

Package ‘youthu’

April 9, 2021

Title Youth Outcomes to Health Utility

Version 0.0.0.9065

Description Tools for mapping measures routinely collected in youth mental health services to AQOL 6D Health Utility. Part of the First Bounce model of primary youth mental health services. This development version of the youthu package has been made available as part of the process of testing and documenting the package. The tools contained in this development release are designed for use in conjunction with model objects stored in data repositories. The real model objects will be publicly released once the associated scientific manuscript is published. In the mean time, we have included links to placeholder model objects derived from synthetic data. For this reason, this release is for demonstration purposes only and this package should not yet be used in analyses deigned to inform policy decisions. If you have any questions, please contact the authors (matthew.hamilton@orygen.org.au). The documentation for this package has been automatically generated by the ready4fun package and is therefore quite rudimentary. Human authored documentation will follow in 2021.

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URL <https://ready4-dev.github.io/youthu/>,
<https://github.com/ready4-dev/youthu>, <https://www.ready4-dev.com/>

Encoding UTF-8

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dataverse (>= 0.3.7),
dplyr,
ggplot2,
knitr,
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lifecycle,
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magrittr,
MatchIt,

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 purrr,
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 ready4show (\geq 0.0.0.9019),
 ready4use (\geq 0.0.0.9122),
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 stats,
 stringr,
 testthat,
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 tidyselect,
 truncnorm,
 TTU (\geq 0.0.0.9133),
 utils,
 youthvars (\geq 0.0.0.9018)

VignetteBuilder knitr

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 ready4-dev/TTU,
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 ready4-dev/ready4fun

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youthu-package	<i>youthu: Youth Outcomes to Health Utility</i>
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Description

Tools for mapping measures routinely collected in youth mental health services to AQOL 6D Health Utility. Part of the First Bounce model of primary youth mental health services. This development version of the youthu package has been made available as part of the process of testing and documenting the package. The tools contained in this development release are designed for use in conjunction with model objects stored in data repositories. The real model objects will be publicly released once the associated scientific manuscript is published. In the mean time, we have included links to placeholder model objects derived from synthetic data. For this reason, this release is for demonstration purposes only and this package should not yet be used in analyses designed to inform policy decisions. If you have any questions, please contact the authors (matthew.hamilton@orygen.org.au). The documentation for this package has been automatically generated by the ready4fun package and is therefore quite rudimentary. Human authored documentation will follow in 2021.

Details

To learn more about youthu, start with the vignettes: `browseVignettes(package = "youthu")`

Author(s)

Maintainer: Matthew Hamilton <matthew.hamilton@orygen.org.au> ([ORCID](#))

Authors:

- Caroline Gao <caroline.gao@orygen.org.au> ([ORCID](#))

Other contributors:

- Orygen [copyright holder, funder]
- Headspace [funder]
- National Health and Medical Research Council [funder]

See Also

Useful links:

- <https://ready4-dev.github.io/youthu/>
- <https://github.com/ready4-dev/youthu>
- <https://www.ready4-dev.com/>

abbreviations_lup *Common abbreviations lookup table*

Description

A lookup table for abbreviations commonly used in object names in the youthpackage.

Usage

```
abbreviations_lup
```

Format

An object of class `tbl_df` (inherits from `tbl`, `data.frame`) with 493 rows and 3 columns.

Details

A tibble

short_name_chr Short name (a character vector)

long_name_chr Long name (a character vector)

plural_lgl Plural (a logical vector)

Source

<https://doi.org/10.7910/DVN/2Y9VF9>

add_aqol6d_predn_to_ds

Add Assessment of Quality of Life Six Dimension prediction to dataset

Description

`add_aqol6d_predn_to_ds()` is an Add function that updates an object by adding data to that object. Specifically, this function implements an algorithm to add assessment of quality of life six dimension prediction to dataset. Function argument `data_tb` specifies the object to be updated. The function returns `Updated` (a tibble).

