

Package ‘clinTrialData’

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Title Clinical Trial Example Datasets

Version 0.1.0

Description A collection of clinical trial example datasets from multiple sources including the CDISC Pilot 01 study (CDISC <<https://www.cdisc.org/>>). All datasets are provided in Parquet format for efficient storage and can be accessed using the 'connector' package. Designed for training, testing, prototyping, and demonstrating clinical data analysis workflows.

Depends R (>= 4.1.0)

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URL <https://lovemore-gakava.github.io/clinTrialData/>,
<https://github.com/Lovemore-Gakava/clinTrialData>

BugReports <https://github.com/Lovemore-Gakava/clinTrialData/issues>

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Author Lovemore Gakava [aut, cre, cph]

Maintainer Lovemore Gakava <Lovemore.Gakava@gmail.com>

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cache_dir	<i>Get the Local Cache Directory</i>
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Description

Returns the path to the local cache directory where downloaded clinical trial datasets are stored. The location follows the platform-specific user data directory convention via `tools::R_user_dir()`.

You can delete any subdirectory here to remove a cached dataset, or clear the entire directory to free disk space.

Usage

```
cache_dir()
```

Value

A character string with the path to the cache directory.

Examples

```
cache_dir()
```

clinTrialData-data *Clinical Trial Datasets*

Description

The clinTrialData package contains clinical trial datasets from multiple sources, stored in Parquet format. Data is accessed using connector functions.

Available Data Sources

CDISC Pilot 01 Study:

The CDISC Pilot 01 study data includes both ADaM and SDTM domains.

ADaM datasets include:

- ADSL: Subject-Level Analysis Dataset
- ADAE: Adverse Events Analysis Dataset
- ADLB: Laboratory Analysis Dataset (combined)
- ADLBC: Laboratory Analysis Dataset (Chemistry)
- ADLBH: Laboratory Analysis Dataset (Hematology)
- ADLBHY: Laboratory Analysis Dataset (Hy's Law)
- ADQSADAS: ADAS-Cog Questionnaire Analysis Dataset
- ADQSCIBC: CIBC Questionnaire Analysis Dataset
- ADQSNPIX: NPI-X Questionnaire Analysis Dataset
- ADTTE: Time-to-Event Analysis Dataset
- ADVS: Vital Signs Analysis Dataset

SDTM datasets include:

- DM: Demographics
- AE: Adverse Events
- VS: Vital Signs
- LB: Laboratory Test Results
- And 18 additional domains (see `list_data_sources()` for details)

Usage

Data sources are discovered by scanning the package directory structure. List available datasets with `list_data_sources()`.

Access data using the connection function:

```
# Connect to any data source (e.g., CDISC Pilot data)
db <- connect_clinical_data("cdisc_pilot")

# List available datasets
db$adam$list_content_cnt()
```

```
# Read a dataset
adsl <- db$adam$read_cnt("adsl")

# See all available data sources
list_data_sources()
```

Data Format

Datasets are stored in Parquet format:

- Columnar storage
- Fast reads
- Compression
- Cross-platform compatibility

Source

CDISC Pilot 01 Study Data Various clinical trial data sources

References

CDISC. Clinical Data Interchange Standards Consortium. <https://www.cdisc.org/>

connect_clinical_data *Connect to Clinical Data by Source*

Description

Generic connection function that allows access to any data source in the package. Data sources are automatically discovered by scanning the package's example data directory structure.

Usage

```
connect_clinical_data(source = "cdisc_pilot")
```

Arguments

source Character string specifying the data source. Use `list_data_sources()` to see all available options.

Value

A connectors object

Examples

```
# Connect to CDISC Pilot data
db <- connect_clinical_data("cdisc_pilot")

# List available datasets
db$adam$list_content_cnt()

# Read a dataset
adsl <- db$adam$read_cnt("adsl")

# List available sources
list_data_sources()
```

dataset_info

Inspect a Clinical Trial Dataset Without Downloading

Description

Fetches and displays metadata for any study available in the `clinTrialData` library – without downloading the full dataset. Metadata includes the study description, available domains and datasets, subject count, version, and data source attribution.

For studies already downloaded via `download_study()`, the metadata is read from the local cache and works offline. For studies not yet downloaded, a small JSON file (~2KB) is fetched from the GitHub Release.

