

Package ‘CME.assistant’

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Title Reusable Assisting Functions for Child Mortality Estimation

Version 1.1.3

Description Provide helper functions for UNICEF child mortality estimation.

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Encoding UTF-8

LazyData true

Depends R (>= 3.3.0), data.table (>= 1.12.0)

Imports ggplot2 (>= 3.0.0), here, readxl, xlsx, usethis

RoxygenNote 7.1.1

Suggests knitr, rmarkdown

VignetteBuilder knitr

NeedsCompilation no

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add.new.series.imr *Add new IMR entries (dt_new_entries), now the same function as 'add.new.series.u5mr'*

Description

Still kept in case needed in the future in case need to differentiate IMR from U5MR process

Usage

```
add.new.series.imr(dt_IMR, dt_new_entries, remove_old = FALSE)
```

Arguments

dt_IMR the IMR master dataset
dt_new_entries dt of new entries to be added
remove_old if TRUE, remove old entries, if FALSE, set old entries to invisible and excluded

Value

the new dt_IMR

add.new.series.nmr *Add new NMR entries ('dt_new_entries')*

Description

Add new NMR entries ('dt_new_entries')

Usage

```
add.new.series.nmr(dt_nmr, dt_new_entries, remove_old = FALSE)
```

Arguments

dt_nmr the NMR master dataset
dt_new_entries dt of new entries to be added
remove_old if TRUE, remove old entries, if FALSE, set old entries to invisible and excluded

Value

the new dt_nmr_new

add.new.series.u5mr *Add new U5MR or IMR entries (dt_new_entries)*

Description

Add new U5MR or IMR entries (dt_new_entries)

Usage

```
add.new.series.u5mr(dt_master, dt_new_entries, remove_old = FALSE)
```

Arguments

dt_master the U5MR master dataset
dt_new_entries dt of new entries to be added
remove_old if TRUE, remove old entries, if FALSE, set old entries to invisible and excluded

Value

the new dt_master

add.Original.Series.Name
Add an original series name

Description

Add 'Original.Series.Name' column by the supplied 'ori_name' argument

Usage

```
add.Original.Series.Name(dt_new_entries, ori_name)
```

Arguments

dt_new_entries dt of new entries to be added
ori_name value for Original.Series.Name

Value

dt_new_entries

check.and.install.pkgs

Check and install packages if missing

Description

Check and install packages if missing

Usage

check.and.install.pkgs(pkgs)

Arguments

pkgs vector of packages

check.CC.profile.data *Compare CC profile tables to "results.csv"*

Description

Compare CC profile tables to all the "results.csv" files listed in 'results_dir_list' for all indicators enclosed.

Usage

check.CC.profile.data(cc_dir, results_dir_list)

Arguments

cc_dir CC profile output directory: where the CC profiles are saved
results_dir_list list of all the results.csv files to read in and compare

Value

NULL, print problems as messages, save comparison datasets read CC xlsx profile data

```
compare.results.vs.cqt
```

Compare the saved cqt vs results

Description

Should be the same as compare CC profiles vs results. It is used to check if the cqt file and CC profile are both updated in the same time

Usage

```
compare.results.vs.cqt(dt_results, dt_cqt)
```

Arguments

dt_results	obtained by 'read.all.results.csv(results_dir_list)'
dt_cqt	obtained by 'get.dt.cqt(dir_cqt_files)'

```
create.IGME.key
```

Create IGME_Key column

Description

Extra strings like "Preliminary" or "MM/NN adjusted" are removed in the created 'IGME_Key' column

Usage

```
create.IGME.key(dt0)
```

Arguments

dt0	dataset
-----	---------

Value

dt0 dataset with added column 'IGME_Key'

default_label	<i>a place holder, supply and it will be used in the 'get.match' function</i>
---------------	-------------------------------------------------------------------------------

Description

a place holder, supply and it will be used in the 'get.match' function

Usage

```
default_label
```

Format

An object of class NULL of length 0.

dropbox_project_sync_off	<i>let dropbox untrack 'Rproj user' folder Solve Dropbox conflicts with 'Rproj.user' revised base on: https://community.rstudio.com/t/dropbox-conflicts-with-rproj-user/54059</i>
--------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Description

let dropbox untrack 'Rproj user' folder Solve Dropbox conflicts with 'Rproj.user' revised base on: <https://community.rstudio.com/t/dropbox-conflicts-with-rproj-user/54059>

