

Package: adepro (via r-universe)

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Title A 'shiny' Application for the (Audio-)Visualization of Adverse Event Profiles

Version 4.4.1

Description Contains a 'shiny' application called AdEPro (Animation of Adverse Event Profiles) which (audio-)visualizes adverse events occurring in clinical trials. As this data is usually considered sensitive, this tool is provided as a stand-alone application that can be launched from any local machine on which the data is stored.

License GPL (≥ 3)

URL <https://github.com/Bayer-Group/BIC-AdEPro>

BugReports <https://github.com/Bayer-Group/BIC-AdEPro/issues>

Imports anytime, audio, bslib, config, dplyr, DT, forcats, golem, graphics, grDevices, haven, here, MASS, pkgload, readr, rlang, seriation, shiny, shinyBS, shinyjs, shinyWidgets, stats, stringr, tidyr, tidyselect, utils

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as_numeric_date	<i>Obtains date as number</i>
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Description

Obtains date as number

Usage

as_numeric_date(variable)

Arguments

variable A vector, the variable

calculate_and_impute_required_variables_missing_values
<i>Impute missing values in adverse event data and return number of imputed data</i>

Description

Impute missing values in adverse event data and return number of imputed data

Usage

```
calculate_and_impute_required_variables_missing_values(  
  data,  
  SUBJIDN = "SUBJIDN",  
  LVDT = "LVDT",  
  DTHDT = "DTHDT",  
  TRTSDT = "TRTSDT",  
  AEDECOD = "AEDECOD",  
  AESTDY = "AESTDY",  
  AETRTEMN = "AETRTEMN",  
  AEENDY = "AEENDY",  
  AESEVN = "AESEVN",  
  severity_grading_flag  
)
```

Arguments

data	frame with adverse event data set
SUBJIDN	Subject ID
LVDT	Last Visit Date as numeric (required)
DTHDT	Death Date as numeric (required)
TRTSDT	Treatment Start Date as numeric (required)
AEDECOD	Adverse Event Code as character (required)
AESTDY	Adverse Event Start Date as numeric (required)
AETRTEMN	Adverse Event Treatment Emergency Flag as numeric (required)
AEENDY	Adverse Event End date as numeric (required)
AESEVN	Adverse Event Severity Grade Flag as numeric (required)
severity_grading_flag	character value if 3 or 5 step grading is used

Value

data frame with imputed adverse event data

calculate_number_ae_end_is_earlier_than_start
<i>Calculate the Number of Cases when Adverse Event Start Day is after the Adverse Event End Day</i>

Description

Calculate the Number of Cases when Adverse Event Start Day is after the Adverse Event End Day

Usage

```
calculate_number_ae_end_is_earlier_than_start(dat, sel_aestdy, sel_aeendy)
```

Arguments

dat	data frame with adverse event data
sel_aestdy	character with adverse event start day variable name
sel_aeendy	character with adverse event end day variable name

Value

numeric value with the number of adverse event end day smaller start day

```
calculate_number_ae_end_missing
```

Calculate the Number of Adverse Events End Day Missing

Description

Calculate the Number of Adverse Events End Day Missing

Usage

```
calculate_number_ae_end_missing(dat, sel_aeendy, sel_aedecod, sel_aestdy)
```

Arguments

dat	data frame with adverse event data
sel_aeendy	character with adverse event end day variable name
sel_aedecod	character with adverse event code variable name
sel_aestdy	character with adverse event start day variable name

Value

numeric value with the number missing adverse event end days

`calculate_number_ae_start_missing`*Calculate the Number of Adverse Events Start Day Missing*

Description

Calculate the Number of Adverse Events Start Day Missing

Usage

```
calculate_number_ae_start_missing(dat, sel_aestdy, sel_aedecod, sel_aeendy)
```

Arguments

<code>dat</code>	data frame with adverse event data
<code>sel_aestdy</code>	character with adverse event start day variable name
<code>sel_aedecod</code>	character with adverse event name
<code>sel_aeendy</code>	character with adverse event end day variable name'

Value

numeric value with the number missing adverse event start days

`calculate_number_aes_not_treatment_emergent`*Calculate the Number of Adverse Events Removed due to Missing Treatment Emergency Flag*

Description

Calculate the Number of Adverse Events Removed due to Missing Treatment Emergency Flag

Usage

```
calculate_number_aes_not_treatment_emergent(dat, sel_aedecod, sel_aetrtemn)
```

Arguments

<code>dat</code>	data frame with adverse event data
<code>sel_aedecod</code>	character with adverse event code variable name
<code>sel_aetrtemn</code>	character with adverse event treatment emergency variable name

Value

numeric value with the number missing treatment emergency values

```
calculate_number_missing_last_visit_dates
```

Calculate the Number of Missing Last Visit Dates

Description

Calculate the Number of Missing Last Visit Dates

Usage

```
calculate_number_missing_last_visit_dates(dat, sel_lvdt, sel_subjdn)
```

Arguments

dat	data frame with adverse event data
sel_lvdt	character with variable name of last visit date in data
sel_subjdn	character with variable name of subject id

Value

numeric value with the number missing last visit dates

```
calculate_number_missing_severity_flag
```

Calculate the Number of Missing Severity Grades

Description

Calculate the Number of Missing Severity Grades

Usage

```
calculate_number_missing_severity_flag(
  dat,
  sel_aesevn = NULL,
  sel_aedecod,
  severity_grading_flag
)
```

Arguments

dat	data frame with adverse event data
sel_aesevn	character with severity grade variable name
sel_aedecod	character with adverse event code variable name
severity_grading_flag	logical value if 3 or 5 step grading is used

