE during package checking. (usethis::use\_logo() does this for you!)

# Usage

```
build_favicons(pkg = ".", overwrite = FALSE)
```

# **Arguments**

pkg Path to package.

overwrite If TRUE, re-create favicons from package logo.

|--|

# **Description**

build\_home() function generates pages at the top-level of the site including:

- The home page
- HTML files from any .md files in ./ or .github/.
- The authors page (from DESCRIPTION)
- The citation page (from inst/CITATION, if present).
- The license page
- A default 404 page if .github/404.md is not found.

build\_home\_index() rebuilds just the index page; it's useful for rapidly iterating when experimenting with site styles.

# Usage

```
build_home(pkg = ".", override = list(), preview = FALSE, quiet = TRUE)
build_home_index(pkg = ".", override = list(), quiet = TRUE)
```

### **Arguments**

pkg	Path to package.
override	An optional named list used to temporarily override values in _pkgdown.yml
preview	If TRUE, or is.na(preview) && interactive(), will preview freshly generated section in browser.
quiet	Set to FALSE to display output of knitr and pandoc. This is useful when debugging.

# Home page

The main content of the home page (index.html) is generated from pkgdown/index.md, index.md, or README.md, in that order. Most packages will use README.md because that's also displayed by GitHub and CRAN. Use index.md if you want your package website to look different to your README, and use pkgdown/index.md if you don't want that file to live in your package root directory.

If you use index.Rmd or README.Rmd it's your responsibility to knit the document to create the corresponding .md. pkgdown does not do this for you because it only touches files in the doc/directory.

Extra markdown files in the base directory (e.g. ROADMAP.md) or in .github/ (e.g. CODE\_OF\_CONDUCT.md) are copied by build\_home() to docs/ and converted to HTML.

The home page also features a sidebar with information extracted from the package. You can tweak it via the configuration file, to help make the home page an as informative as possible landing page.

### **Images and figures:**

If you want to include images in your README.md, they must be stored somewhere in the package so that they can be displayed on the CRAN website. The best place to put them is man/figures. If you are generating figures with R Markdown, make sure you set up fig.path as followed:

```
knitr::opts_chunk$set(
  fig.path = "man/figures/"
)
This should usually go in a chunk with include = FALSE.
```{r chunk-name, include=FALSE}`r ''`
knitr::opts_chunk$set(
  fig.path = "man/figures/"
)
```

### Package logo:

If you have a package logo, you can include it at the top of your README in a level-one heading:

```
# pkgdown <img src="man/figures/logo.png" align="right" />
```

init\_site() will also automatically create a favicon set from your package logo.

# YAML config - title and description:

By default, the page title and description are extracted automatically from the Title and Description fields DESCRIPTION (stripping single quotes off quoted words). CRAN ensures that these fields don't contain phrases like "R package" because that's obvious on CRAN. To make your package more findable on search engines, it's good practice to override the title and description, thinking about what people might search for:

```
home:
```

```
title: An R package for pool-noodle discovery
description: >
  Do you love R? Do you love pool-noodles? If so, you might enjoy
  using this package to automatically discover and add pool-noodles
  to your growing collection.
```

(Note the use of YAML's > i.e. "YAML pipes"; this is a convenient way of writing paragraphs of text.)

### Dev badges:

pkgdown identifies badges in three ways:

- Any image-containing links between <!-- badges: start --> and <!-- badges: end -->, as e.g. created by usethis::use\_readme\_md() or usethis::use\_readme\_rmd(). There should always be an empty line after the <!-- badges: end --> line. If you divide badges into paragraphs, make sure to add an empty line before the <!-- badges: end --> line.
- Any image-containing links within <div id="badges"></div>.
- Within the first paragraph, if it only contains image-containing links.

Identified badges are **removed** from the *main content*. They are shown or not in the *sidebar* depending on the development mode and sidebar customization, see the sidebar section.

### **Authors**

By default, pkgdown will display author information in three places:

- · the sidebar,
- the left part side of the footer,
- the author page.

This documentation describes how to customise the overall author display. See ?build\_home and ?build\_site for details about changing the location of the authors information within the home sidebar and the site footer.

### Authors ORCID, ROR and bio:

Author ORCID identification numbers in the DESCRIPTION are linked using the ORCID logo, author ROR identification numbers are linked using the ROR logo:

```
Authors@R: c(
    person("Hadley", "Wickham", , "hadley@rstudio.com", role = c("aut", "cre"),
        comment = c(ORCID = "0000-0003-4757-117X")
    ),
    person("Jay", "Hesselberth", role = "aut",
        comment = c(ORCID = "0000-0002-6299-179X")
    ),
    person("Posit Software, PBC", role = c("cph", "fnd"),
        comment = c(ROR = "03wc8by49"))
)
```

If you want to add more details about authors or their involvement with the package, you can use the comment field, which will be rendered on the authors page.

