

Package ‘tugboat’

September 28, 2025

Title Build a Docker Image from a Directory or Project

Version 0.1.3

Description Simple utilities to generate a Dockerfile from a directory or project, build the corresponding Docker image, and push the image to DockerHub.

Imports here, renv ($\geq 1.0.0$)

Suggests yaml, rmarkdown, testthat ($\geq 3.0.0$)

License GPL (≥ 3)

Encoding UTF-8

RoxygenNote 7.3.3

URL <https://www.dmolitor.com/tugboat/>

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Config/testthat/start-first create

Language en-US

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build	<i>Build a Docker image</i>
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Description

A simple utility to quickly build a Docker image from a Dockerfile.

Usage

```
build(
  dockerfile = here::here("Dockerfile"),
  image_name = "tugboat",
  tag = "latest",
  platforms = c("linux/amd64", "linux/arm64"),
  build_args = NULL,
  build_context = here::here(),
  push = FALSE,
  dh_username = NULL,
  dh_password = NULL
)
```

Arguments

dockerfile	The path to the Dockerfile. The default value is a file named Dockerfile in the project directory surfaced by here::here .
image_name	A string specifying the Docker image name. Default is tugboat.
tag	A string specifying the image tag. Default is latest.
platforms	A vector of strings. Which platforms to build images for. Default is both linux/amd64 and linux/arm64.
build_args	A vector of strings specifying additional build arguments to pass to the docker buildx build command. Optional.
build_context	The directory that is the build context for the image(s). Default value is the directory returned by here::here .
push	A boolean indicating whether to push to DockerHub.
dh_username	A string specifying the DockerHub username. Only necessary if push == TRUE.
dh_password	A string specifying the DockerHub password. Only necessary if push == TRUE.

Value

The name of the built Docker image as a string.

Examples

```
## Not run:
dock <- create(
  project = here::here(),
  FROM = "rstudio/r-base:devel-bookworm",
  exclude = c("/data", "/examples")
)

image_name <- build(
  dockerfile = here::here("Dockerfile"),
  image_name = "awesome_analysis",
  push = TRUE,
  dh_username = Sys.getenv("DH_USERNAME"),
  dh_password = Sys.getenv("DH_PASSWORD")
)

## End(Not run)
```

create

Create a Dockerfile

Description

This function will crawl all files in the current project/directory and (attempt to) detect all R packages and store these in a lockfile. From this lockfile, it will create a corresponding Dockerfile. It will also copy the full contents of the current directory/project into the Docker image. The directory in the Docker container containing the current directory contents will be /current-directory-name. For example if your analysis directory is named `incredible_analysis`, the corresponding location in the generated Docker image will be `/incredible_analysis`.

Usage

```
create(
  project = here::here(),
  as = file.path(project, "Dockerfile"),
  FROM = NULL,
  ...,
  exclude = NULL,
  verbose = FALSE
)
```

Arguments

<code>project</code>	The project directory. If no project directory is provided, by default, the <code>here</code> package will be used to determine the active project. If no project is currently active, then <code>here</code> defaults to the working directory where initially called.
<code>as</code>	The file path to write to. The default value is <code>file.path(project, "Dockerfile")</code> .

FROM	Docker image to start FROM. Default is FROM r-base:R.version.
...	Additional arguments which are passed directly to renv::snapshot . Please see the documentation for that function for all relevant details.
exclude	A vector of strings specifying all paths (files or directories) that should NOT be included in the Docker image. By default, all files in the directory will be included. NOTE: the file and directory paths should be relative to the project directory. They do NOT need to be absolute paths.
verbose	A boolean indicating whether or not to print the resulting Dockerfile to the console. Default value is FALSE.

Value

The Dockerfile contained as a string vector. Each vector element corresponds to a line in the Dockerfile.

See Also

[here::here](#); this will be used by default to determine the current project directory.

[renv::snapshot](#) which this function relies on to find all R dependencies and create a corresponding lockfile.

Examples

```
## Not run:
# Create a Dockerfile based on the rocker/rstudio image.
# Write the Dockerfile locally to here::here("Dockerfile").
# Copy all files except the /data and /examples directories.
dock <- create(
  project = here::here(),
  FROM = "rocker/rstudio",
  exclude = c("/data", "/examples")
)

## End(Not run)
```

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