Package dissemination

Physalia course 2023

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Incentivize other people to use your package

Your computer:

```
myPackage/
      functions.R
     utils.R
   man/
      myfunction.Rd
   tests/
      testthat.R
      testthat/
        test-myfun.R
   inst/
      extdata/
        <raw-data-file>
   data/
      <data>.Rda
   vignettes/
     myPackage.Rmd
   DESCRIPTION
   NAMESPACE
   README.md
   NEWS
   LICENSE
```



Many computers:

```
myPackage/
     functions.R
     utils.R
   man/
     myfunction.Rd
   tests/
     testthat.R
     testthat/
        test-myfun.R
   inst/
      extdata/
        <raw-data-file>
   data/
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     myPackage.Rmd
   DESCRIPTION
   NAMESPACE
   README.md
   NEWS
   LICENSE
```

Incentivize other people to use your package

- By providing high-quality public resources
- By serving a polished documentation website for your package

Implement documentation website for your package

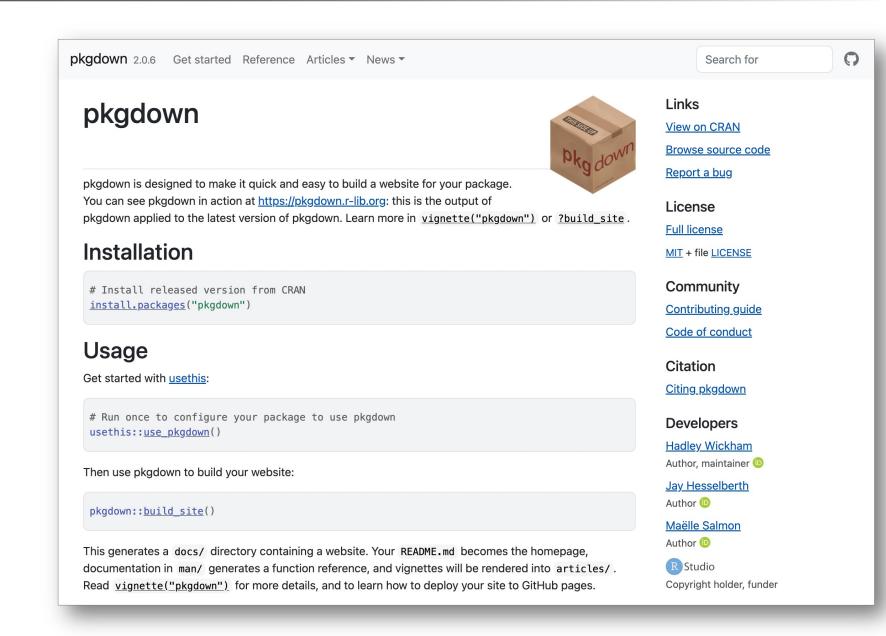
Once again, a package is available in R to help you!

pkgdown let's you easily create a documentation website.

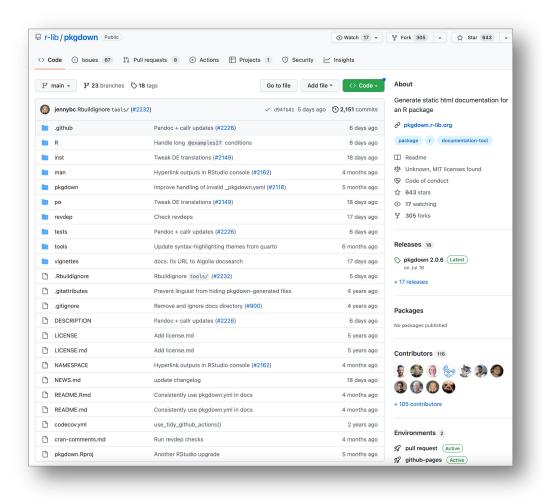
Implement documentation website for your package

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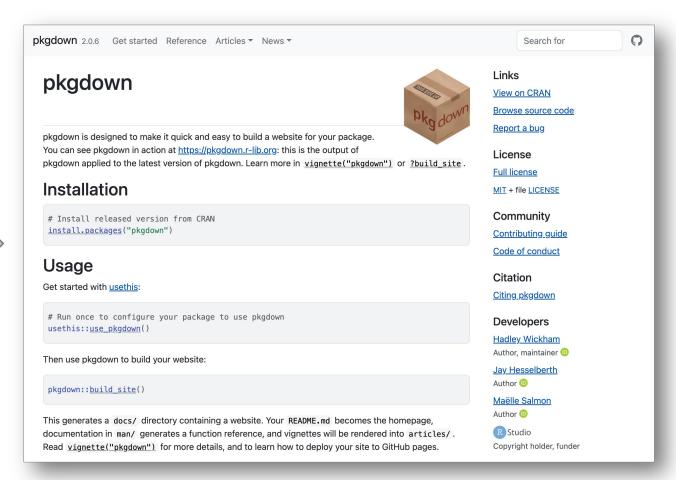
pkgdown let's you easily create a documentation website.