Value

numeric value with the number missing grades

calculate_number_unknown_aes	<i>Calculate the Number of Unknown Adverse Events</i>
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Description

Calculate the Number of Unknown Adverse Events

Usage

```
calculate_number_unknown_aes(dat, sel_aeencoded, sel_aestartday, sel_aeendday)
```

Arguments

dat	data frame with adverse event data
sel_aeencoded	character with adverse event code variable name
sel_aestartday	character with adverse event start day variable name
sel_aeendday	character with adverse event end day variable name

Value

numeric value with the number empty adverse events ("")

check_colname_present	<i>Checks if column name exists, throw an error otherwise</i>
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Description

Checks if column name exists, throw an error otherwise

Usage

```
check_colname_present(colname, data)
```

Arguments

colname	A character, the column name to check
data	A data object

filter_for_safety_flag
<i>Filter for Safety Flag and Create Required Variables</i>

Description

Filter for Safety Flag and Create Required Variables

Usage

filter_for_safety_flag(dat, SAFFN)

Arguments

dat	frame with adverse event data set
SAFFN	Safety Flag as numeric (required)

Value

data frame with filtered adverse event data

filter_prepare_patient_data
<i>Filter for Safety Flag and Create Required Variables</i>

Description

Filter for Safety Flag and Create Required Variables

Usage

filter_prepare_patient_data(data, saffn, lvd, trtsdt, trt01a, subjdn, dthdt)

Arguments

data	frame with adverse event data set
saffn	Safety Flag as numeric (required)
lvd	Last Visit Date as numeric (required)
trtsdt	Treatment Start Date as numeric (required)
trt01a	Treatment Group as character (required)
subjdn	Subject Id as numeric (required)
dthdt	Death Date as numeric (required)

Value

data frame with filtered adverse event data

`get_number_of_unknown_aes`*Get number of unknown AEs*

Description

Get number of unknown AEs

Usage

```
get_number_of_unknown_aes(data, adae_data, adsl_data, sel_aeDecod)
```

Arguments

<code>data</code>	A dataframe
<code>adae_data</code>	A dataframe. ADAE data
<code>adsl_data</code>	A dataframe. ADSL data
<code>sel_aeDecod</code>	Character vector with names of selected AEs (AEDECOD)

`is_convertible_to_date`*Checks if variable can be converted to date*

Description

Returns TRUE if at least a value can be parsed to date with `anytime::anydate`

Usage

```
is_convertible_to_date(variable)
```

Arguments

<code>variable</code>	A vector, the variable
-----------------------	------------------------

join_adae_and_adsl	<i>Join Adverse Event Data and Subject Level Data Sets</i>
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Description

Join Adverse Event Data and Subject Level Data Sets

Usage

```
join_adae_and_adsl(dat_adae, dat_adsl, SUBJIDN)
```

Arguments

dat_adae	data frame with adverse event data set
dat_adsl	data frame with subject level data set
SUBJIDN	character with subject identifier variable (required column in both data sets)

Value

merged data set with adae and adsl information

run_app	<i>Launches the AdEPro application</i>
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Description

Launches the AdEPro application

Usage

```
run_app(  
  onStart = NULL,  
  options = list(),  
  enableBookmarking = NULL,  
  uiPattern = "/",  
  ...  
)
```

Arguments

onStart	A function that will be called before the app is actually run. This is only needed for shinyAppObj, since in the shinyAppDir case, a global.R file can be used for this purpose.
options	Named options that should be passed to the runApp call (these can be any of the following: "port", "launch.browser", "host", "quiet", "display.mode" and "test.mode"). You can also specify width and height parameters which provide a hint to the embedding environment about the ideal height/width for the app.
enableBookmarking	Can be one of "url", "server", or "disable". The default value, NULL, will respect the setting from any previous calls to enableBookmarking() . See enableBookmarking() for more information on bookmarking your app.
uiPattern	A regular expression that will be applied to each GET request to determine whether the ui should be used to handle the request. Note that the entire request path must match the regular expression in order for the match to be considered successful.
...	arguments to pass to golem_opts. See <code>'?golem::get_golem_options'</code> for more details.

Details

Further information on how to use this application can be found in the vignette of this package.

Value

A shiny app

Examples

```
## Not run:
## Launch application on localhost (127.0.0.1)
## -----
## By default run_app starts the application on localhost
## and a randomly selected port (e.g. 9876), in which case you can connect
## to the running application by navigating your browser to
## http://localhost:9876.
run_app()

## Launch application on a different host
## -----
## You can also run the application on a different host
## by specifying a hostname and port. Just make sure to
## use an open port on your machine. Here "open" means
## that the port should not be used by another service
## and the port is opened by your firewall.
options(shiny.port = 8888, shiny.host = "your-hostname")
run_app(host="your-hostname", port=8888)
```

```
## Make the application available to your coworkers
## -----
## within your local area network even without a
## dedicated Shiny server. The value set through the
## host argument says to accept any connection (not just from localhost).
## Then take note of your local IP (if you are under linux,
## you can see it through ifconfig). Say your IP is 192.168.1.70.
## Your colleagues can use your app by inserting in the address
## bar of their browser 192.168.1.70:8888, i.e. your IP followed
## by : and the port number you selected.
options(shiny.port = 8888, shiny.host = "0.0.0.0")
run_app()

## Launch application on a different browser
## -----
## To run the shiny app on a different browser than your standard browser
## use the "browser" argument to set the path to the respective .exe file.
option(browser = "C:/Program Files/Mozilla Firefox/firefox.exe")
run_app()

## launching the application.

## End(Not run)
```

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