Usage

```
add_aqol6d_predn_to_ds(
  data_tb,
  model_md1,
  tfmn_1L_chr,
  predr_vars_nms_chr = NULL,
  utl_var_nm_1L_chr = NULL,
  id_var_nm_1L_chr = "fkClientID",
  round_var_nm_1L_chr = "round",
  round_bl_val_1L_chr = "Baseline",
  utl_cls_fn = youthvars::youthvars_aqol6d_adol,
  predictors_lup = NULL
)
```

Arguments

data_tb	Data (a tibble)
model_md1	Model (a model)
tfmn_1L_chr	Transformation (a character vector of length one)
predr_vars_nms_chr	Predictor variables names (a character vector), Default: NULL
utl_var_nm_1L_chr	Utility variable name (a character vector of length one), Default: NULL
id_var_nm_1L_chr	Identity variable name (a character vector of length one), Default: 'fkClientID'
round_var_nm_1L_chr	Round variable name (a character vector of length one), Default: 'round'
round_bl_val_1L_chr	Round baseline value (a character vector of length one), Default: 'Baseline'
utl_cls_fn	Utility class (a function), Default: youthvars::youthvars_aqol6d_adol
predictors_lup	Predictors (a lookup table), Default: NULL

Value

Updated (a tibble)

add_change_in_ds_var *Add change in dataset variable*

Description

add_change_in_ds_var() is an Add function that updates an object by adding data to that object. Specifically, this function implements an algorithm to add change in dataset variable. Function argument ds_tb specifies the object to be updated. The function returns Updated dataset (a tibble).

Usage

```
add_change_in_ds_var(
  ds_tb,
  id_var_nm_1L_chr = "fkClientID",
  round_var_nm_1L_chr = "round",
  round_bl_val_1L_chr = "Baseline",
  change_var_nm_1L_chr,
  var_nm_1L_chr,
  arrange_by_id_lgl = T
)
```

Arguments

ds_tb	Dataset (a tibble)
id_var_nm_1L_chr	Identity variable name (a character vector of length one), Default: 'fkClientID'

round_var_nm_1L_chr
Round variable name (a character vector of length one), Default: 'round'

round_bl_val_1L_chr
Round baseline value (a character vector of length one), Default: 'Baseline'

change_var_nm_1L_chr
Change variable name (a character vector of length one)

var_nm_1L_chr Variable name (a character vector of length one)

arrange_by_id_lgl
Arrange by identity (a logical vector), Default: T

Value

Updated dataset (a tibble)

add_costs_by_tmpt	<i>Add costs by time point</i>
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Description

add_costs_by_tmpt() is an Add function that updates an object by adding data to that object. Specifically, this function implements an algorithm to add costs by time point. Function argument ds_tb specifies the object to be updated. The function returns Updated dataset (a tibble).

Usage

```
add_costs_by_tmpt(
  ds_tb,
  round_var_nm_1L_chr,
  round_lvls_chr = c("Baseline", "Follow-up"),
  costs_mean_dbl,
  costs_sd_dbl,
  extra_cost_args_ls = list(costs_var_nm_1L_chr = "costs_dbl"),
  fn = add_costs_from_gamma_dstr
)
```

Arguments

ds_tb Dataset (a tibble)

round_var_nm_1L_chr
Round variable name (a character vector of length one)

round_lvls_chr Round levels (a character vector), Default: c("Baseline", "Follow-up")

costs_mean_dbl Costs mean (a double vector)

costs_sd_dbl Costs standard deviation (a double vector)

extra_cost_args_ls
Extra cost arguments (a list), Default: list(costs_var_nm_1L_chr = "costs_dbl")

fn Function (a function), Default: add_costs_from_gamma_dstr

Value

Updated dataset (a tibble)

add_costs_from_gamma_dstr
Add costs from gamma distribution

Description

add_costs_from_gamma_dstr() is an Add function that updates an object by adding data to that object. Specifically, this function implements an algorithm to add costs from gamma distribution. Function argument ds_tb specifies the object to be updated. The function returns Updated dataset (a tibble).

Usage

```
add_costs_from_gamma_dstr(  
  ds_tb,  
  costs_mean_dbl,  
  costs_sd_dbl,  
  costs_var_nm_1L_chr = "costs_dbl"  
)
```

Arguments

ds_tb	Dataset (a tibble)
costs_mean_dbl	Costs mean (a double vector)
costs_sd_dbl	Costs standard deviation (a double vector)
costs_var_nm_1L_chr	Costs variable name (a character vector of length one), Default: 'costs_dbl'

Value

Updated dataset (a tibble)

add_dates_from_dstr *Add dates from distribution*

Description

add_dates_from_dstr() is an Add function that updates an object by adding data to that object. Specifically, this function implements an algorithm to add dates from distribution. Function argument ds_tb specifies the object to be updated. The function returns Updated dataset (a tibble).