Implement documentation website for your package







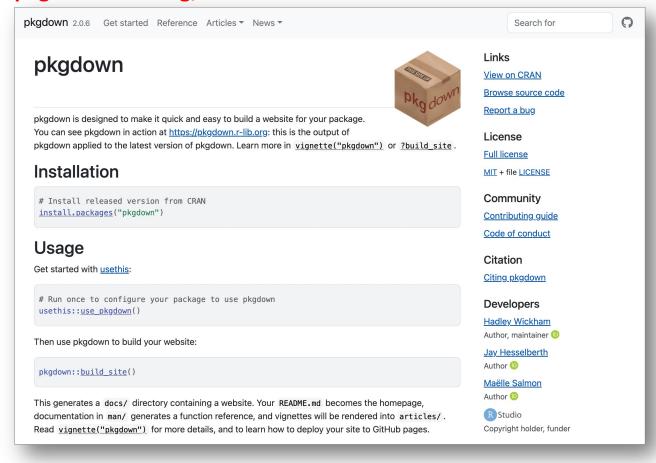
1. Parsing of R package files in html code

README.md

```
# pkqdown <imq src="man/figures/logo.png" align="right" alt="" width="120" />
<!-- badges: start -->
<a href="https://cran.r-project.org/package=pkgdown"</pre>
class="pkgdown-release"><img
src="https://www.r-pkg.org/badges/version/pkgdown"
alt="CRAN Status" /></a>
<a href="https://github.com/r-lib/pkgdown/actions"
class="pkgdown-devel"><img
src="https://github.com/r-lib/pkgdown/workflows/R-CMD-check/badge.svg"
alt="R-CMD-check" /></a> [![Codecov test
coverage](https://codecov.io/gh/r-lib/pkgdown/branch/main/graph/badge.svg)](htt
<!-- badges: end -->
pkgdown is designed to make it quick and easy to build a website for
your package. You can see pkgdown in action at
<https://pkgdown.r-lib.org>: this is the output of pkgdown applied to
the latest version of pkgdown. Learn more in `vignette("pkgdown")` or
`?build site`.
## Installation
<div class=".pkgdown-release">
# Install released version from CRAN
install.packages("pkgdown")
</div>
<div class=".pkgdown-devel">
# Install development version from GitHub
devtools::install_github("r-lib/pkgdown")
</div>
## Usage
Get started with [usethis](https://usethis.r-lib.org/):
# Run once to configure your package to use pkgdown
usethis::use_pkgdown()
Then use pkgdown to build your website:
pkgdown::build_site()
This generates a `docs/` directory containing a website. Your
`README.md` becomes the homepage, documentation in `man/` generates a
function reference, and vignettes will be rendered into `articles/`.
Read `vignette("pkqdown")` for more details, and to learn how to deploy
your site to GitHub pages.
```



