Package 'containr'

September 24, 2025

Title Containerize Your 'R' Project

Version 0.1.1

Description Automates the process of containerizing 'R' projects. The core function of 'containr' is 'generate_dockerfile()', which analyzes an 'R' project's environment and dependencies via an 'renv' lock file and generates a ready-to-use 'Dockerfile' that encapsulates the computational setup. The package helps researchers build portable and consistent workflows so that analyses can be reliably shared, archived, and rerun across systems. See R Core Team (2025) <https://www.R-project.org/>, Ushey et al. (2025) <https://CRAN.R-project.org/package=renv>, and Docker Inc. (2025) <https://www.docker.com/>.

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Encoding UTF-8

RoxygenNote 7.3.2

URL https://github.com/erwinlares/containr, https://erwinlares.github.io/containr/

BugReports https://github.com/erwinlares/containr/issues

Suggests testthat (>= 3.0.0), withr

Imports dplyr, glue, purrr, readr, httr

Config/testthat/edition 3

NeedsCompilation no

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Repository CRAN

Date/Publication 2025-09-24 08:30:02 UTC

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`generate_dockerfile` *Generate a reproducible Dockerfile for R projects*

Description

Creates a customizable Dockerfile tailored to R-based workflows, supporting multiple Rocker images (base R, tidyverse, RStudio Server, and publishing-ready configurations). The function allows inclusion of data, code, and miscellaneous files, sets up system libraries, optionally installs Quarto, and configures user access. It supports verbose output and inline comments for transparency and educational use. Designed to streamline containerization for reproducible research and deployment.

Usage

```
generate_dockerfile(
  verbose = FALSE,
  r_version = "current",
  data_file = NULL,
  code_file = NULL,
  misc_file = NULL,
  add_user = NULL,
  home_dir = "/home",
  install_quarto = FALSE,
  expose_port = "8787",
  r_mode = "base",
  install_syslibs = TRUE,
  comments = FALSE,
  output = tempdir()
)
```

Arguments

`verbose`	logical (TRUE or FALSE). Should generate_dockerfile() print out progress? By default, it will silently create a Dockerfile
`r_version`	a character string indicated a version of R, i.e., "4.3.0". By default, it will grab the version of R from the current session
`data_file`	a character string indicating an optional name of a data file to be copied into the container
`code_file`	a character string indicating an optional name of a script file to be copied into the container
`misc_file`	a character string indicating an optional name of miscellaneous files to be copied into the container
`add_user`	a character string indicating an optional name of a linux user to be created inside the container
`home_dir`	a character string specifying the home directory inside the container

`install_quarto`	logical (TRUE or FALSE). If TRUE it will include supporting packages and system libraries to support Quarto and RMarkdown.
`expose_port`	a character string indicating in which port will RStudio Server be accessible. It defaults to 8787
`r_mode`	a character string. Inspired by the images in the Rocker Project. The options are "base" for base R, "tidyverse", "rstudio" for RStudio Server, and "tidystudio" which is tidyverse plus TeX Live and some publishing-related R packages
`install_syslibs`	logical. If TRUE, includes system libraries commonly required by R packages and tools for source compilation.
`comments`	logical (TRUE or FALSE). If TRUE, the Dockerfile generated will include comments detailing what each line does. If FALSE, the Dockerfile will be bare with only commands.
`output`	Character. Directory path to write the Dockerfile. Defaults to `tempdir()`.

Value

writes a Dockerfile to the specified output directory.

Examples

```
# Basic Usage

# Specify an image with R 4.2.0 installed

generate_dockerfile(r_version = "4.3.0")
```

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