Package 'trackdown'

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Title Collaborative Editing of Rmd (or Rnw) Documents in Google Drive

Version 1.1.1

Description Collaborative writing and editing of R Markdown (or Sweave) documents. The local .Rmd (or .Rnw) is uploaded as a plain-text file to Google Drive. By taking advantage of the easily readable Markdown (or LaTeX) syntax and the well-known online interface offered by Google Docs, collaborators can easily contribute to the writing and editing process. After integrating all authors' contributions, the final document can be downloaded and rendered locally.

Depends R (>= 3.5)

License GPL-3

Encoding UTF-8

Imports cli (>= 3.0.0), googledrive (> 1.0.1), rmarkdown

Suggests covr, devtools, gargle, knitr, pagedown, sodium, testthat (>= 3.0.0), vcr

Config/testthat/edition 3

RoxygenNote 7.1.1

VignetteBuilder knitr

URL <https://github.com/claudiozandonella/trackdown/>,
<https://claudiozandonella.github.io/trackdown/>

BugReports <https://github.com/claudiozandonella/trackdown/issues>

NeedsCompilation no

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trackdown-package   *trackdown - R package for improving collaborative writing*

Description

The `trackdown` package offers a simple solution for collaborative writing and editing of R Markdown (or Sweave) documents. Using `trackdown`, the local `.Rmd` (or `.Rnw`) file can be uploaded as a plain-text file to Google Drive. By taking advantage of the easily readable Markdown (or La-TeX) syntax and the well-known online interface offered by Google Docs, collaborators can easily contribute to the writing and editing process. After integrating all authors' contributions, the final document can be downloaded and rendered locally.

The `trackdown` Workflow

During the collaborative writing/editing of an `.Rmd` (or `.Rnw`) document, it is important to employ different workflows for computer code and narrative text:

- **Code** - Collaborative code writing is done most efficiently by following a traditional **Git**-based workflow using an online repository (e.g., GitHub or GitLab).
- **Narrative Text** - Collaborative writing of narrative text is done most efficiently using **Google Docs** which provides a familiar and simple online interface that allows multiple users to simultaneously write/edit the same document.

Thus, the workflow's main idea is simple: Upload the `.Rmd` (or `.Rnw`) document to Google Drive to collaboratively write/edit the narrative text in Google Docs; download the document locally to continue working on the code while harnessing the power of Git for version control and collaboration. This iterative process of uploading to and downloading from Google Drive continues until the desired results are obtained. The workflow can be summarized as:

Collaborative **code** *writing using* **Git** *& collaborative writing of* **narrative text** *using* **Google Docs**

Functions

`trackdown` offers different functions to manage the workflow:

- `upload_file` uploads a file for the first time to Google Drive.
- `update_file` updates the content of an existing file in Google Drive with the contents of a local file.
- `download_file` downloads the edited version of a file from Google Drive and updates the local version.
- `render_file` downloads a file from Google Drive and renders it locally.

Special Features

> `trackdown` offers additional features to facilitate the collaborative writing and editing of documents in Google Docs. In particular, it is possible to:
>
> - **Hide Code:** Code in the header of the document (YAML header or LaTeX preamble) and code chunks are removed from the document when uploading to Google Drive and are automatically restored during download. This prevents collaborators from inadvertently making changes to the code which might corrupt the file and allows them to focus on the narrative text.
> - **Upload Output:** The actual output document (i.e., the rendered file) can be uploaded to Google Drive in conjunction with the `.Rmd` (or `.Rnw`) document. This helps collaborators to evaluate the overall layout including figures and tables and allows them to add comments to suggest and discuss changes.
> - **Use Google Drive shared drives:** The documents can be uploaded on your personal Google Drive or on a shared drive to facilitate collaboration.

Advantages of Google Docs

> Google Docs offers users a familiar, intuitive, and free web-based interface that allows multiple users to simultaneously write/edit the same document. In Google Docs it is possible to:
>
> - track changes (incl. accepting/rejecting suggestions)
> - add comments to suggest and discuss changes
> - check spelling and grammar errors (potentially integrating third-party services like Grammarly)
>
> Moreover, Google Docs allows anyone to contribute to the writing/editing of the document. No programming experience is required, users can just focus on writing/editing the narrative text.
>
> Note that not all collaborators have to have a Google account (although this is recommended to utilize all Google Docs features). Only the person who manages the `trackdown` workflow needs to have a Google account to upload files to Google Drive. Other collaborators can be invited to contribute to the document using a shared link.

Documentation and Vignettes

> All the documentation is available at https://claudiozandonella.github.io/trackdown/.
>
> To know more about the `trackdown`, please reference:
>
> - `vignette("trackdown-features")` for a detailed description of the function arguments and features.
> - `vignette("trackdown-workflow")` for a workflow example and discussion of how to collaborate on narrative text and code.
> - `vignette("trackdown-tech-notes")` for details regarding technical details like authentication and file management.

download_file	*Downloads from Google Docs*

Description

Download edited version of a file from Google Drive updating the local version with the new changes.