pkgdown.r-lib.org/

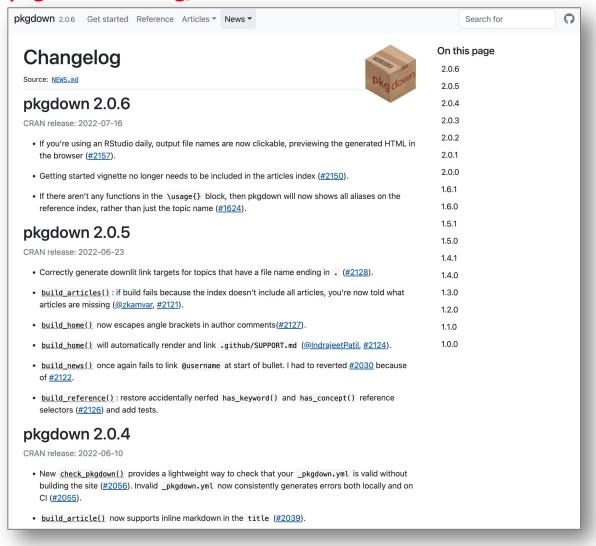


1. Parsing of R package files in html code

NEWS.md

```
# pkgdown (development version)
* Tweak German translation (@krlmlr, @mgirlich, #2149)
* Remove mention of (defunct) Twitter card validator, provide alternatives (@Bisaloo, #2185)
* Fix `keywords` typo in `check missing topics()` message (@swsoyee, #2178).
* Use jsdeliver CDN for bootstrap-toc (@GregorDeCillia, #2207).
# pkgdown 2.0.6
* If you're using an RStudio daily, output file names are now clickable,
  previewing the generated HTML in the browser (#2157).
* Getting started vignette no longer needs to be included in the articles index
* If there aren't any functions in the `\usage{}` block, then pkgdown will
  now shows all aliases on the reference index, rather than just the topic
  name (#1624).
# pkgdown 2.0.5
* Correctly generate downlit link targets for topics that have a file name
  ending in `.` (#2128).
* `build_articles()`: if build fails because the index doesn't include all
 articles, you're now told what articles are missing (@zkamvar, #2121).
* `build home()` now escapes angle brackets in author comments(#2127).
* `build_home()` will automatically render and link `.github/SUPPORT.md`
  (@IndrajeetPatil, #2124).
* `build_news()` once again fails to link `@username` at start of
  bullet. I had to reverted #2030 because of #2122.
* `build reference()`: restore accidentally nerfed `has keyword()` and
  `has concept()` reference selectors (#2126) and add tests.
# pkgdown 2.0.4
* New `check_pkgdown()` provides a lightweight way to check that your
  `pkgdown.yml` is valid without building the site (#2056). Invalid
  `_pkgdown.yml` now consistently generates errors both locally and on
* `build article()` now supports inline markdown in the `title` (#2039).
* `build_home()` no longer shows development status badges on the released
  version of the site (#2054).
* `build news()` support automated `@username` links in more places (#2030).
* `build reference()`:
    * You can once again exclude topics from the reference index with `-` (#2040).
   * Inline markdown in `title`s and `subtitle`s is now supported(#2039).
```

pkgdown.r-lib.org/news

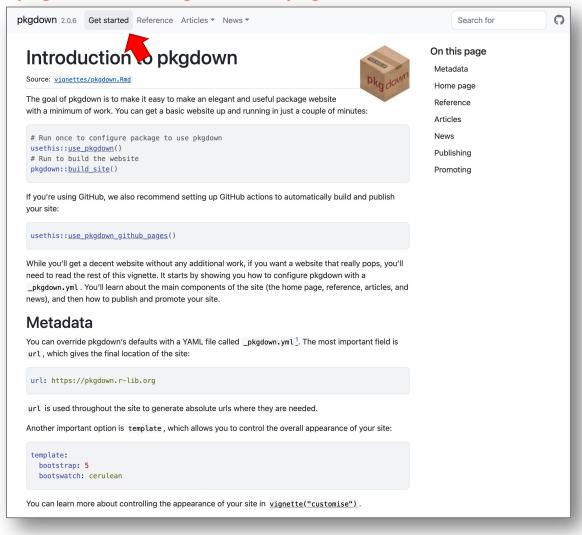


1. Parsing of R package files in html code

vignettes/pkgdown.Rmd

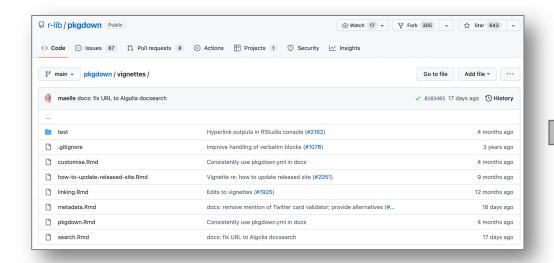
```
title: "Introduction to pkgdown'
description: >
 Learn how to get started with the basics of pkgdown.
output: rmarkdown::html vignette
vignette: >
 %\VignetteIndexEntry{Introduction to pkgdown}
 %\VignetteEngine{knitr::rmarkdown}
 %\VignetteEncoding{UTF-8}
The goal of pkgdown is to make it easy to make an elegant and useful package website with a minim
You can get a basic website up and running in just a couple of minutes:
```{r, eval = FALSE}
Run once to configure package to use pkgdown
usethis::use pkgdown()
Run to build the website
pkgdown::build_site()
If you're using GitHub, we also recommend setting up GitHub actions to automatically build and pu
 ```{r, eval = FALSE}
usethis::use pkgdown github pages()
While you'll get a decent website without any additional work, if you want a website that really
It starts by showing you how to configure pkgdown with a ` pkgdown.yml`.
You'll learn about the main components of the site (the home page, reference, articles, and news)
## Metadata
You can override pkgdown's defaults with a YAML file called `pkgdown.yml`[^1].
The most important field is `url`, which gives the final location of the site:
[^1]: You can also put it in `pkgdown/ pkgdown.yml` if you want to keep the package root clutter-
available when your package is installed.
``` yaml
url: https://pkgdown.r-lib.org
`url` is used throughout the site to generate absolute urls where they are needed.
Another important option is `template`, which allows you to control the overall appearance of you
``` yaml
template:
 bootstrap: 5
 bootswatch: cerulean
You can learn more about controlling the appearance of your site in `vignette("customise")`.
```