Usage

```
add_dates_from_dstr(  
  ds_tb,  
  bl_start_date_dtm,  
  bl_end_date_dtm,  
  duration_args_ls,  
  duration_fn = stats::rnorm,
```

```

date_var_nm_1L_chr = "date_psx",
id_var_nm_1L_chr = "fkClientID",
round_var_nm_1L_chr = "round",
round_bl_val_1L_chr = "Baseline",
origin_1L_chr = "1970-01-01"
)

```

Arguments

ds_tb	Dataset (a tibble)
bl_start_date_dtm	Baseline start date (a date vector)
bl_end_date_dtm	Baseline end date (a date vector)
duration_args_ls	Duration arguments (a list)
duration_fn	Duration (a function), Default: stats::rnorm
date_var_nm_1L_chr	Date variable name (a character vector of length one), Default: 'date_psx'
id_var_nm_1L_chr	Identity variable name (a character vector of length one), Default: 'fkClientID'
round_var_nm_1L_chr	Round variable name (a character vector of length one), Default: 'round'
round_bl_val_1L_chr	Round baseline value (a character vector of length one), Default: 'Baseline'
origin_1L_chr	Origin (a character vector of length one), Default: '1970-01-01'

Value

Updated dataset (a tibble)

add_diffs_by_group_and_tmpt

Add differences by group and time point

Description

add_diffs_by_group_and_tmpt() is an Add function that updates an object by adding data to that object. Specifically, this function implements an algorithm to add differences by group and time point. Function argument ds_tb specifies the object to be updated. The function returns Updated dataset (a tibble).

Usage

```

add_diffs_by_group_and_tmpt(
  ds_tb = trial_ds_tb,
  cmprsn_var_nm_1L_chr = "study_arm_chr",
  cmprsn_group_match_val_chr = c("Intervention"),
  round_var_nm_1L_chr = "round",

```



```

timepoint_match_val_1L_chr = "Follow-up",
match_idx_var_nm_1L_chr = "match_idx_int",
var_nms_chr,
fns_ls,
abs_mean_diff_dbl,
diff_sd_dbl,
multiplier_dbl,
min_dbl,
max_dbl,
integer_lgl
)

```

Arguments

ds_tb	Dataset (a tibble), Default: trial_ds_tb
cmpsrn_var_nm_1L_chr	Comparison variable name (a character vector of length one), Default: 'study_arm_chr'
cmpsrn_group_match_val_chr	Comparison group match value (a character vector), Default: c("Intervention")
round_var_nm_1L_chr	Round variable name (a character vector of length one), Default: 'round'
timepoint_match_val_1L_chr	Timepoint match value (a character vector of length one), Default: 'Follow-up'
match_idx_var_nm_1L_chr	Match index variable name (a character vector of length one), Default: 'match_idx_int'
var_nms_chr	Variable names (a character vector)
fns_ls	Functions (a list)
abs_mean_diff_dbl	Absolute mean difference (a double vector)
diff_sd_dbl	Difference standard deviation (a double vector)
multiplier_dbl	Multiplier (a double vector)
min_dbl	Minimum (a double vector)
max_dbl	Maximum (a double vector)
integer_lgl	Integer (a logical vector)

Value

Updated dataset (a tibble)

add_qalys

Add Quality Adjusted Life Years

Description

add_qalys() is an Add function that updates an object by adding data to that object. Specifically, this function implements an algorithm to add quality adjusted life years. Function argument ds_tb specifies the object to be updated. The function returns Updated dataset (a tibble).

Usage

```
add_qalys(
  ds_tb,
  cmprsn_var_nm_1L_chr = "study_arm_chr",
  duration_var_nm_1L_chr = "duration_prd",
  id_var_nm_1L_chr = "fkClientID",
  match_idx_var_nm_1L_chr = "match_idx_int",
  qalys_var_nm_1L_chr = "qalys_dbl",
  round_var_nm_1L_chr = "round",
  utl_change_var_nm_1L_chr = "utl_change_dbl",
  utl_var_nm_1L_chr = "utility_dbl",
  reshape_1L_lgl = T
)
```

Arguments

`ds_tb` Dataset (a tibble)

`cmprsn_var_nm_1L_chr` Comparison variable name (a character vector of length one), Default: 'study_arm_chr'

`duration_var_nm_1L_chr` Duration variable name (a character vector of length one), Default: 'duration_prd'

`id_var_nm_1L_chr` Identity variable name (a character vector of length one), Default: 'fkClientID'

`match_idx_var_nm_1L_chr` Match index variable name (a character vector of length one), Default: 'match_idx_int'

`qalys_var_nm_1L_chr` Quality Adjusted Life Years variable name (a character vector of length one), Default: 'qalys_dbl'

`round_var_nm_1L_chr` Round variable name (a character vector of length one), Default: 'round'

`utl_change_var_nm_1L_chr` Utility change variable name (a character vector of length one), Default: 'utl_change_dbl'

`utl_var_nm_1L_chr` Utility variable name (a character vector of length one), Default: 'utility_dbl'

`reshape_1L_lgl` Reshape (a logical vector of length one), Default: T

Value

Updated dataset (a tibble)

`add_qalys_to_ds` *Add Quality Adjusted Life Years to dataset*

Description

`add_qalys_to_ds()` is an Add function that updates an object by adding data to that object. Specifically, this function implements an algorithm to add quality adjusted life years to dataset. Function argument `ds_tb` specifies the object to be updated. The function returns Dataset (a tibble).