Usage

```
dropbox_project_sync_off()
```

final_dir_list	<i>final_dir_list: saved dir list of final results, could also be obtained using 'load.final_dir()'</i>
----------------	---------------------------------------------------------------------------------------------------------

Description

final_dir_list: saved dir list of final results, could also be obtained using 'load.final_dir()'

Usage

```
final_dir_list
```

Format

An object of class list of length 6.

find_latest_date *Find out the latest date of all the master files in the directory using the dates in file names*

Description

Find out the latest date of all the master files in the directory using the dates in file names

Usage

```
find_latest_date(files)
```

Arguments

files file path

get.0_4.sources *Get survey names for Table Under 5*

Description

Get survey names for Table Under 5

Usage

```
get.0_4.sources(dt_U5MR, dt_IMR, dt_NMR)
```

Arguments

dt_U5MR U5MR master dataset
dt_IMR IMR
dt_NMR NMR

Value

list of 2 datasets: surveys sources and VR sources

get.5_24.sources *Get survey names (sources) for 5 to 24*

Description

Get survey names (sources) for 5 to 24

Usage

```
get.5_24.sources(dt5_14, dt15_24)
```

Arguments

dt5_14	dt 5-14
dt15_24	dt 15-24

Value

list of 3 datasets: sources for 5-14, for 15-24 and vr

get.CME.UI.data *Return different format of the final aggregate results country summary*

Description

'get.CME.UI.data' can read in "Rates & Deaths_Country Summary.csv" for any indicators published so far and include Sex, Quantile in the output. A pre-saved list of summary.csv files directories could be obtained by [load.final_dir](#). Output dataset in either long, wide year, wide indicator, or wide 'get' (one column for rate and one column for death)

Usage

```
get.CME.UI.data(
  dir_file = NULL,
  c_iso = NULL,
  year_range = c(1990:2019),
  get = "both",
  idvars = c("OfficialName", "IS03Code"),
  sex = NULL,
  format = "long",
  round_digit = 1L,
  use_IGME_year = 2020,
  quantile = TRUE
)
```

Arguments

dir_file	allow a different dataset to be read: directory to aggregate final
c_iso	country iso, if NULL, returns all isos, default to NULL
year_range	a vector of years, default to 1990: 2019
get	default to "rate". Choose among "rate", "death", or "both"
idvars	default to "'OfficialName', 'ISO3Code'", what id vars you want to include
sex	Sex column value: Total, Female or Male, if left as NULL as default will be determined from directory of 'dir_file'
format	Choose format among raw, long, wide_year, wide_ind, and wide_get, default to "long". All the wide-format just 'dcasts' the long-format data, wide_get means two columns: rate and death
round_digit	digits to round estimates, default to 1
use_IGME_year	load the saved IGME final aggregated results (final): 2019 or 2020
quantile	TRUE: return upper, median, lower; FALSE: only median

Value

a data.table

Examples

```
dt_1 <- get.CME.UI.data(use_IGME_year = 2020, format = "wide_year")
dt_2 <- get.CME.UI.data(format = "wide_ind")
```

get.country.info *Load the country info file, requires dt object 'country_info'*

Description

Creates UNICEFReportRegion from UNICEFReportRegion1 and UNICEFReportRegion2

Usage

```
get.country.info()
```

Value

dataset of country info

get.cqt.from.aggfinal *Get cqt file from final aggregated results for plotting, based on the long-formatted final results*

Description

Get cqt file from final aggregated results for plotting, based on the long-formatted final results

Usage

```
get.cqt.from.aggfinal(  
  dt_long,  
  output_dir,  
  mcmc.meta_filename = "mcmc.meta.rda"  
)
```

Arguments

dt_long	final results in long format
output_dir	where to find the "mcmc.meta.rda"
mcmc.meta_filename	default to "mcmc.meta.rda"

Value

res.cqt.Lw.new

Examples

```
## Not run:  
dt_u5 <- get.CME.UI.data(dir_file = final_dir_list$dir_total_2020)  
dt_u5 <- dt_u5[Indicator == "U5MR"]  
output_dir <- file.path(get.IGMEoutput.dir(2019), "GR20200214_all")  
res.cqt.Lw.new <- get.cqt.from.aggfinal(dt_u5, output_dir)  
  
## End(Not run)
```

get.cqt.from.results *Make cqt file from 'results.csv' file*

Description

Read 'results.csv' and 'mcmc.meta' files in the output dir and make res.cqt.Lw.rda