```
Authors@R: c(
   person("Hadley", "Wickham", , "hadley@rstudio.com", role = c("aut", "cre"),
        comment = c(ORCID = "0000-0003-4757-117X", "Indenter-in-chief")
   ),
   person("Jay", "Hesselberth", role = "aut",
        comment = c(ORCID = "0000-0002-6299-179X")
   )
)
```

### Additional control via YAML:

You can control additional aspects of the authors display via the authors YAML field:

- display of each author in the footer, sidebar and authors page,
- which authors (by role) are displayed in the sidebar and footer,
- text before authors in the footer,
- text before and after authors in the sidebar,
- text before and after authors on the authors page.

You can modify how each author's name is displayed by adding a subsection for authors. Each entry in authors should be named the author's name (matching DESCRIPTION) and can contain href and/or html fields:

- If href is provided, the author's name will be linked to this URL.
- If html is provided, it will be shown instead of the author's name. This is particularly useful if you want to display the logo of a corporate sponsor. Use an absolute URL to an image, not a relative link. Use an empty alternative text rather than no alternative text so a screen-reader would skip over it.

```
authors:
```

```
firstname lastname:
  href: "http://name-website.com"
  html: "<img src='https://website.com/name-picture.png' width=72 alt=''>"
```

By default, the "developers" list shown in the sidebar and footer is populated by the maintainer ("cre"), authors ("aut"), and funder ("fnd") from the DESCRIPTION. You could choose other roles for filtering. With the configuration below:

- only the maintainer and funder(s) appear in the footer, after the text "Crafted by",
- all authors and contributors appear in the sidebar,
- the authors list on the sidebar is preceded and followed by some text,
- the authors list on the authors page is preceded and followed by some text.

```
authors:
```

```
footer:
    roles: [cre, fnd]
    text: "Crafted by"
sidebar:
    roles: [aut, ctb]
    before: "So *who* does the work?"
    after: "Thanks all!"
before: "This package is proudly brought to you by:"
after: "See the [changelog](news/index.html) for other contributors. :pray:"
```

If you want to filter authors based on something else than their roles, consider using a custom sidebar/footer component (see ?build\_home/?build\_site, respectively).

### Sidebar

You can customise the homepage sidebar with the home.sidebar field. It's made up of two pieces: structure, which defines the overall layout, and components, which defines what each piece looks like. This organisation makes it easy to mix and match the pkgdown defaults with your own customisations.

This is the default structure:

```
home:
```

```
sidebar:
  structure: [links, license, community, citation, authors, dev]
```

These are drawn from seven built-in components:

 links: automated links generated from URL and BugReports fields from DESCRIPTION plus manual links from the home.links field:

```
home:
  links:
    text: Link text
    href: https://website.com
    text: Roadmap
    href: /roadmap.html
```

- license: Licensing information if LICENSE/LICENCE or LICENSE.md/LICENCE.md files are present.
- community: links to to .github/CONTRIBUTING.md, .github/CODE\_OF\_CONDUCT.md, etc.
- citation: link to package citation information. Uses either inst/CITATION or, if absent, information from the DESCRIPTION.
- authors: selected authors from the DESCRIPTION.
- dev: development status badges extracted from README.md/index.md. This is only shown for "development" versions of websites; see "Development mode" in ?build\_site for details.
- toc: a table of contents for the README (not shown by default).

You can also add your own components, where text is markdown text:

```
home:
    sidebar:
    structure: [authors, custom, toc, dev]
    components:
        custom:
        title: Funding
        text: We are *grateful* for funding!
```

Alternatively, you can provide a ready-made sidebar HTML:

```
home:
    sidebar:
    html: path-to-sidebar.html

Or completely remove it:
home:
```

sidebar: FALSE

### See Also

Other site components: build\_articles(), build\_news(), build\_reference(), build\_tutorials()

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uild_news Build news section
------------------------------

# **Description**

A NEWS.md will be broken up into versions using level one (#) or level two headings (##) that (partially) match one of the following forms (ignoring case):

```
• {package name} 1.3.0
```

- {package name} v1.3.0
- Version 1.3.0
- Changes in 1.3.0
- Changes in v1.3.0

# Usage

```
build_news(pkg = ".", override = list(), preview = FALSE)
```

# **Arguments**

pkg Path to package.

override An optional named list used to temporarily override values in \_pkgdown.yml preview If TRUE, or is.na(preview) && interactive(), will preview freshly generated

section in browser.

### **Details**

A common structure for news files is to use a top level heading for each release, and use a second level heading to break up individual bullets into sections.

