

Package ‘siera’

August 25, 2025

Type Package

Title Generate Analysis Results Programmes Using ARS Metadata

Version 0.5.2

Maintainer Malan Bosman <malanbos@gmail.com>

Description Analysis Results Standard (ARS), a foundational standard by CDISC (Clinical Data Interchange Standards Consortium), provides a logical data model for metadata describing all components to calculate Analysis Results. <https://www.cdisc.org/standards/foundational/analysis-results-standard>
Using 'siera' package, ARS metadata is ingested (JSON or Excel format), producing programmes to generate Analysis Results Datasets (ARDs).

License MIT + file LICENSE

Encoding UTF-8

RoxygenNote 7.3.2

Imports magrittr, dplyr, tibble, tidyr, jsonlite, stringr, readxl, cli

Suggests knitr, rmarkdown, testthat (>= 3.0.0)

VignetteBuilder knitr

URL <https://clymbclinical.github.io/siera/>,
<https://github.com/clymbclinical/siera>

BugReports <https://github.com/clymbclinical/siera/issues>

Config/testthat/edition 3

NeedsCompilation no

Author Malan Bosman [aut, cre],
Clymb Clinical [cph, fnd]

Repository CRAN

Date/Publication 2025-08-25 15:10:02 UTC

Contents

ARD_script_example	2
ARS_example	2
readARS	3

Index**5**

ARD_script_example	<i>Get path to example ARD scripts, auto-generated by siera</i>
--------------------	---

Description

siera comes bundled with some example ARD-producing scripts in its ‘inst/script’ directory. This function make them easy to access.

Usage

```
ARD_script_example(path = NULL)
```

Arguments

path	Name of R file. If ‘NULL’, the example files will be listed.
------	--

Value

A list of example R files (if path is NULL), or a file itself if path is used.

Examples

```
ARD_script_example()  
ARD_script_example("ARD_Out14-1-1.R")
```

ARS_example	<i>Get path to ARS example files</i>
-------------	--------------------------------------

Description

siera comes bundled with some example files in its ‘inst/extdata’ directory. This function make them easy to access.

Usage

```
ARS_example(path = NULL)
```

Arguments

path	Name of file. If ‘NULL’, the example files will be listed.
------	--

Value

A list of example files (if path is NULL), or a file itself if path is used.

Examples

```
ARS_example()
ARS_example("ARS_V1_Common_Safety_Displays.json")
```

readARS	<i>Ingest ARS (Analysis Results Standard) metadata, produce ARD (Analysis Results Dataset) code for each output</i>
---------	---

Description

Ingest ARS (Analysis Results Standard) metadata, and meta-programme R scripts that could be run as-is to produce Analysis Results Datasets when ingesting ADaM datasets

Usage

```
readARS(
  ARS_path,
  output_path = tempdir(),
  adam_path = tempdir(),
  spec_output = "",
  spec_analysis = "",
  example = FALSE,
  shuffle = FALSE
)
```

Arguments

ARS_path	A file containing ARS metadata for a reporting event
output_path	Path to store .R ARD scripts
adam_path	Path to folder containing ADaM datasets, to be run in ARD program
spec_output	The output ID for a specific output to be run from the metadata
spec_analysis	The analysis ID for a specific analysis to be run from the metadata
example	Default is FALSE. If TRUE, example-based operations will be applied to CDISC example ARS. If FALSE, AnalysisMethodCodeTemplateCode will be expected as source of the Method (and Operations) code
shuffle	Default is FALSE. If TRUE, shuffle_ard() is applied to the binded final ARD, to prepare for the tfrmt use case of table generation

Value

R programmes generating ARDs - one for each output (or analysis from an output) specified in the ARS metadata

Examples

```
# path to file containing ARS metadata

ARS_path <- ARS_example("Common_Safety_Displays_cards.xlsx")

# output path for R programs
output_dir = tempdir()

# folder containing ADaM datasets
adam_folder = tempdir()

# run function, write to temp directory
readARS(ARS_path, output_dir, adam_folder)
```

Index

ARD_script_example, [2](#)

ARS_example, [2](#)

readARS, [3](#)