Usage

```
get.cqt.from.results(
  output_dir,
  mcmc.meta_filename = "mcmc.meta.rda",
  results_filename = "results.csv",
  res.cqt_filename = "res.cqt.Lw.rda"
)
```

Arguments

output_dir where to find the results.csv
mcmc.meta_filename
 default to "mcmc.meta.rda"
results_filename
 default to "results.csv", the file to read
res.cqt_filename
 default to "res.cqt.Lw.rda", file name for saving

get.dir_gender *Get the sex-specific master dataset directory*

Description

Compare to [get.dir_U5MR](#), there is need to supply dir_IGME since the dataset location is fixed at "/CMEgender2015/Database"

Usage

```
get.dir_gender(dir_IGME_gender = NULL, plotting = TRUE)
```

Arguments

dir_IGME_gender
 default to "/Dropbox/CMEgender2015/Database"
plotting to get the dataset for plotting (if TRUE) or dataset for modeling (if FALSE)

Value

file path to the master dataset

get.dir_IMR *Get the IMR master dataset directory*

Description

Get the IMR master dataset directory

Usage

```
get.dir_IMR(dir_IGME = get.IGMEinput.dir(2020))
```

Arguments

dir_IGME The directory to IGME input folder, e.g. "../2020 Round Estimation/Code/input"

Value

file path to the master dataset

get.dir_NMR *Get the NMR master dataset directory*

Description

Compare to [get.dir_U5MR](#), there is need to supply dir_IGME since the dataset location is fixed at "/NMR/data"

Usage

```
get.dir_NMR(y5 = FALSE)
```

Arguments

y5 to get the 5-year dataset or not

Value

file path to the master dataset

get.dir_U5MR	<i>Get the U5MR master dataset directory</i>
--------------	----------------------------------------------

Description

Get the U5MR master dataset directory

Usage

```
get.dir_U5MR(dir_IGME = get.IGMEinput.dir(2020))
```

Arguments

dir_IGME	The directory to IGME input folder, e.g. ".../2020 Round Estimation/Code/input/", could be obtained using get.IGMEinput.dir
----------	---------------------------------------------------------------------------------------------------------------------------------------------

Value

file path to the master dataset

get.dt.cqt	<i>Collect data from the cqt file for plotting</i>
------------	----------------------------------------------------

Description

'get.dt.cqt' loads all cqt files in the folder as one long-format dataset

Usage

```
get.dt.cqt(cqt_dir)
```

Arguments

cqt_dir	where all the 'res.cqt.rds' files are saved
---------	---------------------------------------------

Value

dt_cqt

get.file.name	<i>Show all file directories within the file directory 'dir_file' and matched by pattern 'pattern0'</i>
---------------	---------------------------------------------------------------------------------------------------------

Description

Search only the files in the folder, match by 'pattern0', the search is not recursive.

Usage

```
get.file.name(dir_file, pattern0, full_name = TRUE)
```

Arguments

dir_file	directory
pattern0	string to match file names
full_name	list.files(full.names), if TRUE (default) returns full directories, if FALSE, return only the file names

Value

vector of matched file directories

get.IGME.dir	<i>Get IGME "Code" dir for a given year</i>
--------------	---------------------------------------------

Description

If 'year' is 2020, returns the directory to Code folder in the 2020 Round Estimation Dropbox folder

Usage

```
get.IGME.dir(year)
```

Arguments

year	YYYY
------	------

Value

directory to input folder

`get.IGMEfig.dir` *Get "fig" dir for a given year*

Description

If 'year' is 2020, returns the directory to fig folder in the 2020 Round Estimation Dropbox folder #'

Usage

`get.IGMEfig.dir(year)`

Arguments

year YYYY

Value

directory to fig folder

`get.IGMEinput.dir` *Get "input" dir for a given year*

Description

If 'year' is 2020, returns the directory to input folder in the 2020 Round Estimation Dropbox folder

Usage

`get.IGMEinput.dir(year)`

Arguments

year YYYY

Value

directory to input folder

get.IGMEoutput.dir *Get "output" dir for a given year*

Description

If 'year' is 2020, returns the directory to output folder in the 2020 Round Estimation Dropbox folder #'

Usage

```
get.IGMEoutput.dir(year)
```

Arguments

year YYYY

Value

directory to output folder

get.match *A label function to replace values by a given list in a variable*

Description

You can provide a `__new_list__` to define the values you wish to change in this variable. Values not revised in the given list will be kept