pkgdown.r-lib.org/articles/pkgdown.html



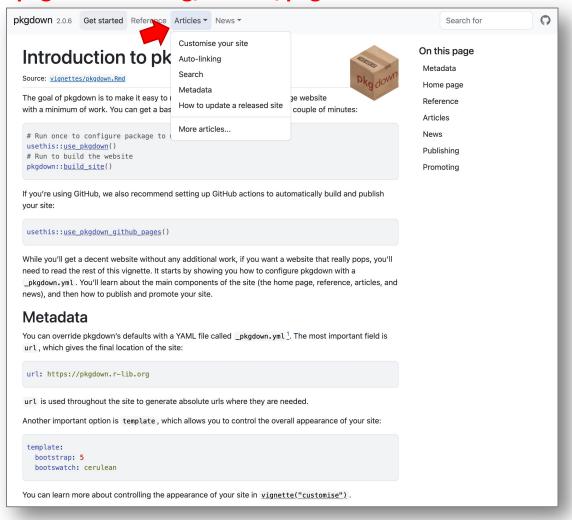
1. Parsing of R package files in html code



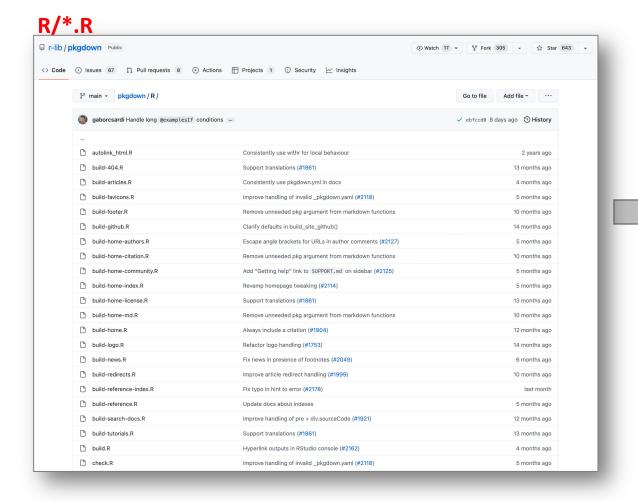




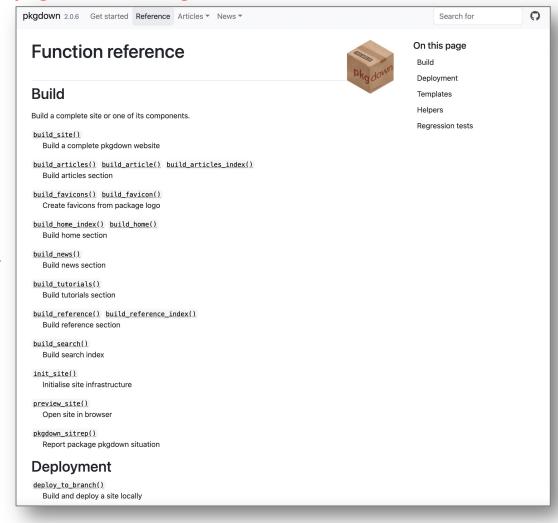
pkgdown.r-lib.org/articles/pkgdown.html



- 1. Parsing of R package files in html code
- 2. List each function and link to its documentation



pkgdown.r-lib.org/reference



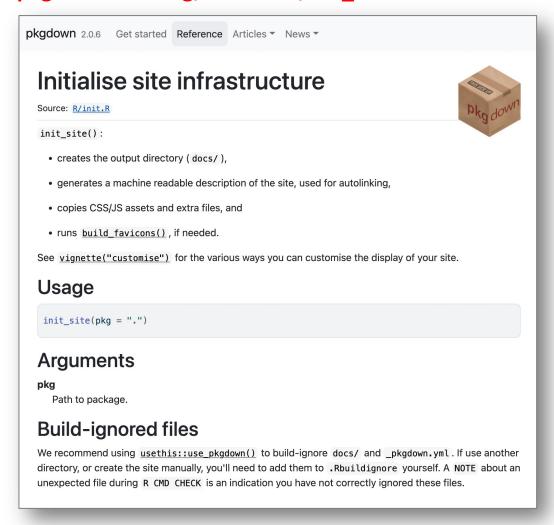
- 1. Parsing of R package files in html code
- List each function and link to its documentation