Usage

```
add_qalys_to_ds(ds_tb, ds_smry_ls)
```

Arguments

ds_tb	Dataset (a tibble)
ds_smry_ls	Dataset summary (a list)

Value

Dataset (a tibble)

extract_guide_box_lgd *Extract guide box legend*

Description

extract_guide_box_lgd() is an Extract function that extracts data from an object. Specifically, this function implements an algorithm to extract guide box legend. The function returns Legend (a character vector of length one).

Usage

```
extract_guide_box_lgd(plot_plt)
```

Arguments

plot_plt	Plot (a plot)
----------	---------------

Value

Legend (a character vector of length one)

fns_dmt_tb *youthu function documentation table*

Description

Meta-data on each youthu function used to create package documentation

Usage

```
fns_dmt_tb
```

Format

An object of class `tbl_df` (inherits from `tbl`, `data.frame`) with 27 rows and 10 columns.

Details

A tibble

fns_chr Functions (a character vector)

title_chr Title (a character vector)

desc_chr Description (a character vector)

details_chr Details (a character vector)

inc_for_main_user_lgl Include for main user (a logical vector)

output_chr Output (a character vector)

example_lgl Example (a logical vector)

args_ls Arguments (a list)

file_nm_chr File name (a character vector)

file_pfx_chr File prefix (a character vector)

Source

<https://ready4-dev.github.io/youthu/>

fn_type_lup_tb	<i>Function type lookup table</i>
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Description

A lookup table to find descriptions for different types of functions used within the youthu package suite.

Usage

fn_type_lup_tb

Format

An object of class `tbl_df` (inherits from `tbl`, `data.frame`) with 46 rows and 6 columns.

Details

A tibble

fn_type_nm_chr Function type name (a character vector)

fn_type_desc_chr Function type description (a character vector)

first_arg_desc_chr First argument description (a character vector)

second_arg_desc_chr Second argument description (a character vector)

is_generic_lgl Is generic (a logical vector)

is_method_lgl Is method (a logical vector)

Source

<https://doi.org/10.7910/DVN/2Y9VF9>

get_mdls_using_predrs *Get models using predictors*

Description

get_mdls_using_predrs() is a Get function that retrieves a pre-existing data object from memory, local file system or online repository. Specifically, this function implements an algorithm to get models using predictors. Function argument mdl_predrs_in_ds_chr specifies the where to look for the required object. The function returns Filtered models (a lookup table).

Usage

```
get_mdls_using_predrs(mdl_predrs_in_ds_chr, mdls_lup = NULL)
```

Arguments

mdl_predrs_in_ds_chr
Model predictors in dataset (a character vector)

mdls_lup
Models (a lookup table), Default: NULL

Value

Filtered models (a lookup table)

get_md1_from_dv *Get model from dataverse*

Description

get_md1_from_dv() is a Get function that retrieves a pre-existing data object from memory, local file system or online repository. Specifically, this function implements an algorithm to get model from dataverse. Function argument mdl_nm_1L_chr specifies the where to look for the required object. The function returns Model (a model).

Usage

```
get_md1_from_dv(
  mdl_nm_1L_chr,
  dv_ds_nm_1L_chr = "https://doi.org/10.7910/DVN/JC6PTV",
  server_1L_chr = "dataverse.harvard.edu",
  key_1L_chr = NULL
)
```

Arguments

mdl_nm_1L_chr
Model name (a character vector of length one)

dv_ds_nm_1L_chr
Dataverse dataset name (a character vector of length one), Default: 'https://doi.org/10.7910/DVN/JC6PTV'

server_1L_chr
Server (a character vector of length one), Default: 'dataverse.harvard.edu'

key_1L_chr
Key (a character vector of length one), Default: NULL

Value

Model (a model)

get_tfmn_from_lup *Get transformation from*

Description

get_tfmn_from_lup() is a Get function that retrieves a pre-existing data object from memory, local file system or online repository. Specifically, this function implements an algorithm to get transformation from lookup table. Function argument mdl_nm_1L_chr specifies the where to look for the required object. The function returns Transformation (a character vector of length one).