```
# foofy 1.0.0
```

## Major changes

\* Can now work with all grooveable grobbles!

## Minor improvements and bug fixes

- \* Printing scrobbles no longer errors (@githubusername, #100)
- \* Wibbles are now 55% less jibbly (#200)

Issues and contributors will be automatically linked to the corresponding pages on GitHub if the GitHub repo can be discovered from the DESCRIPTION (typically from a URL entry containing github.com)

If a version is available on CRAN, the release date will automatically be added to the heading (see below for how to suppress); if not available on CRAN, "Unreleased" will be added.

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### YAML config

To automatically link to release announcements, include a releases section.

```
news:
    releases:
    text: "usethis 1.3.0"
    href: https://www.tidyverse.org/articles/2018/02/usethis-1-3-0/
    text: "usethis 1.0.0 (and 1.1.0)"
    href: https://www.tidyverse.org/articles/2017/11/usethis-1.0.0/
```

Control whether news is present on one page or multiple pages with the one\_page field. The default is true.

```
news:
   one_page: false
```

Suppress the default addition of CRAN release dates with:

```
news:
    cran_dates: false
```

### See Also

### Tidyverse style for News

Other site components: build\_articles(), build\_home(), build\_reference(), build\_tutorials()

build\_redirects

Build redirects

# **Description**

If you change the structure of your documentation (by renaming vignettes or help topics) you can setup redirects from the old content to the new content. One or several now-absent pages can be redirected to a new page (or to a new section of a new page). This works by creating a html page that performs a "meta refresh", which isn't the best way of doing a redirect but works everywhere that you might deploy your site.

The syntax is the following, with old paths on the left, and new paths or URLs on the right.

### redirects:

- ["articles/old-vignette-name.html", "articles/new-vignette-name.html"]
- ["articles/another-old-vignette-name.html", "articles/new-vignette-name.html"]
- ["articles/yet-another-old-vignette-name.html", "https://pkgdown.r-lib.org/dev"]

If for some reason you choose to redirect an existing page make sure to exclude it from the search index, see ?build\_search.

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# Usage

```
build_redirects(pkg = ".", override = list())
```

# **Arguments**

pkg Path to package.

override An optional named list used to temporarily override values in \_pkgdown.yml

build\_reference Build reference section

# **Description**

By default, pkgdown will generate an index that lists all functions in alphabetical order. To override this, provide a reference section in your \_pkgdown.yml as described below.

# Usage

```
build_reference(
  pkg = ".",
  lazy = TRUE,
  examples = TRUE,
  run_dont_run = FALSE,
  seed = 1014L,
  override = list(),
  preview = FALSE,
  devel = TRUE,
  topics = NULL
)
build_reference_index(pkg = ".", override = list())
```

# **Arguments**

pkg	Path to package.

lazy If TRUE, only rebuild pages where the .Rd is more recent than the .html. This

makes it much easier to rapidly prototype. It is set to FALSE by build\_site().

examples Run examples?

run\_dont\_run Run examples that are surrounded in \dontrun?

seed Seed used to initialize random number generation in order to make article output

reproducible. An integer scalar or NULL for no seed.

override An optional named list used to temporarily override values in \_pkgdown.yml

preview If TRUE, or is.na(preview) && interactive(), will preview freshly generated

section in browser.

build\_reference

devel	Determines how code is loaded in order to run examples. If TRUE (the default),
	assumes you are in a live development environment, and loads source package
	with pkgload::load_all(). If FALSE, uses the installed version of the package.
topics	Build only specified topics. If supplied, sets lazy and preview to FALSE.

### Reference index

To tweak the index page, add a section called reference to \_pkgdown.yml. It can contain three different types of element:

- A **title** (title + desc), which generates an row containing an <h2> with optional paragraph description.
- A **subtitle** (subtitle + desc), which generates an row containing an <h3> with optional paragraph description.
- A **list of topics** (contents), which generates one row for each topic, with a list of aliases for the topic on the left, and the topic title on the right.

(For historical reasons you can include contents with a title or subtitle, but this is no longer recommended).

Most packages will only need to use title and contents components. For example, here's a snippet from the YAML that pkgdown uses to generate its own reference index:

```
reference:
- title: Build
  desc: Build a complete site or its individual section components.
- contents:
    - starts_with("build_")
- title: Templates
- contents:
    - template_navbar
    - render_page
```

Bigger packages, e.g. ggplot2, may need an additional layer of structure in order to clearly organise large number of functions:

```
reference:
- title: Layers
- subtitle: Geoms
  desc: Geom is short for geometric element
- contents:
  - starts_with("geom")
- subtitle: Stats
  desc: Statistical transformations transform data before display.
  contents:
  - starts_with("stat")
```

desc can use markdown, and if you have a long description it's a good idea to take advantage of the YAML > notation:

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desc: >

This is a very \_long\_ and \*\*overly\*\* flowery description of a single simple function. By using `>`, it's easy to write a description that runs over multiple lines.

### **Topic matching:**

contents can contain:

- Individual function/topic names.
- Weirdly named functions with doubled quoting, once for YAML and once for R, e.g. "'+.gg'".
- starts\_with("prefix") to select all functions with common prefix.
- ends\_with("suffix") to select all functions with common suffix.
- matches("regexp") for more complex regular expressions.
- has\_keyword("x") to select all topics with keyword "x"; has\_keyword("datasets") selects all data documentation.
- has\_concept("blah") to select all topics with concept "blah". If you are using roxygen2, has\_concept() also matches family tags, because roxygen2 converts them to concept tags.
- lacks\_concepts(c("concept1", "concept2")) to select all topics without those concepts. This is useful to capture topics not otherwise captured by has\_concepts().
- Topics from other installed packages, e.g. rlang::is\_installed() (function name) or sass::font\_face (topic name).
- has\_lifecycle("deprecated") will select all topics with lifecycle deprecated.

All functions (except for has\_keyword()) automatically exclude internal topics (i.e. those with \keyword{internal}). You can choose to include with (e.g.) starts\_with("build\_", internal = TRUE).

Use a leading - to remove topics from a section, e.g. -topic\_name, -starts\_with("foo"). pkgdown will check that all non-internal topics are included on the reference index page, and error if you have missed any.

# **Missing topics:**

pkgdown will warn if there are (non-internal) topics that not listed in the reference index. You can suppress these warnings by listing the topics in section with "title: internal" (case sensitive) which will not be displayed on the reference index.

### Icons

You can optionally supply an icon for each help topic. To do so, you'll need a top-level icons directory. This should contain .png files that are either 30x30 (for regular display) or 60x60 (if you want retina display). Icons are matched to topics by aliases.

# **Examples**

If you need to run extra code before or after all examples are run, you can create pkgdown/pre-reference.R and pkgdown/post-reference.R.

### **Figures**

You can control the default rendering of figures by specifying the figures field in \_pkgdown.yml. The default settings are equivalent to:

build\_search

```
figures:
    dev: ragg::agg_png
    dpi: 96
    dev.args: []
    fig.ext: png
    fig.width: 7.2916667
    fig.height: ~
    fig.retina: 2
    fig.asp: 1.618
    bg: NA
    other.parameters: []
```

Most of these parameters are interpreted similarly to knitr chunk options. other.parameters is a list of parameters that will be available to custom graphics output devices such as HTML widgets.

# See Also

Other site components: build\_articles(), build\_home(), build\_news(), build\_tutorials()

build\_search

Build search index

# Description

Generate a JSON search index from the built site. This is used by fuse.js to provide a javascript powered search for BS5 powered pkgdown sites.

NB: build\_search() is called automatically by build\_site(); you don't need call it yourself. This page documents how it works and its customisation options.

# Usage

```
build_search(pkg = ".", override = list())
```

## **Arguments**

pkg Path to package.

override An optional named list used to temporarily override values in \_pkgdown.yml

# YAML config

You can exclude some paths from the search index using search.exclude. Below we exclude the changelog from the search index:

```
search:
  exclude: ['news/index.html']
```

# Debugging and local testing

Locally (as opposed to on GitHub Pages or Netlify for instance), search won't work if you simply use pkgdown preview of the static files. You can use servr::httw("docs") instead.

If search is not working, run pkgdown::pkgdown\_sitrep() to eliminate common issues such as the absence of URL in the pkgdown configuration file of your package.

build\_site

Build a complete pkgdown website

# **Description**

build\_site() is a convenient wrapper around six functions:

- init\_site()
- build\_home()
- build\_reference()
- build\_articles()
- build\_tutorials()
- build\_news()
- build\_redirects()

See the documentation for the each function to learn how to control that aspect of the site. This page documents options that affect the whole site.

# Usage

```
build_site(
   pkg = ".",
   examples = TRUE,
   run_dont_run = FALSE,
   seed = 1014L,
   lazy = FALSE,
   override = list(),
   preview = NA,
   devel = FALSE,
   new_process = !devel,
   install = !devel
)
```

# Arguments

```
pkg Path to package.

examples Run examples?

run_dont_run Run examples that are surrounded in \dontrun?
```

Seed used to initialize random number generation in order to make article output reproducible. An integer scalar or NULL for no seed.

If TRUE, will only rebuild articles and reference pages if the source is newer than

the destination.

override An optional named list used to temporarily override values in \_pkgdown.yml

preview If TRUE, or is.na(preview) && interactive(), will preview freshly generated

section in browser.

devel Use development or deployment process?

If TRUE, uses lighter-weight process suitable for rapid iteration; it will run examples and vignettes in the current process, and will load code with pkgload::load\_all().

If FALSE, will first install the package to a temporary library, and will run all

examples and vignettes in a new process.

build\_site() defaults to devel = FALSE so that you get high fidelity outputs when you building the complete site; build\_reference(), build\_home() and friends default to devel = TRUE so that you can rapidly iterate during develop-

ment.

new\_process If TRUE, will run build\_site() in a separate process. This enhances repro-

ducibility by ensuring nothing that you have loaded in the current process affects

the build process.

install If TRUE, will install the package in a temporary library so it is available for

vignettes.

# General config

lazy

• destination controls where the site will be generated, defaulting to docs/. Paths are relative to the package root.

• url is optional, but strongly recommended.

url: https://pkgdown.r-lib.org

It specifies where the site will be published and is used to allow other pkgdown sites to link to your site when needed (vignette("linking")), generate a sitemap.xml, automatically generate a CNAME when deploying to github, generate the metadata needed rich social "media cards" (vignette("metadata")), and more.

• title overrides the default site title, which is the package name. It's used in the page title and default navbar.

### Navbar and footer

The navbar and footer fields control the appearance of the navbar footer which appear on every page. Learn more about these fields in vignette("customise").

## **Development mode**

The development field allows you to generate different sites for the development and released versions of your package. To use it, you first need to set the development mode:

```
development:
  mode: auto
```

# **Setting development mode:**

The development mode of a site controls where the built site is placed and how it is styled (i.e. the colour of the package version in the navbar, the version tooltip), and whether or not the site is indexed by search engines. There are four possible modes:

• automatic (mode: auto): determines the mode based on the version:

```
- 0.0.0.9000 (0.0.0.*): unreleased.
```

- four version components: development.
- everything else -> release.
- release (mode: release), the default. Site is written to docs/ and styled like a released package, even if the content is for an unreleased or development version. Version in navbar gets the default colouring. Development badges are not shown in the sidebar (see ?build\_home).
- **development** (mode: devel). Site is written to docs/dev/. The navbar version gets a "danger" class and a tooltip stating these are docs for an in-development version of the package. The noindex meta tag is used to ensure that these packages are not indexed by search engines. Development badges are shown in the sidebar (see ?build\_home).
- unreleased (mode: unreleased). Site is written to docs/. Version in navbar gets the "danger" class, and a message indicating the package is not yet on CRAN. Development badges are shown in the sidebar (see ?build\_home).

Use mode: auto if you want both a released and a dev site, and mode: release if you just want a single site. It is very rare that you will need either devel or unreleased modes.

You can override the mode specified in the \_pkgdown.yml by setting by setting PKGDOWN\_DEV\_MODE to devel or release.

### **Selective HTML:**

You can selectively show HTML only on the devel or release site by adding class pkgdown-devel or pkgdown-release. This is most easily accessed from .Rmd files where you can use pandoc's <div> syntax to control where a block of markdown will display. For example, you can use the following markdown in your README to only show GitHub install instructions on the development version of your site:

```
::: {.pkgdown-devel}
You can install the development version of pkgdown from GitHub with:
   remotes::install_github("r-lib/pkgdown")`
:::
```

You can use a similar technique to control where badges are displayed. This markdown show the CRAN status badge on the site for the released package and the GitHub check status for the development package:

```
[![CRAN Status](https://www.r-pkg.org/badges/version/pkgdown)]
  (https://cran.r-project.org/package=pkgdown){.pkgdown-release}
[![R-CMD-check](https://github.com/r-lib/pkgdown/workflows/R-CMD-check/badge.svg)]
  (https://github.com/r-lib/pkgdown/actions){.pkgdown-devel}
```

# Other options:

There are three other options that you can control:

```
development:
   destination: dev
   version_label: danger
   version_tooltip: "Custom message here"
```

destination allows you to override the default subdirectory used for the development site; it defaults to dev/. version\_label allows you to override the style used for development (and unreleased) versions of the package. It defaults to "danger", but you can set to "default", "info", or "warning" instead. (The precise colours are determined by your bootstrap theme, but become progressively more eye catching as you go from default to danger). Finally, you can choose to override the default tooltip with version\_tooltip.

# **Template**

The template field is mostly used to control the appearance of the site. See vignette("customise") for details. But it's also used to control

### Other aspects:

There are a few other template fields that control other aspects of the site:

• noindex: true will suppress indexing of your pages by search engines:

```
template:
  params:
  noindex: true
```

• google\_site\_verification allows you to verify your site with google:

```
template:
  params:
    google_site_verification: _nn6ile-a6x6lctOW
```

• trailing\_slash\_redirect: true will automatically redirect your-package-url.com to your-package-url.com/, using a JS script added to the <head> of the home page. This is useful in certain redirect scenarios.

```
template:
   trailing_slash_redirect: true
```

# **Analytics:**

To capture usage of your site with a web analytics tool, you can make use of the includes field to add the special HTML they need. This HTML is typically placed in\_header (actually in the <head>), before\_body, or after\_body. You can learn more about how includes work in pkg-down at https://pkgdown.r-lib.org/articles/customise.html#additional-html-and-files.

I include a few examples of popular analytics platforms below, but we recommend getting the HTML directly from the tool:

• plausible.io:

```
template:
   includes:
   in_header: |
     <script defer data-domain="{YOUR DOMAIN}" src="https://plausible.io/js/plausible.js"></scri</pre>
```

• Google analytics:

```
template:
   includes:
      in_header: |
         <!-- Global site tag (gtag.js) - Google Analytics -->
      <script async src="https://www.googletagmanager.com/gtag/js?id={YOUR MEASUREMENT ID}" ></sc</pre>
           window.dataLayer = window.dataLayer || [];
           function gtag(){dataLayer.push(arguments);}
           gtag('js', new Date());
           gtag('config', '{YOUR MEASUREMENT ID}');
         </script>
         <!-- Google tag (gtag.js) -->
GoatCounter:
 template:
   includes:
     after_body: >
     <script data-goatcounter="https://{YOUR CODE}.goatcounter.com/count" data-goatcounter-setti</pre>
```

# Source repository

Use the repo field to override pkgdown's automatically discovery of your source repository. This is used in the navbar, on the homepage, in articles and reference topics, and in the changelog (to link to issue numbers and user names). pkgdown can automatically figure out the necessary URLs if you link to a GitHub, GitLab or Codeberg repo in your BugReports or URL field.

Otherwise, you can supply your own in the repo field:

```
repo:
    url:
    home: https://github.com/r-lib/pkgdown/
    source: https://github.com/r-lib/pkgdown/blob/HEAD/
    issue: https://github.com/r-lib/pkgdown/issues/
    user: https://github.com/
```

- home: path to package home on source code repository.
- source: path to source of individual file in default branch (more on that below).
- issue: path to individual issue.
- user: path to user.

The varying components (e.g. path, issue number, user name) are pasted on the end of these URLs so they should have trailing /s.

When creating the link to a package source, we have to link to a specific branch. The default behaviour is to use current branch when in GitHub actions and HEAD otherwise. You can overide this default with repo.branch:

```
repo:
branch: devel
```

pkgdown can automatically link to Jira issues as well if specify both a custom issue URL as well Jira project names to auto-link in jira\_projects. You can specify as many projects as you would like:

```
repo:
    jira_projects: [this_project, another_project]
    url:
     issue: https://jira.organisation.com/jira/browse/
```

# **Deployment** (deploy)

There is a single deploy field

• install\_metadata allows you to install package index metadata into the package itself. Normally this metadata is made available on the published site; installing it into your package means that it's available for autolinking even if your website is not reachable at build time (e.g. because behind a firewall or requires auth).