R/init.R

```
#' 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.
#' See `vignette("customise")` for the various ways you can customise the
#' display of your site.
#' @section Build-ignored files:
#' We recommend using [usethis::use pkgdown()] 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.
#' @inheritParams build_articles
#' @export
init_site <- function(pkg = ".") {</pre>
 pkg <- as_pkgdown(pkg)
  if (is non pkgdown site(pkg$dst path)) {
   stop(dst_path(pkg$dst_path), " is non-empty and not built by pkgdown", call. = FALSE)
  rule("Initialising site")
 dir create(pkg$dst path)
  copy_assets(pkg)
  if (pkg$bs version > 3) {
   build_bslib(pkg)
  if (has_logo(pkg) && !has_favicons(pkg)) {
   # Building favicons is expensive, so we hopefully only do it once.
   build favicons(pkg)
  copy favicons(pkg)
  copy_logo(pkg)
  build site meta(pkg)
  invisible()
```



pkgdown.r-lib.org/reference/init_site.html



- 1. Parsing of R package files in html code
- 2. List each function and link to its documentation
- 3. Auto-linking to useful resources

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  if (has logo(pkg) && !has favicons(pkg)) {
   # Building favicons is expensive, so we hopefully only do it once.
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  copy_favicons(pkg)
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- 1. Parsing of R package files in html code
- 2. List each function and link to its documentation
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usethis 2.1.6 Setup Reference Articles ▼ News ▼

Use pkgdown



Source: R/pkgdown.R

<u>pkgdown</u> makes it easy to turn your package into a beautiful website. usethis provides two functions to help you use pkgdown:

- use_pkgdown(): creates a pkgdown config file and adds relevant files or directories to .Rbuildignore and .gitignore.
- use_pkgdown_github_pages(): implements the GitHub setup needed to automatically publish your pkgdown site to GitHub pages:
- (first, it calls use_pkgdown())
- <u>use_github_pages()</u> prepares to publish the pkgdown site from the gh-pages branch
- <u>use_github_action("pkgdown")</u>, configures a GitHub Action to automatically build the pkgdown site and deploy it via GitHub Pages
- The pkgdown site's URL is added to the pkgdown configuration file, to the URL field of DESCRIPTION, and to the GitHub repo.
- Packages owned by certain GitHub organizations (tidyverse, r-lib, and tidymodels) get some special treatment, in terms of anticipating the (eventual) site URL and the use of a pkgdown template.

use_pkgdown_travis() is deprecated; we no longer recommend that you use Travis-CI.

Usage

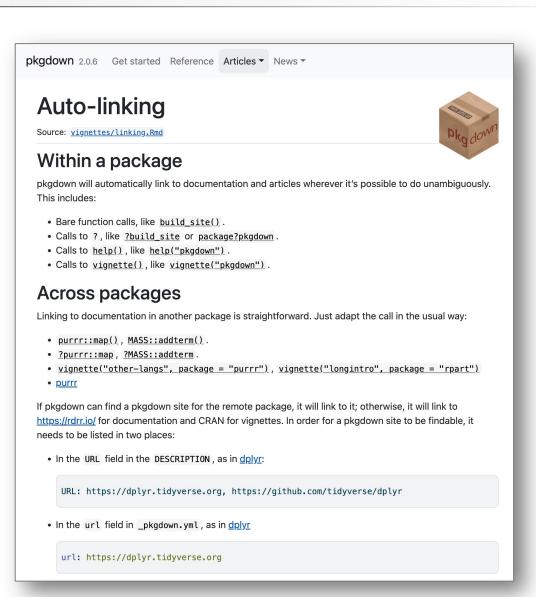
```
use_pkgdown(config_file = "_pkgdown.yml", destdir = "docs")
use_pkgdown_github_pages()
use_pkgdown_travis()
```

Arguments

config_file

Path to the pkgdown yaml config file

- 1. Parsing of R package files in html code
- 2. List each function and link to its documentation
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> install.packages("pkgdown")

```
> install.packages("pkgdown")
> usethis::use_pkgdown()
```

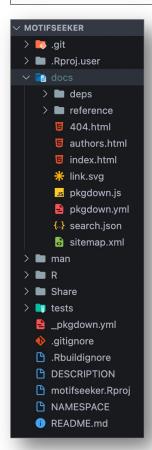
_pkgdown.yml

url: ~ template: bootstrap: 5

```
> install.packages("pkgdown")
> usethis::use_pkgdown()
> pkgdown::build_site()
```