Usage

```
get.match(x, new_list = NULL, no_line_break = FALSE)
```

Arguments

x a element or a vector
new_list if you supply a new list the function will use instead of the default_labels
no_line_break to remove linebreak from the string

Value

an updated vector as character

get.max.date	<i>Internal function to check if the input is date, and figure out which date is the latest</i>
--------------	-------------------------------------------------------------------------------------------------

Description

Internal function to check if the input is date, and figure out which date is the latest

Usage

```
get.max.date(mydate)
```

Arguments

mydate a vector of dates

Value

an integer returned by 'which.max'

get.new.sourceID	<i>Format the legend_ID for the master datasets</i>
------------------	-----------------------------------------------------

Description

Used in [get.0_4.sources](#) and [get.5_24.sources](#) to create sources for template input

Usage

```
get.new.sourceID(data = dt_cme)
```

Arguments

data datasets

Value

subsetting dataset with revised Series.Name and new column 'legend_ID'

get.opt.dir	<i>Get optimal file directory from 'Output CMRJack' folder</i>
-------------	----------------------------------------------------------------

Description

Get optimal file directory from 'Output CMRJack' folder

Usage

```
get.opt.dir(cname, surveytype = "DHS", year = NULL)
```

Arguments

cname	country name
surveytype	folder names like "DHS", "MICS", "NDHS",...
year	year of the survey, e.g. 2015

Value

xlsx file directory

Examples

```
## Not run:
get.opt.dir("Zimbabwe", "DHS", 2015)

## End(Not run)
```

get.raw.dir	<i>get raw file directory from 'Output CMRJack' folder</i>
-------------	------------------------------------------------------------

Description

get raw file directory from 'Output CMRJack' folder

Usage

```
get.raw.dir(cname, surveytype = "DHS", year = NULL)
```

Arguments

cname	country name
surveytype	folder names like "DHS", "MICS", "NDHS",...
year	year of the survey, e.g. 2015

Value

xlsx file directory

Examples

```
## Not run:  
get.raw.dir("Zimbabwe", "DHS", 2015)  
  
## End(Not run)
```

get.ref.date	<i>Calculate start, end and average date in decimal from starting/end dates</i>
--------------	---------------------------------------------------------------------------------

Description

Calculate start, end and average date in decimal from starting/end dates

Usage

```
get.ref.date(date0, date1)
```

Arguments

date0	date for example: 2020-01-01
date1	date for example: 2020-12-31

Value

a list of date start, date end, date average. for example: 2020, 2020.997, 2020.497

Examples

```
get.ref.date("2020-01-01", "2020-12-31")
```

get.table.by.iso *Get CC profile data by country*

Description

Get the table that fits into the CC profile excel template. Fit the format of the template with blank rows between indicators. Follow the order of median, lower and upper. Only the values (not row/col names) are put into the template later

Usage

```
get.table.by.iso(iso0, ind_wanted = c("10q15", "10q5", "IMR", "NMR", "U5MR"))
```

Arguments

iso0	ISO3Code
ind_wanted	indicators used in the profile, default to 'c("10q15", "10q5", "IMR", "NMR", "U5MR")'

Value

formatted table by country

ggsave.figs *Use 'ggsave' to save figs in both png and pdf*

Description

Use 'ggsave' to save figs in both png and pdf, default to 600dpi, store in working folder unless 'folder_name' is named.

Usage

```
ggsave.figs(
  myplot,
  file_name = "myplot",
  width = 8,
  height = 6,
  folder_name = ""
)
```

Arguments

myplot	ggplot2 object
file_name	the name of the plot file, e.g. "plot1"
width	width for ggsave
height	height for ggsave
folder_name	the name of the folder, e.g. "figure", if provided, the directory will be created if not there

hiv.iso	<i>hiv.iso: the 17 hiv isos</i>
---------	---------------------------------

Description

hiv.iso: the 17 hiv isos

Usage

hiv.iso

Format

An object of class character of length 17.

leap_year	<i>leap year: if this is a leap year</i>
-----------	------------------------------------------

Description

leap year: if this is a leap year

Usage

leap_year(date)

Arguments

date	date
------	------

load.final_dir	<i>Return a saved dir_list for total and sex-specific Rates & Deaths_Country Summary.csv</i>
----------------	--------------------------------------------------------------------------------------------------

Description

'load.final_dir' returns file paths of Rates & Deaths_Country Summary.csv from Aggregate results (final) folders