```
deploy:
  install_metadata: true
```

### **Examples**

```
## Not run:
build_site()
build_site(override = list(destination = tempdir()))
## End(Not run)
```

```
build_site_github_pages
```

Build site for GitHub pages

# **Description**

Designed to be run as part of automated workflows for deploying to GitHub pages. It cleans out the old site, builds the site into dest\_dir adds a .nojekyll file to suppress rendering by Jekyll, and adds a CNAME file if needed.

It is designed to be run in CI, so by default it:

- Cleans out the old site.
- Does not install the package.
- Runs build\_site() in process.

build\_tutorials 25

# Usage

```
build_site_github_pages(
   pkg = ".",
   ...,
   dest_dir = "docs",
   clean = TRUE,
   install = FALSE,
   new_process = FALSE
)
```

# **Arguments**

pkg Path to package.

... Additional arguments passed to build\_site().

dest\_dir Directory to build site in.
clean Clean all files from old site.

install If TRUE, will install the package in a temporary library so it is available for

vignettes.

new\_process If TRUE, will run build\_site() in a separate process. This enhances repro-

ducibility by ensuring nothing that you have loaded in the current process affects

the build process.

build\_tutorials Build tutorials section

# Description

learnr tutorials must be hosted elsewhere as they require an R execution engine. Currently, pkgdown will not build or publish tutorials for you, but makes it easy to embed (using <iframe>s) published tutorials. Tutorials are automatically discovered from published tutorials in inst/tutorials and vignettes/tutorials. Alternatively, you can list in \_pkgdown.yml as described below.

# Usage

```
build_tutorials(pkg = ".", override = list(), preview = FALSE)
```

# **Arguments**

pkg Path to package.

override An optional named list used to temporarily override values in \_pkgdown.yml preview If TRUE, or is.na(preview) && interactive(), will preview freshly generated

section in browser.

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# YAML config

To override the default discovery process, you can provide a tutorials section. This should be a list where each element specifies:

- name: used for the generated file name
- title: used in page heading and in navbar
- url: which will be embedded in an iframe
- source: optional, but if present will be linked to

### tutorials:

```
    name: 00-setup
        title: Setting up R
        url: https://jjallaire.shinyapps.io/learnr-tutorial-00-setup/
        name: 01-data-basics
        title: Data basics
        url: https://jjallaire.shinyapps.io/learnr-tutorial-01-data-basics/
```

# See Also

Other site components: build\_articles(), build\_home(), build\_news(), build\_reference()

check\_pkgdown

Check \_pkgdown.yml

# **Description**

This pair of functions checks that your \_pkgdown.yml is valid without building the whole site. check\_pkgdown() errors at the first problem; pkgdown\_sitrep() reports the status of all checks.

Currently they check that:

- There's a url in the pkgdown configuration, which is also recorded in the URL field of the DESCRIPTION.
- All opengraph metadata is valid.
- All reference topics are included in the index.
- All articles/vignettes are included in the index.

# Usage

```
check_pkgdown(pkg = ".")
pkgdown_sitrep(pkg = ".")
```

# **Arguments**

pkg

Path to package.

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clean\_site

Clean site

# Description

Delete all files in docs/ (except for CNAME).

Delete all files in the pkgdown cache directory.

# Usage

```
clean_site(pkg = ".", quiet = FALSE, force = FALSE)
clean_cache(pkg = ".", quiet = FALSE)
```

# **Arguments**

pkg Path to package.

quiet If TRUE, suppresses a message.

force If TRUE, delete contents of docs even if it is not a pkgdown site.

deploy\_to\_branch

Build and deploy a site locally

# Description

Assumes that you're in a git clone of the project, and the package is already installed. Use usethis::use\_pkgdown\_github\_r to automate this process using GitHub actions.

# Usage