Usage

```
get_tfmn_from_lup(mdl_nm_1L_chr, mdl_s_lup = NULL)
```

Arguments

mdl_nm_1L_chr Model name (a character vector of length one)
 mdl_s_lup Models (a lookup table), Default: NULL

Value

Transformation (a character vector of length one)

make_balanced_fake_ds *Make balanced fake dataset*

Description

make_balanced_fake_ds() is a Make function that creates a new R object. Specifically, this function implements an algorithm to make balanced fake dataset. The function returns Dataset (a tibble).

Usage

```
make_balanced_fake_ds(  
  ds_tb,  
  match_on_vars_chr,  
  id_var_nm_1L_chr = "UID_chr",  
  round_var_nm_1L_chr = "Timepoint_chr",  
  timepoint_bl_val_1L_chr = "Baseline",  
  cmprsn_var_nm_1L_chr = "study_arm_chr",  
  cmprsn_groups_chr = c("Intervention", "Control")  
)
```

Arguments

ds_tb	Dataset (a tibble)
match_on_vars_chr	Match on variables (a character vector)
id_var_nm_1L_chr	Identity variable name (a character vector of length one), Default: 'UID_chr'
round_var_nm_1L_chr	Round variable name (a character vector of length one), Default: 'Timepoint_chr'
timepoint_bl_val_1L_chr	Timepoint baseline value (a character vector of length one), Default: 'Baseline'
cmpsrn_var_nm_1L_chr	Comparison variable name (a character vector of length one), Default: 'study_arm_chr'
cmpsrn_groups_chr	Comparison groups (a character vector), Default: c("Intervention", "Control")

Value

Dataset (a tibble)

make_costs_vec_from_gamma_dstr

Make costs vector from gamma distribution

Description

make_costs_vec_from_gamma_dstr() is a Make function that creates a new R object. Specifically, this function implements an algorithm to make costs vector from gamma distribution. The function returns Costs (a double vector).

Usage

```
make_costs_vec_from_gamma_dstr(n_int, costs_mean_dbl, costs_sd_dbl)
```

Arguments

n_int	N (an integer vector)
costs_mean_dbl	Costs mean (a double vector)
costs_sd_dbl	Costs standard deviation (a double vector)

Value

Costs (a double vector)

make_cst_efns_smry *Make cost efns summary*

Description

make_cst_efns_smry() is a Make function that creates a new R object. Specifically, this function implements an algorithm to make cost efns summary. The function returns Summary (a double vector).

Usage

```
make_cst_efns_smry(
  ds_tb,
  idxs_int,
  change_types_chr = "dbl",
  benefits_pfx_1L_chr = "qalys_dbl",
  benefits_var_nm_1L_chr = "qalys",
  costs_pfx_1L_chr = "costs_dbl",
  costs_var_nm_1L_chr = "costs",
  change_sfx_1L_chr = "change",
  change_vars_chr = NA_character_,
  cmprsn_groups_chr = c("Intervention", "Control"),
  cmprsn_var_nm_1L_chr = "study_arm_chr",
  round_fup_val_1L_chr = "Follow-up"
)
```

Arguments

ds_tb	Dataset (a tibble)
idxs_int	Indices (an integer vector)
change_types_chr	Change types (a character vector), Default: 'dbl'
benefits_pfx_1L_chr	Benefits prefix (a character vector of length one), Default: 'qalys_dbl'
benefits_var_nm_1L_chr	Benefits variable name (a character vector of length one), Default: 'qalys'
costs_pfx_1L_chr	Costs prefix (a character vector of length one), Default: 'costs_dbl'
costs_var_nm_1L_chr	Costs variable name (a character vector of length one), Default: 'costs'
change_sfx_1L_chr	Change suffix (a character vector of length one), Default: 'change'
change_vars_chr	Change variables (a character vector), Default: 'NA'
cmprsn_groups_chr	Comparison groups (a character vector), Default: c("Intervention", "Control")
cmprsn_var_nm_1L_chr	Comparison variable name (a character vector of length one), Default: 'study_arm_chr'
round_fup_val_1L_chr	Round follow-up value (a character vector of length one), Default: 'Follow-up'

Value

Summary (a double vector)

make_fake_trial_ds	<i>Make fake trial dataset</i>
--------------------	--------------------------------

Description

make_fake_trial_ds() is a Make function that creates a new R object. Specifically, this function implements an algorithm to make fake trial dataset. The function returns Updated dataset (a tibble).