Usage

```
load.final_dir(year = 2020)
```

Arguments

year	default to 2020, can get directory list for 2020 or 2019, otherwise return both years
------	---------------------------------------------------------------------------------------

Value

list of results file directories on Dropbox

load.IGMEinput.dir	<i>Load the IGME "input" directories</i>
--------------------	------------------------------------------

Description

Load the IGME "input" directories

Usage

```
load.IGMEinput.dir()
```

Value

dir_IGMEinput_list: a list of directories of UN IGME Data/YYYY Round Estimations/Code/input

```
load.IGMEoutput.dir    load the IGME "output" directories
```

Description

load the IGME "output" directories

Usage

```
load.IGMEoutput.dir()
```

Value

dir_IGMEoutput_list: a list of directories to UN IGME Data/YYYY Round Estimations/Code/output

```
new_cnames            new_cnames: the official country names: ISO3Code UNCode Official-Name
```

Description

new_cnames: the official country names: ISO3Code UNCode OfficialName

Usage

```
new_cnames
```

Format

An object of class `data.table` (inherits from `data.frame`) with 196 rows and 3 columns.

```
Rates_Deaths_Country_Summary_2019_UI
Rates_Deaths_Country_Summary_2019_UI: The 2019 final estimates with UI
```

Description

Please refer to childmortality.org for details

Usage

```
Rates_Deaths_Country_Summary_2019_UI
```

Format

An object of class `data.table` (inherits from `data.frame`) with 588 rows and 491 columns.

Rates_Deaths_Country_Summary_2020_UI

Rates_Deaths_Country_Summary_2020_UI: The 2020 final estimates with UI Please refer to childmortality.org for details

Description

Rates_Deaths_Country_Summary_2020_UI: The 2020 final estimates with UI Please refer to childmortality.org for details

Usage

Rates_Deaths_Country_Summary_2020_UI

Format

An object of class `data.table` (inherits from `data.frame`) with 588 rows and 519 columns.

<code>rbinddataset</code>	<i>Row-bind two datasets, check duplicated keys and set order</i>
---------------------------	-------------------------------------------------------------------

Description

Row-bind two datasets, check duplicated keys and set order

Usage

```
rbinddataset(dt_master, dt_new)
```

Arguments

<code>dt_master</code>	master dataset
<code>dt_new</code>	new entries

Value

‘dt1’ as ‘`rbind(dt_master, dt_new)`’

<code>rbinddatasetNMR</code>	<i>Row-bind two datasets for NMR with slight changes, check duplicated keys, set order</i>
------------------------------	--------------------------------------------------------------------------------------------

Description

Row-bind two datasets for NMR with slight changes, check duplicated keys, set order

Usage

```
rbinddatasetNMR(dt_master, dt_new)
```

Arguments

<code>dt_master</code>	master dataset
<code>dt_new</code>	new entries

Value

'dt1' as 'rbind(dt_master, dt_new)'

<code>read.all.results.csv</code>	<i>Read all "results.csv"</i>
-----------------------------------	-------------------------------

Description

Using [read.results.csv.file](#) to read all "results.csv" files

Usage

```
read.all.results.csv(results_dir_list, year_range0 = 1931:2019)
```

Arguments

<code>results_dir_list</code>	<code>results_dir_list</code> list of all the results.csv files to read in and compare
<code>year_range0</code>	year range, default to all years 1931 to 2019

Value

`dt_results_2020`, saved as csv file in folder Results_Data too

read.country.summary *function to read "Rates & Deaths_Country Summary.csv" and output long format*

Description

function to read "Rates & Deaths_Country Summary.csv" and output long format

Usage

```
read.country.summary(dir_dt_cs, year_wanted = NULL, sex = NULL)
```

Arguments

dir_dt_cs	directory to Rates & Deaths_Country Summary.csv
year_wanted	default to null, supply e.g. 1990:2019
sex	default to NULL, will determine from file dir

read.region.summary *function to read regional summary and output long format*

Description

function to read regional summary and output long format

Usage

```
read.region.summary(  
  dir_dt_cs,  
  year_wanted = NULL,  
  sex = NULL,  
  add_regional_grouping = FALSE  
)
```

Arguments

dir_dt_cs	directory to e.g. paste0("Rates & Deaths_UNICEFRegion.csv")
year_wanted	default to null, supply e.g. 1990:2019
sex	default to NULL, will determine from file dir
add_regional_grouping	if add 'Regional_Grouping' column