```
deploy_to_branch(
   pkg = ".",
   commit_message = construct_commit_message(pkg),
   clean = TRUE,
   branch = "gh-pages",
   remote = "origin",
   github_pages = (branch == "gh-pages"),
   ...,
   subdir = NULL
)
```

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### **Arguments**

pkg Path to package.

commit\_message The commit message to be used for the commit.

clean Clean all files from old site.
branch The git branch to deploy to
remote The git remote to deploy to

github\_pages Is this a GitHub pages deploy. If TRUE, adds a CNAME file for custom domain

name support, and a .nojekyll file to suppress jekyll rendering.

... Additional arguments passed to build\_site().

subdir The sub-directory where the site should be built on the branch. This argu-

ment can be used to support a number of site configurations. For example, you could build version-specific documentation by setting subdir = "v1.2.3"; deploy\_to\_branch() will build and deploy the package documentation in the

v.1.2.3/ directory of your site.

init\_site

Initialise site infrastructure

# **Description**

init\_site():

- creates the output directory (docs/),
- generates a machine readable description of the site, used for autolinking,
- copies CSS/JS assets and extra files, and
- runs build\_favicons(), if needed.

Typically, you will not need to call this function directly, as all build\_\*() functions will run init\_site() if needed.

The only good reasons to call init\_site() directly are the following:

- If you add or modify a package logo.
- If you add or modify pkgdown/extra.scss.
- If you modify template.bslib variables in \_pkgdown.yml.

See vignette("customise") for the various ways you can customise the display of your site.

### Usage

```
init_site(pkg = ".", override = list())
```

# **Arguments**

pkg Path to package.

override An optional named list used to temporarily override values in \_pkgdown.yml

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# **Build-ignored files**

We recommend using usethis::use\_pkgdown\_github\_pages() to build-ignore docs/ and \_pkgdown.yml. If use another directory, or create the site manually, you'll need to add them to .Rbuildignore yourself. A NOTE about an unexpected file during R CMD CHECK is an indication you have not correctly ignored these files.

in\_pkgdown

Determine if code is executed by pkgdown

# Description

This is occasionally useful when you need different behaviour by pkgdown and regular documentation.

# Usage

```
in_pkgdown()
```

# **Examples**

in\_pkgdown()

preview\_site

Open site in browser

# **Description**

preview\_site() opens your pkgdown site in your browser. pkgdown has been carefully designed to work even when served from the file system like this; the only part that doesn't work is search. You can use servr::httw("docs/") to create a server to make search work locally.

# Usage

```
preview_site(pkg = ".", path = ".", preview = TRUE)
```

# **Arguments**

pkg Path to package.

path Path relative to destination

preview If TRUE, or is.na(preview) && interactive(), will preview freshly generated

section in browser.

render\_page

rd2html

Translate an Rd string to its HTML output

# **Description**

Translate an Rd string to its HTML output

# Usage

```
rd2html(x, fragment = TRUE, ...)
```

# Arguments

x Rd string. Backslashes must be double-escaped ("\\").

fragment logical indicating whether this represents a complete Rd file

... additional arguments for as\_html

# **Examples**

```
rd2html("a\n%b\nc")
rd2html("a & b")
rd2html("\\strong{\\emph{x}}")
```

render\_page

Render page with template

# **Description**

Each page is composed of four templates: "head", "header", "content", and "footer". Each of these templates is rendered using the data, and then assembled into an overall page using the "layout" template.

# Usage

```
render_page(pkg = ".", name, data, path, depth = NULL, quiet = FALSE)
data_template(pkg = ".", depth = 0L)
```

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# **Arguments**

pkg Path to package to document.

Name of the template (e.g. "home", "vignette", "news")

data Data for the template.

This is automatically supplemented with three lists:

• site: title and path to root.

• yaml: the template key from \_pkgdown.yml.

• package: package metadata including name andversion.

See the full contents by running data\_template().

path Location to create file; relative to destination directory.

depth Depth of path relative to base directory.

template\_navbar

Generate YAML templates

If quiet, will suppress output messages

# Description

quiet

Use these function to generate the default YAML that pkgdown uses for the different parts of \_pkgdown.yml. This are useful starting points if you want to customise your site.

# Usage

```
template_navbar(path = ".")
template_reference(path = ".")
template_articles(path = ".")
```

# Arguments

path Path to package root

# **Examples**

```
## Not run:
pkgdown::template_navbar()
## End(Not run)
## Not run:
pkgdown::template_reference()
## End(Not run)
```

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```
## Not run:
pkgdown::template_articles()
## End(Not run)
```

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