Usage

```
make_fake_trial_ds(
  ds_tb,
  id_var_nm_1L_chr = "fkClientID",
  round_var_nm_1L_chr = "round",
  round_lvls_chr = c("Baseline", "Follow-up"),
  match_on_vars_chr,
  cmprsn_var_nm_1L_chr = "study_arm_chr",
  cmprsn_groups_chr = c("Intervention", "Control"),
  fns_ls,
  var_nms_chr,
  abs_mean_diff_dbl,
  diff_sd_dbl,
  multiplier_dbl,
  min_dbl,
  max_dbl,
  integer_lgl,
  match_idx_var_nm_1L_chr = "match_idx_int"
)
```

Arguments

ds_tb	Dataset (a tibble)
id_var_nm_1L_chr	Identity variable name (a character vector of length one), Default: 'fkClientID'
round_var_nm_1L_chr	Round variable name (a character vector of length one), Default: 'round'
round_lvls_chr	Round levels (a character vector), Default: c("Baseline", "Follow-up")
match_on_vars_chr	Match on variables (a character vector)
cmprsn_var_nm_1L_chr	Comparison variable name (a character vector of length one), Default: 'study_arm_chr'
cmprsn_groups_chr	Comparison groups (a character vector), Default: c("Intervention", "Control")
fns_ls	Functions (a list)
var_nms_chr	Variable names (a character vector)

abs_mean_diff_dbl Absolute mean difference (a double vector)

diff_sd_dbl Difference standard deviation (a double vector)

multiplier_dbl Multiplier (a double vector)

min_dbl Minimum (a double vector)

max_dbl Maximum (a double vector)

integer_lgl Integer (a logical vector)

match_idx_var_nm_1L_chr
 Match index variable name (a character vector of length one), Default: 'match_idx_int'

Value

Updated dataset (a tibble)

make_formula	<i>Make formula</i>
--------------	---------------------

Description

make_formula() is a Make function that creates a new R object. Specifically, this function implements an algorithm to make formula. The function is called for its side effects and does not return a value.

Usage

```
make_formula(
  depnt_var_nm_1L_chr,
  predictors_chr,
  environment_env = parent.frame()
)
```

Arguments

depnt_var_nm_1L_chr
 Dependent variable name (a character vector of length one)

predictors_chr Predictors (a character vector)

environment_env
 Environment (an environment), Default: parent.frame()

Value

NA ()

make_hlth_ec_smry *Make health economic summary*

Description

make_hlth_ec_smry() is a Make function that creates a new R object. Specifically, this function implements an algorithm to make health economic summary. The function returns He summary (a list).

Usage

```
make_hlth_ec_smry(
  ds_tb,
  change_vars_chr = NA_character_,
  wtp_dbl = 50000,
  bootstrap_iters_1L_int = 1000,
  change_types_chr = "dbl",
  benefits_pfx_1L_chr = "qalys_dbl",
  benefits_var_nm_1L_chr = "qalys",
  costs_pfx_1L_chr = "costs_dbl",
  costs_var_nm_1L_chr = "costs",
  change_sfx_1L_chr = "change",
  cmprsn_groups_chr = c("Intervention", "Control"),
  cmprsn_var_nm_1L_chr = "study_arm_chr",
  round_fup_val_1L_chr = "Follow-up"
)
```

Arguments

ds_tb	Dataset (a tibble)
change_vars_chr	Change variables (a character vector), Default: 'NA'
wtp_dbl	Willingness to pay (a double vector), Default: 50000
bootstrap_iters_1L_int	Bootstrap iterations (an integer vector of length one), Default: 1000
change_types_chr	Change types (a character vector), Default: 'dbl'
benefits_pfx_1L_chr	Benefits prefix (a character vector of length one), Default: 'qalys_dbl'
benefits_var_nm_1L_chr	Benefits variable name (a character vector of length one), Default: 'qalys'
costs_pfx_1L_chr	Costs prefix (a character vector of length one), Default: 'costs_dbl'
costs_var_nm_1L_chr	Costs variable name (a character vector of length one), Default: 'costs'
change_sfx_1L_chr	Change suffix (a character vector of length one), Default: 'change'
cmprsn_groups_chr	Comparison groups (a character vector), Default: c("Intervention", "Control")

cmprsn_var_nm_1L_chr

Comparison variable name (a character vector of length one), Default: 'study_arm_chr'

round_fup_val_1L_chr

Round follow-up value (a character vector of length one), Default: 'Follow-up'

Value

He summary (a list)

make_matched_ds	<i>Make matched dataset</i>
-----------------	-----------------------------

Description

make_matched_ds() is a Make function that creates a new R object. Specifically, this function implements an algorithm to make matched dataset. The function returns Matched dataset (a tibble).