`read.results.csv.file` *Read one results.csv file and reformat into long-format*

Description

Read one results.csv file and reformat into long-format

Usage

```
read.results.csv.file(
  dt_dir,
  year_range = 1931:2019,
  q = c("Lower", "Median", "Upper"),
  sex = NULL
)
```

Arguments

<code>dt_dir</code>	the single directory to a results.csv file
<code>year_range</code>	year range desired, default to '1931:2019'
<code>q</code>	quantile desired, default to 'c("Lower", "Median", "Upper")'
<code>sex</code>	default to NULL, Sex is determined from 'dt_dir', unless specified

Value

long-format dt containing all indicators

`revise.age.group` *Remove 25-34 age group in 'dt_new_entries'*

Description

Internal function used by 'add.new.series' functions

Usage

```
revise.age.group(dt_new_entries)
```

Arguments

`dt_new_entries` dt of new entries to be added

revise.path	<i>Adjust the file dir if the lash is not right or the dropbox username is not right (YL 2020/2)</i>
-------------	------------------------------------------------------------------------------------------------------

Description

Adjust the file dir if the lash is not right or the dropbox username is not right (YL 2020/2)

Usage

```
revise.path(dir0)
```

Arguments

dir0	file directory not output for now
------	-----------------------------------

roundoff	<i>A rounding function that round off numbers in the conventional way</i>
----------	---------------------------------------------------------------------------

Description

Instead of in R where $\text{round}(0.5) = 0$, $\text{roundoff}(0.5, 0) = 1$

Usage

```
roundoff(x, digits = 2)
```

Arguments

x	the number
digits	digits, default to 2

Value

rounded numeric vector

save.CME.CC.profile *Save CMR CC profile by country*

Description

'save.CME.CC.profile' writes excel template using the 'XLSX' package

Usage

```
save.CME.CC.profile(
    iso0,
    template = "IGME CC Template.xlsx",
    dir_save = "AfterCC"
)
```

Arguments

iso0	ISO3Code
template	directory to template, default to project root folder
dir_save	directory to save output, default to folder "AfterCC", folders are created if doesn't exist

Value

NULL, save xlsx in 'dir_save'

search.for.file *Search for file paths matched by part of the file name*

Description

Search for files containing the 'file_name_string' in all sub-folders in 'target.dir', and list files containing the 'file_name_string'

Usage

```
search.for.file(target.dir, file_name_string, full_path = FALSE)
```

Arguments

target.dir	target directory
file_name_string	e.g. "data_U5MR"
full_path	full path or not

shortind_indicator	<i>shortind_indicator: match shortind to full indicator names</i>
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Description

shortind_indicator: match shortind to full indicator names

Usage

shortind_indicator

Format

An object of class list of length 24.

UNICEF_colors	<i>UNICEF_colors load UNICEF color palette Load UNICEF blue, Sequential, Diverging, Qualitative, and grays scheme into the global environment</i>
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Description

UNICEF_colors load UNICEF color palette Load UNICEF blue, Sequential, Diverging, Qualitative, and grays scheme into the global environment

Usage

UNICEF_colors

Format

An object of class list of length 5.

Details

```
UNICEF_colors <- list("UNICEF_blue" = "#1CABE2", # Sequential scheme "cp_UNICEF_seq" =
c("#002759", "#00377D", "#0058AB", "#0083CF", "#1CABE2", "#69DBFF", "#A3EAF", "#CFF4FF"),
# Diverging scheme "cp_UNICEF_div" = c("#002759", "#0058AB", "#1CABE2", "#69DBFF",
"#CFF4FF", "#FFF09C", "#FFC20E", "#F26A21", "#E2231A", "#B50800"), # Qualitative schemes
"cp_UNICEF_qua" = c("#0058AB", "#1CABE2", "#00833D", "#80BD41", "#6A1E74", "#961A49",
"#E2231A", "#F26A21", "#FFC20E", "#FFF09C"), # grays "cp_UNICEF_grays" = c("#333333",
"#6B6B6B", "#B3B3B3", "#D7D7D7", "#E8E8E8") )
```

`upper.first.letter` *Capitalize first letter of each word in the vector*

Description

Capitalize first letter of each word in the vector

Usage

```
upper.first.letter(y)
```

Arguments

`y` vector of strings

Value

a vector of strings with first letter capitalized

Examples

```
upper.first.letter(c("aa", "bb", "cc"))
```


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