_pkgdown.yml

url: ~
template:
bootstrap: 5

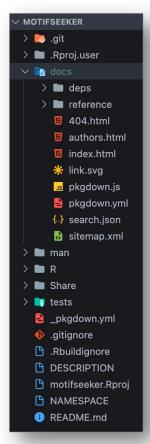


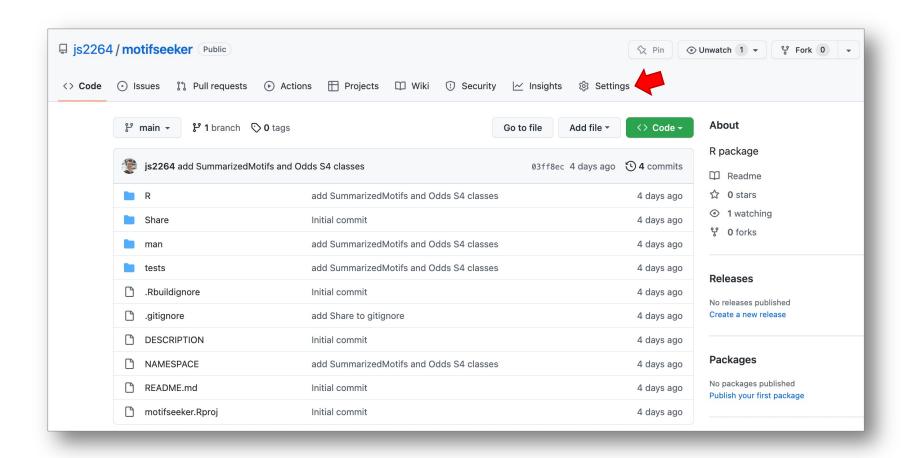
```
> install.packages("pkgdown")
> usethis::use_pkgdown()
> pkgdown::build_site()
```