Use with caution as local version of the file will be overwritten!

To know more about trackdown workflow and features see [trackdown-package](#) help page.

Usage

```
download_file(
  file,
  gfile = NULL,
  gpath = "trackdown",
  shared_drive = NULL,
  rm_gcomments = FALSE
)
```

Arguments

file	character. The path of a local '.Rmd' or '.Rnw' file.
gfile	character. The name of a Google Drive file (defaults to local file name).
gpath	character. (Sub)directory in My Drive or a shared drive (optional). By default files are uploaded in the folder "trackdown". To specify another folder the full path is required (e.g., "trackdown/my_folder"). Use NULL to upload directly at the root level, although it is not recommended.
shared_drive	character. The name of a Google Drive shared drive (optional).
rm_gcomments	[experimental] logical value indicating whether or not to remove Google comments.

Value

'TRUE' if file from Google Drive was saved, 'FALSE' otherwise

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render_file   *Render file from Google Drive*

Description

Render file from Google Drive if there have been edits

To know more about `trackdown` workflow and features see [trackdown-package](#) help page.

Usage

```
render_file(
  file,
  gfile = basename(file),
  gpath = "trackdown",
  shared_drive = NULL
)
```

Arguments

file	character. The path of a local '.Rmd' or '.Rnw' file.
gfile	character. The name of a Google Drive file (defaults to local file name).
gpath	character. (Sub)directory in My Drive or a shared drive (optional). By default files are uploaded in the folder "trackdown". To specify another folder the full path is required (e.g., "trackdown/my_folder"). Use `NULL` to upload directly at the root level, although it is not recommended.
shared_drive	character. The name of a Google Drive shared drive (optional).

Value

'TRUE' if file from Google Drive was saved and rendered, 'FALSE' otherwise

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update_file   *Updates file in Google Drive*

Description

Replaces the content of an existing file in Google Drive with the contents of a local file. It is also possible to update (or upload if not already present) the output (pdf or html) of the file specifying the `path_output` argument. In case of html files, if pagedown package and Chrome are available, users can decide to upload a pdf version of the html file.

Use with caution as tracked changes in the Google Drive file will be lost!

To know more about `trackdown` workflow and features see [trackdown-package](#) help page.

Usage

```
update_file(
  file,
  gfile = NULL,
  gpath = "trackdown",
  shared_drive = NULL,
  hide_code = FALSE,
  path_output = NULL
)
```

Arguments

file	character. The path of a local '.Rmd' or '.Rnw' file.
gfile	character. The name of a Google Drive file (defaults to local file name).
gpath	character. (Sub)directory in My Drive or a shared drive (optional). By default files are uploaded in the folder "trackdown". To specify another folder the full path is required (e.g., "trackdown/my_folder"). Use NULL to upload directly at the root level, although it is not recommended.
shared_drive	character. The name of a Google Drive shared drive (optional).
hide_code	logical value indicating whether to remove code from the text document (chunks and header). Placeholders of type "[[chunk-<name>]]" are displayed instead.
path_output	default NULL, specify the path to the output to upload together with the other file. PDF are directly uploaded, HTML can be first converted into PDF if package pagedown and Chrome are available.

Value

a dribble of the uploaded file (and output if specified)

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upload_file	*Upload file to Google Drive for collaborative writing and editing*

Description

Uploads a local file to Google Drive as a plain text document. Will only upload the file if it doesn't already exist in the chosen location. By default files are uploaded in the folder "trackdown", if is not available on Google Drive, permission to create it is required to the user. To update an already existing file see [update_file](#). It is also possible to upload the output (pdf or html) of the file specifying the path_output argument. In case of html files, if pagedown package and Chrome are available, users can decide to upload a pdf version of the html file.

To know more about trackdown workflow and features see [trackdown-package](#) help page.

Usage

```
upload_file(
  file,
  gfile = NULL,
  gpath = "trackdown",
  shared_drive = NULL,
  hide_code = FALSE,
  path_output = NULL
)
```

Arguments

file	character. The path of a local '.Rmd' or '.Rnw' file.
gfile	character. The name of a Google Drive file (defaults to local file name).
gpath	character. (Sub)directory in My Drive or a shared drive (optional). By default files are uploaded in the folder "trackdown". To specify another folder the full path is required (e.g., "trackdown/my_folder"). Use NULL to upload directly at the root level, although it is not recommended.
shared_drive	character. The name of a Google Drive shared drive (optional).
hide_code	logical value indicating whether to remove code from the text document (chunks and header). Placeholders of type "[[chunk-<name>]]" are displayed instead.
path_output	default NULL, specify the path to the output to upload together with the other file. PDF are directly uploaded, HTML can be first converted into PDF if package pagedown and Chrome are available.

Value

a dribble of the uploaded file (and output if specified)

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