Usage

```
make_matched_ds(sngl_grp_ds_tb, cmprsn_smry_tb, ds_smry_ls)
```

Arguments

sngl_grp_ds_tb Single group dataset (a tibble)
 cmprsn_smry_tb Comparison summary (a tibble)
 ds_smry_ls Dataset summary (a list)

Value

Matched dataset (a tibble)

make_matched_ds_spine	<i>Make matched dataset spine</i>
-----------------------	-----------------------------------

Description

make_matched_ds_spine() is a Make function that creates a new R object. Specifically, this function implements an algorithm to make matched dataset spine. The function returns Matched dataset (a tibble).

Usage

```
make_matched_ds_spine(  
  ds_tb,  
  round_var_nm_1L_chr = "Timepoint_chr",  
  timepoint_bl_val_1L_chr = "Baseline",  
  cmprsn_var_nm_1L_chr = "study_arm_chr",  
  active_arm_val_1L_chr = "Intervention",  
  id_var_nm_1L_chr = "fkClientID",  
  match_on_vars_chr  
)
```

Arguments

ds_tb	Dataset (a tibble)
round_var_nm_1L_chr	Round variable name (a character vector of length one), Default: 'Timepoint_chr'
timepoint_bl_val_1L_chr	Timepoint baseline value (a character vector of length one), Default: 'Baseline'
cmpsrn_var_nm_1L_chr	Comparison variable name (a character vector of length one), Default: 'study_arm_chr'
active_arm_val_1L_chr	Active arm value (a character vector of length one), Default: 'Intervention'
id_var_nm_1L_chr	Identity variable name (a character vector of length one), Default: 'fkClientID'
match_on_vars_chr	Match on variables (a character vector)

Value

Matched dataset (a tibble)

make_sngl_grp_ds	<i>Make single group dataset</i>
------------------	----------------------------------

Description

make_sngl_grp_ds() is a Make function that creates a new R object. Specifically, this function implements an algorithm to make single group dataset. The function returns Single group dataset (a tibble).

Usage

```
make_sngl_grp_ds(seed_ds_tb = NULL, ds_smry_ls)
```

Arguments

seed_ds_tb	Seed dataset (a tibble), Default: NULL
ds_smry_ls	Dataset summary (a list)

Value

Single group dataset (a tibble)

 mdl1_s_lup

Lookup table of prediction models

Description

A summary of the key descriptive features of the prediction models included in the youthu package.

Usage

```
mdl1_s_lup
```

Format

An object of class `tbl_df` (inherits from `tbl`, `data.frame`) with 24 rows and 4 columns.

Details

A tibble

mdl_nms_chr Model names (a character vector)

predrs_ls Predictors (a list)

mdl_type_chr Model type (a character vector)

tfmn_chr Transformation (a character vector)

 predict_from_md1_coefs

Predict from model coefficients

Description

`predict_from_md1_coefs()` is a Predict function that makes predictions from data using a specified statistical model. Specifically, this function implements an algorithm to predict from model coefficients. The function returns `Pred` (a double vector).

Usage

```
predict_from_md1_coefs(smry_of_md1_tb, new_data_tb)
```

Arguments

`smry_of_md1_tb` Summary of model (a tibble)

`new_data_tb` New data (a tibble)

Value

`Pred` (a double vector)

rename_from_nmd_vec *Rename from named vector*

Description

rename_from_nmd_vec() is a Rename function that renames elements of an object based on a pre-specified schema. Specifically, this function implements an algorithm to rename from named vector. The function returns Renamed data (a tibble).

Usage

```
rename_from_nmd_vec(data_tb, nmd_vec_chr, vec_nms_as_new_1L_lgl = T)
```

Arguments

data_tb Data (a tibble)
nmd_vec_chr Named vector (a character vector)
vec_nms_as_new_1L_lgl
 Vector names as new (a logical vector of length one), Default: T

Value

Renamed data (a tibble)

transform_ds_for_cmprsn
 Transform dataset for comparison

Description

transform_ds_for_cmprsn() is a Transform function that edits an object in such a way that core object attributes - e.g. shape, dimensions, elements, type - are altered. Specifically, this function implements an algorithm to transform dataset for comparison. Function argument ds_tb specifies the object to be updated. Argument cmprsn_var_nm_1L_chr provides the object to be updated. The function returns Dataset (a tibble).

