

# Package: kirby21.base (via r-universe)

September 5, 2024

**Type** Package

**Title** Example Data from the Multi-Modal MRI 'Reproducibility' Resource

**Version** 1.7.3

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**Description** Multi-modal magnetic resonance imaging ('MRI') data from the 'Kirby21' reproducibility study  
<<https://www.nitrc.org/projects/multimodal/>>, including functional and structural imaging.

**License** GPL-2

**LazyData** true

**LazyLoad** true

**Imports** utils, stats, git2r

**RoxygenNote** 7.1.0

**URL** <https://www.nitrc.org/projects/multimodal/>,  
<http://dx.doi.org/10.1016/j.neuroimage.2010.11.047>

**Encoding** UTF-8

**Suggests** testthat (>= 2.1.0)

**Repository** <https://muschellij2.r-universe.dev>

**RemoteUrl** <https://github.com/muschellij2/kirby21.base>

**RemoteRef** HEAD

**RemoteSha** 0c83ee09afd737adff361d0ed4e71d87269d8e4e

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all_modalities	<i>Return All Modalities</i>
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### Description

Return the modalities for images where packages were developed

### Usage

```
all_modalities()
```

### Value

Vector of characters

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copy_kirby21_data	<i>Copy Kirby21 Data to an output directory</i>
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### Description

Copies files from Kirby21 Package to an output directory

### Usage

```
copy_kirby21_data(copydir, ...)
```

### Arguments

copydir	Output directory for data
...	Arguments to pass to <a href="#">get_image_filenames</a>

### Value

Logical if files are copied

## Examples

```
on_cran = !identical(Sys.getenv("NOT_CRAN"), "true")
on_ci <- nzchar(Sys.getenv("CI"))
local_run = grepl("musch", tolower(Sys.info()[["user"]]))
run_example = !on_cran || on_ci || local_run
if (run_example) {
  tdir = tempfile()
  dir.create(tdir)
  outdir = tempdir()
  surv_installed = "kirby21.survey" %in% installed.packages()
  if (!surv_installed) {
    testthat::expect_error(
      download_kirby21_data("SURVEY",
        force = FALSE))
  } else {
    download_kirby21_data("SURVEY",
      force = FALSE)
  }
  res = download_kirby21_data("SURVEY", outdir = outdir, force = TRUE)
  if (!surv_installed) {
    try({remove.packages("kirby21.survey")})
  }
  copy_kirby21_data(copydir = tdir, outdir = outdir)
}
```

---

delete\_kirby21\_data *Delete Kirby21 Imaging Data*

---

## Description

This function allows users to remove specific modalities for Kirby21 data sets. This allows this package to be on CRAN

## Usage

```
delete_kirby21_data(modality = kirby21.base::all_modalities(), outdir = NULL)
```

## Arguments

modality	modality of images that are to be downloaded. You must have the package downloaded for that modality.
outdir	output directory for files to download. It will default to the directory of the corresponding package for the data.

## Value

Nothing is returned

**Examples**

```

on_cran = !identical(Sys.getenv("NOT_CRAN"), "true")
on_ci <- nzchar(Sys.getenv("CI"))
local_run = grepl("musch", tolower(Sys.info()[["user"]]))
run_example = !on_cran || on_ci || local_run
if (run_example) {
  outdir = tempdir()
  res = download_kirby21_data("SURVEY", outdir = outdir, force = TRUE)
  delete_kirby21_data("SURVEY", outdir = outdir)
}

```

---

download\_kirby21\_data *Download Kirby21 Imaging Data*

---

**Description**

This function allows users to download specific modalities for Kirby21 data sets. This allows this package to be on CRAN

**Usage**

```

download_kirby21_data(
  modality = kirby21.base::all_modalities(),
  progress = TRUE,
  force = FALSE,
  outdir = NULL
)

```

**Arguments**

modality	modality of images that are to be downloaded. You must have the package downloaded for that modality.
progress	Should verbose messages be printed when downloading the data
force	If the package of that modality is not installed stop. If force = FALSE, then this will download the data but not really install the package.
outdir	output directory for files to download. It will default to the directory of the corresponding package for the data.