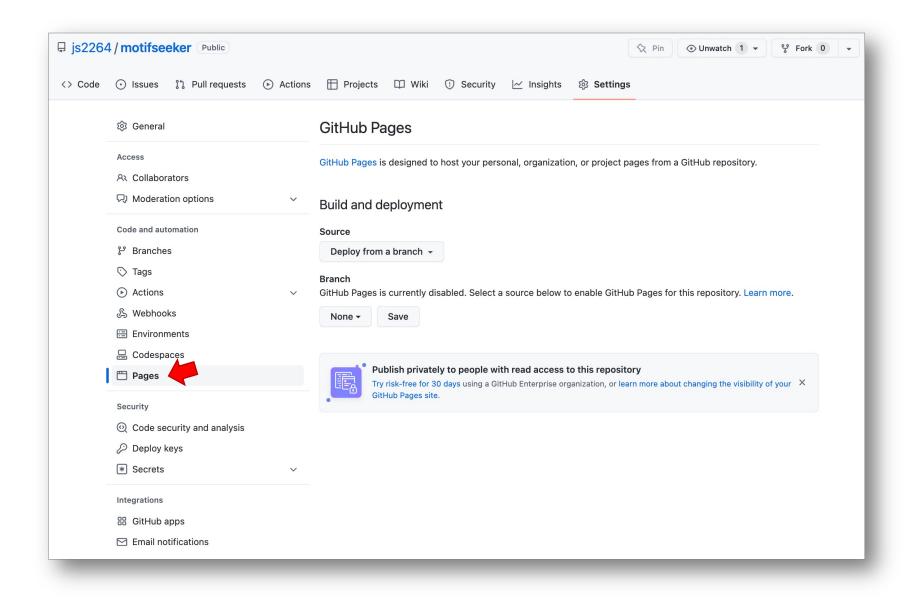
```
III Git commit Git push III
```

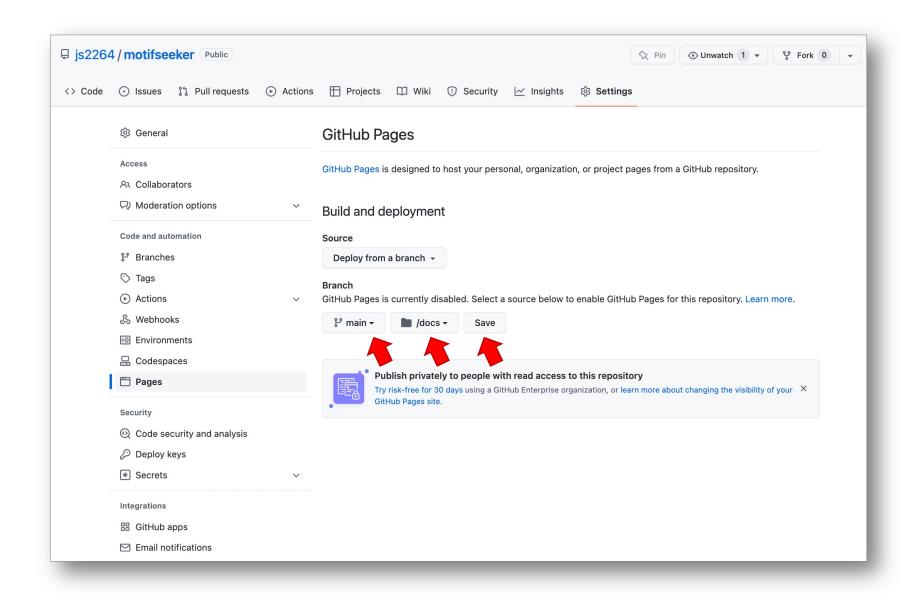
_pkgdown.yml

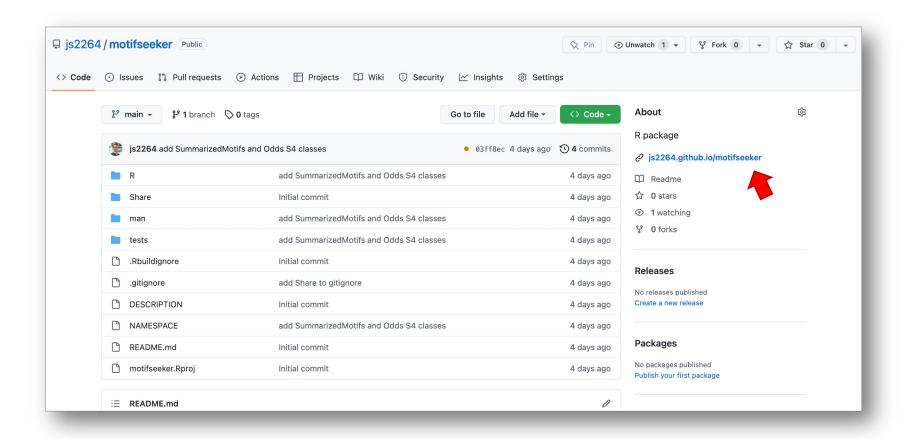
url: ~
template:
bootstrap: 5









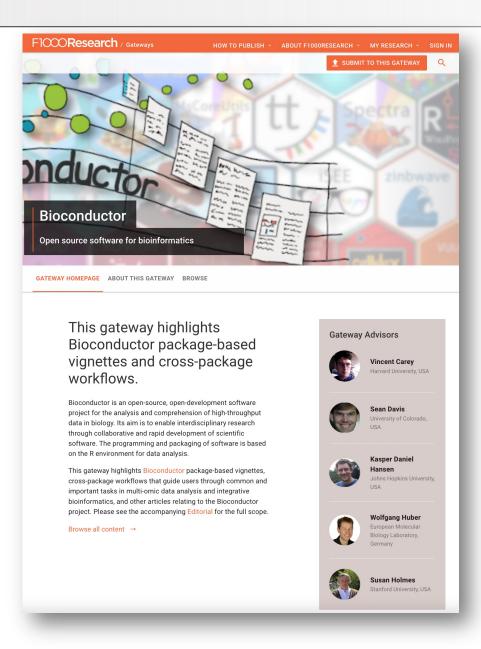


Disseminating your package

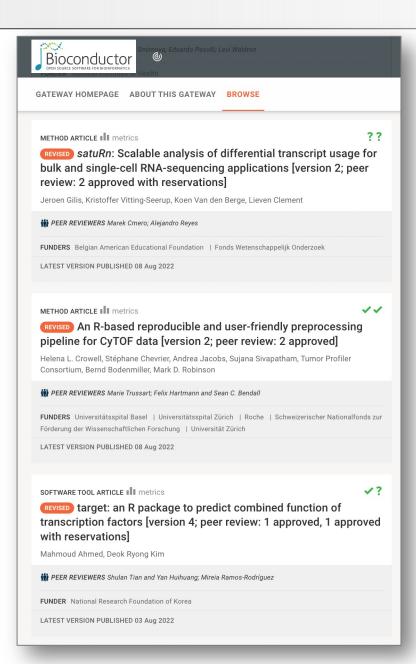
Several journals will consider submission of manuscripts describing package functionalities, e.g.:

- Bioinformatics
- Bioinformatics and Biology Insights
- BMC Bioinformatics
- BMC Systems Biology
- Current Protocols in Bioinformatics
- eLife (Tools and Resources)
- F1000 Research
- Nature Methods
- PeerJ
- PLoS Computational Biology: Software collection