Usage

```
transform_ds_for_cmprsn(  
  ds_tb,  
  cmprsn_var_nm_1L_chr,  
  id_var_nm_1L_chr = "UID_chr",  
  round_var_nm_1L_chr = "Timepoint_chr",  
  cmprsn_groups_chr = c("Intervention", "Control")  
)
```

Arguments

ds_tb	Dataset (a tibble)
cmprsn_var_nm_1L_chr	Comparison variable name (a character vector of length one)
id_var_nm_1L_chr	Identity variable name (a character vector of length one), Default: 'UID_chr'
round_var_nm_1L_chr	Round variable name (a character vector of length one), Default: 'Timepoint_chr'
cmprsn_groups_chr	Comparison groups (a character vector), Default: c("Intervention", "Control")

Value

Dataset (a tibble)

transform_ds_to_predn_ds

Transform dataset to prediction dataset

Description

transform_ds_to_predn_ds() is a Transform function that edits an object in such a way that core object attributes - e.g. shape, dimensions, elements, type - are altered. Specifically, this function implements an algorithm to transform dataset to prediction dataset. Function argument data_tb specifies the object to be updated. Argument predr_vars_nms_chr provides the object to be updated. The function returns Data (a tibble).

Usage

```
transform_ds_to_predn_ds(
  data_tb,
  predr_vars_nms_chr,
  tfmn_1L_chr,
  depnt_var_nm_1L_chr = "aqol6d_total_w",
  id_var_nm_1L_chr = "fkClientID",
  round_var_nm_1L_chr = "round",
  round_bl_val_1L_chr = "Baseline",
  predictors_lup = NULL
)
```

Arguments

data_tb	Data (a tibble)
predr_vars_nms_chr	Predictor variables names (a character vector)
tfmn_1L_chr	Transformation (a character vector of length one)
depnt_var_nm_1L_chr	Dependent variable name (a character vector of length one), Default: 'aqol6d_total_w'

id_var_nm_1L_chr Identity variable name (a character vector of length one), Default: 'fkClientID'
 round_var_nm_1L_chr Round variable name (a character vector of length one), Default: 'round'
 round_bl_val_1L_chr Round baseline value (a character vector of length one), Default: 'Baseline'
 predictors_lup Predictors (a lookup table), Default: NULL

Value

Data (a tibble)

update_col_with_diff *Update column with difference*

Description

update_col_with_diff() is an Update function that edits an object, while preserving core object attributes. Specifically, this function implements an algorithm to update column with difference. Function argument ds_tb specifies the object to be updated. Argument var_nm_1L_chr provides the object to be updated. The function is called for its side effects and does not return a value.

Usage

```
update_col_with_diff(  
  ds_tb,  
  var_nm_1L_chr,  
  fn,  
  abs_mean_diff_1L_dbl,  
  diff_sd_1L_dbl,  
  multiplier_1L_dbl,  
  min_1L_dbl,  
  max_1L_dbl,  
  integer_1L_lgl  
)
```

Arguments

ds_tb Dataset (a tibble)
 var_nm_1L_chr Variable name (a character vector of length one)
 fn Function (a function)
 abs_mean_diff_1L_dbl Absolute mean difference (a double vector of length one)
 diff_sd_1L_dbl Difference standard deviation (a double vector of length one)
 multiplier_1L_dbl Multiplier (a double vector of length one)
 min_1L_dbl Minimum (a double vector of length one)
 max_1L_dbl Maximum (a double vector of length one)
 integer_1L_lgl Integer (a logical vector of length one)

Value

New (a dataset)

update_multpl_cols_with_diffs

Update multiplier columns with differences

Description

update_multpl_cols_with_diffs() is an Update function that edits an object, while preserving core object attributes. Specifically, this function implements an algorithm to update multiplier columns with differences. Function argument ds_tb specifies the object to be updated. Argument var_nms_chr provides the object to be updated. The function returns Updated dataset (a tibble).

Usage

```
update_multpl_cols_with_diffs(  
  ds_tb,  
  var_nms_chr,  
  fns_ls,  
  abs_mean_diff_dbl,  
  diff_sd_dbl,  
  multiplier_dbl,  
  min_dbl,  
  max_dbl,  
  integer_lgl  
)
```

Arguments

ds_tb	Dataset (a tibble)
var_nms_chr	Variable names (a character vector)
fns_ls	Functions (a list)
abs_mean_diff_dbl	Absolute mean difference (a double vector)
diff_sd_dbl	Difference standard deviation (a double vector)
multiplier_dbl	Multiplier (a double vector)
min_dbl	Minimum (a double vector)
max_dbl	Maximum (a double vector)
integer_lgl	Integer (a logical vector)

Value

Updated dataset (a tibble)

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