**Value**

A logical indicating the data is there.

**Examples**

```
on_cran = !identical(Sys.getenv("NOT_CRAN"), "true")
on_ci <- nzchar(Sys.getenv("CI"))
local_run = grepl("musch", tolower(Sys.info()[["user"]]))
run_example = !on_cran || on_ci || local_run
if (run_example) {
  outdir = tempdir()
  res = download_kirby21_data("SURVEY", outdir = outdir)
}
```

---

`get_ids`*Get IDs with Data in Package*

---

**Description**

Return the IDs for the people scanned available in the kirby21 packages

**Usage**

```
get_ids()
```

**Value**

Vector of numeric ids

---

`get_image_filenames`*Get Image Filenames*

---

**Description**

Return the filenames for the images

**Usage**

```
get_image_filenames(...)
```

**Arguments**

... arguments passed to [get\\_image\\_filenames\\_df](#)

**Examples**

```
get_image_filenames()
```

---

`get_image_filenames_df`*Get Image Filenames in a data.frame*

---

**Description**

Return a data.frame of filenames for the images

**Usage**

```
get_image_filenames_df(  
  ids = get_ids(),  
  modalities = all_modalities(),  
  visits = c(1, 2),  
  long = TRUE,  
  warn = TRUE,  
  outdir = NULL  
)  
  
get_image_filenames_matrix(...)  
  
get_image_filenames_list(...)  
  
get_image_filenames_list_by_visit(...)  
  
get_image_filenames_list_by_subject(...)
```

**Arguments**

<code>ids</code>	ID to return
<code>modalities</code>	vector of image modalities within <code>c("FLAIR", "MPRAGE", "T2w", "fMRI", "DTI")</code> to return
<code>visits</code>	Vector of scan indices to return (1 or 2 or both)
<code>long</code>	if TRUE, each row is a subject, visit, modality pair
<code>warn</code>	if TRUE, warnings will be produced when packages are not installed
<code>outdir</code>	output directory for files to download. It will default to the directory of the corresponding package for the data.
<code>...</code>	arguments passed to <a href="#">get_image_filenames_df</a>

**Value**

Data.frame of filenames

**Examples**

```
get_image_filenames_df()
get_image_filenames_matrix()
get_image_filenames_list()
get_image_filenames_list_by_visit()
get_image_filenames_list_by_subject()
```

---

get\_par\_filenames      *Get Filenames of Par files*

---

**Description**

Return the filenames for the par files

**Usage**

```
get_par_filenames(
  ids = get_ids(),
  modalities = c("FLAIR", "MPRAGE", "T2w", "fMRI", "DTI"),
  visits = c(1, 2)
)
```

**Arguments**

ids	ID to return
modalities	vector of image modalities within c("FLAIR", "MPRAGE", "T2w", "fMRI", "DTI") to return
visits	Vector of scan indices to return (1 or 2 or both)

**Value**

Data.frame of filenames

**Examples**

```
get_par_filenames()
```

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kirby21_demog	<i>Kirby 21 Demographics</i>
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---

**Description**

A dataset containing demographic information for kirby21 data sets

**Format**

A data frame with 21 rows and 3 columns.

**Source**

[https://www.nitrc.org/frs/?group\\_id=313](https://www.nitrc.org/frs/?group_id=313)

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modality_df	<i>All Modalities and the Corresponding package</i>
-------------	---

---

**Description**

Return the modalities for images and the packages that contain them

**Usage**

```
modality_df()
```

**Value**

data.frame of two columns:

- modality: modality of image
- package: package that contains it



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subject\_id\_to\_visit\_id

*Kirby 21 Subject Identifiers to NITRC Visit Identifiers*

---

**Description**

A dataset containing the mapping from the Subject IDs from the Kirby demographics to the KKI2009 identifiers on NITRC

**Format**

A data frame with 42 rows and 4 columns

**Source**

[https://www.nitrc.org/frs/?group\\_id=313](https://www.nitrc.org/frs/?group_id=313)

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