Usage

```
dataset_info(source, repo = "Lovemore-Gakava/clinTrialData")
```

Arguments

source	Character string. Name of the study (e.g. "cdisc_pilot_extended"). Use <code>list_available_studies()</code> to see all options.
repo	GitHub repository in the form "owner/repo". Defaults to the official <code>clinTrialData</code> release repository.

Value

Invisibly returns the metadata as a named list.

Examples

```
dataset_info("cdisc_pilot")
```

`download_study`*Download a Clinical Trial Study Dataset*

Description

Downloads a study dataset from a GitHub Release and stores it in the local cache (see `cache_dir()`). Once downloaded, the study is available to `connect_clinical_data()` without an internet connection.

Requires the piggyback package.

Usage

```
download_study(  
  source,  
  version = "latest",  
  force = FALSE,  
  repo = "Lovemore-Gakava/clinTrialData"  
)
```

Arguments

<code>source</code>	Character string. The name of the study to download (e.g. "cdisc_pilot"). Use <code>list_available_studies()</code> to see all options.
<code>version</code>	Character string. The release tag to download from. Defaults to "latest", which resolves to the most recent release.
<code>force</code>	Logical. If TRUE, re-download even if the study is already cached. Defaults to FALSE.
<code>repo</code>	GitHub repository in the form "owner/repo". Defaults to the official <code>clinTrialData</code> release repository.

Value

Invisibly returns the path to the cached study directory.

Examples

```
# Download the CDISC Pilot study  
download_study("cdisc_pilot")  
  
# Then connect as usual  
db <- connect_clinical_data("cdisc_pilot")
```

`list_available_studies`*List Studies Available for Download*

Description

Returns a data frame of all clinical trial studies available as GitHub Release assets, along with their local cache status. Studies marked as `cached = TRUE` are already downloaded and available for use with `connect_clinical_data()` without an internet connection.

When GitHub is unreachable, the function falls back to the last successfully fetched listing (if available) and issues a warning. The `cached` column is always recomputed from the local filesystem.

Requires the `piggyback` package.

Usage

```
list_available_studies(repo = "Lovemore-Gakava/clinTrialData")
```

Arguments

repo GitHub repository in the form "owner/repo". Defaults to the official `clinTrialData` release repository.

Value

A data frame with columns:

source Study name (pass this to `download_study()` or `connect_clinical_data()`)

version Release tag the asset belongs to

size_mb Asset size in megabytes

cached TRUE if the study is already in the local cache

Examples

```
list_available_studies()
```

list_data_sources *List Available Clinical Data Sources*

Description

Returns information about all clinical datasets available locally – both datasets bundled with the package and any datasets previously downloaded via `download_study()`. The location column indicates whether a dataset is "bundled" (shipped with the package) or "cached" (downloaded to the user cache directory).

To see datasets available for download from GitHub, use `list_available_studies()`.

Usage

```
list_data_sources()
```

Value

A data frame with columns:

source Dataset name (pass to `connect_clinical_data()`)

description Human-readable study description

domains Comma-separated list of available data domains (e.g. "adam, sdtm")

format Storage format ("parquet")

location Either "bundled" or "cached"

Examples

```
list_data_sources()
```

remove_cnt.ConnectorLockedFS

Remove Content with Lock Check

Description

S3 method for remove_cnt that checks if the study folder is locked before allowing remove operations.

Usage

```
## S3 method for class 'ConnectorLockedFS'
remove_cnt(connector_object, name, ...)
```

Arguments

connector_object	The ConnectorLockedFS object
name	The file name to remove
...	Additional arguments passed to the underlying connector

Value

Invisible connector_object

```
write_cnt.ConnectorLockedFS
```

Write Content with Lock Check

Description

S3 method for write_cnt that checks if the study folder is locked before allowing write operations.

Usage

```
## S3 method for class 'ConnectorLockedFS'
write_cnt(connector_object, x, name, overwrite = FALSE, ...)
```

Arguments

connector_object	The ConnectorLockedFS object
x	The data to write
name	The file name
overwrite	Whether to overwrite existing files
...	Additional arguments passed to the underlying connector

Value

Invisible connector_object

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