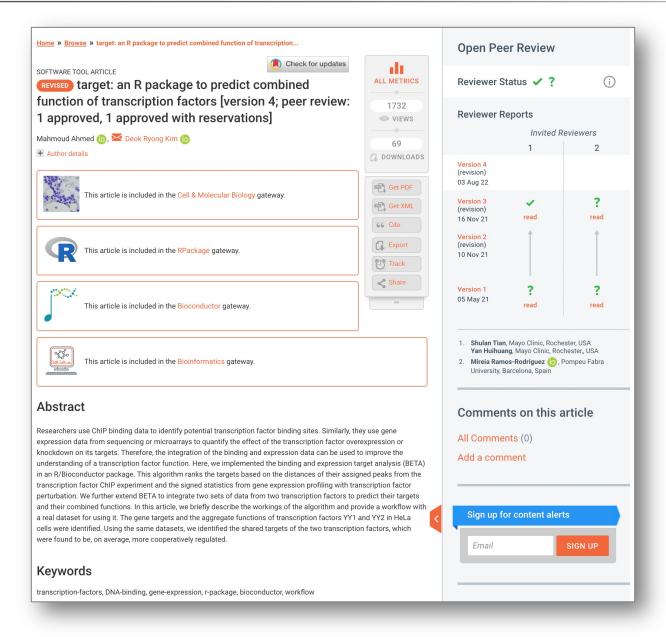
F1000 Research & Bioconductor gateway



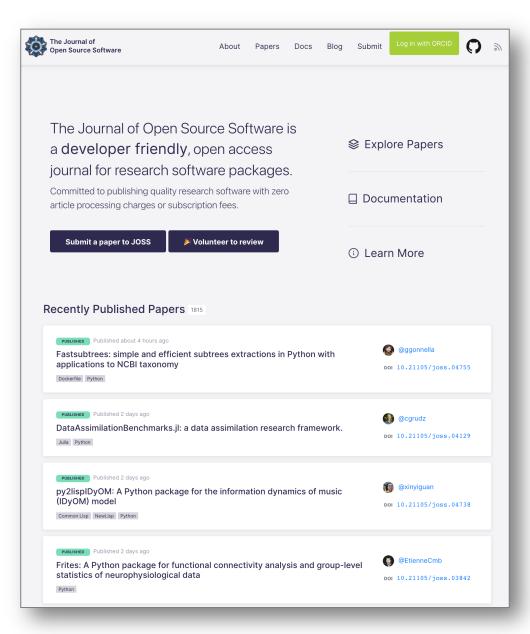
F1000 Research & Bioconductor gateway



F1000 Research & Bioconductor gateway



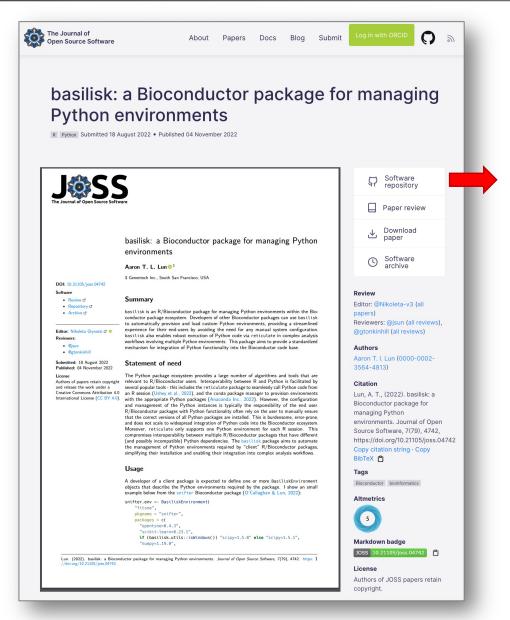
Other less "official" bioinformatic package editors



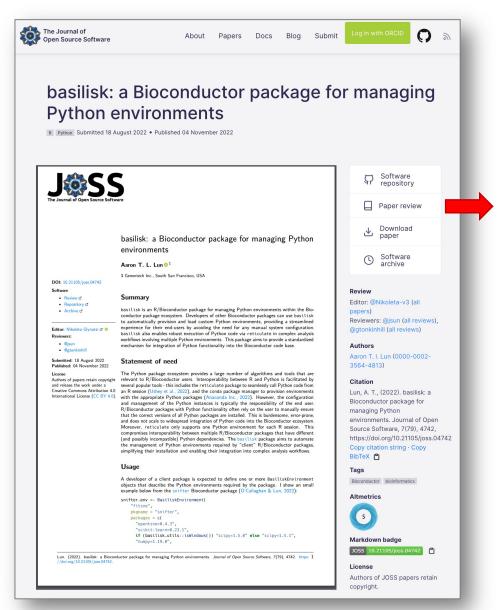
Other less "official" bioinformatic package editors



Other less "official" bioinformatic package editors



github.com/LTLA/basilisk



github.com/openjournals/joss-reviews/issues/4742

