

Package ‘r2rtf’

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Title Easily Create Presentation-Ready Rich Text Format (RTF) Table and Figure

Version 0.1.1

Description Create presentation-ready Rich Text Format (RTF) table and figure with flexible and customized format.

Depends R (>= 3.5.0)

License GPL-3

Encoding UTF-8

LazyData true

RoxygenNote 7.0.2

Suggests knitr, rmarkdown, testthat, emmeans, dplyr, tidyverse, devtools

Imports stringr, grDevices

NeedsCompilation no

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adae	<i>An Adverse Event Dataset</i>
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Description

A dataset containing the adverse event information of a clinical trial following CDISC ADaM standard.

Usage

adae

Format

A data frame with 1191 rows and 55 variables.

Details

Definition of each variable can be found in <https://www.cdisc.org/pilot-project-submission-package>

Source

<https://www.cdisc.org/pilot-project-submission-package>

adsl	<i>A Subject Level Demographic Dataset</i>
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Description

A dataset containing the demographic information of a clinical trial following CDISC ADaM standard.

Usage

adsl

Format

A data frame with 254 rows and 51 variables.

Details

Definition of each variable can be found in <https://www.cdisc.org/pilot-project-submission-package>

Source

<https://www.cdisc.org/pilot-project-submission-package>

HAMD17	<i>An Efficacy Clinical Trial Data to Evaluate a Drug to Reduce Lower Back Pain</i>
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Description

A dataset prepared by the Drug Information Association scientific working group to investigate a drug to reduce lower back pain.

Usage

HAMD17

Format

A data frame with 831 rows and 6 variables.

Details

Definition of each variable can be found in <https://missingdata.lshtm.ac.uk/dia-working-group/>

Source

<https://missingdata.lshtm.ac.uk/dia-working-group/>

rtf_body	<i>add table body attributes to the table</i>
----------	---

Description

add table body attributes to the table

Usage

```
rtf_body(
  tbl,
  colheader = TRUE,
  page_width = 8.5,
  page_height = 11,
  orientation = "portrait",
  doctype = "wma",
  border_left = "single",
  border_right = "single",
  border_top = NULL,
  border_bottom = "double",
  border_color_left = NULL,
  border_color_right = NULL,
  border_color_top = NULL,
  border_color_bottom = NULL,
  border_width = 15,
  col_rel_width = NULL,
  col_total_width = page_width/1.4,
  cell_height = 0.15,
  cell_justification = "c",
  text_font = 1,
  text_format = NULL,
  text_color = NULL,
  text_background_color = NULL,
  text_justification = "c",
  text_font_size = 9,
  text_space_before = 15,
  text_space_after = 15,
  page_num = NULL,
  page_by = NULL,
  new_page = FALSE,
  last_row = TRUE
)
```

Arguments

tbl	A data frame
colheader	A boolean value to indicate whether to add default column header to the table

page_width	page width in inches
page_height	page height in inches
orientation	Orientation in 'portrait' or 'landscape'
doctype	doctype in 'csr', 'wma', or 'wmm'
border_left	left border type
border_right	right border type
border_top	top border type
border_bottom	bottom border type
border_color_left	left border color
border_color_right	right border color
border_color_top	top border color
border_color_bottom	bottom border color
border_width	border width in twips
col_rel_width	column relative width in a vector eg. c(2,1,1) refers to 2:1;1
col_total_width	column total width for the table
cell_height	height for cell in twips
cell_justification	justification for cell
text_font	text font type
text_format	text format
text_color	text color
text_background_color	text background color
text_justification	justification for text
text_font_size	text font size
text_space_before	line space before text
text_space_after	line space after text
page_num	number of rows in each page
page_by	column names to group by table in sections
new_page	a boolean value to indicate whether to separate grouped table into pages by sections
last_row	a boolean value to indicate whether the table contains the last row of the final table

Value

the same data frame `tbl` with additional attributes for table body

Examples

```
library(dplyr) # required to run examples
data(tbl_1)
tbl_1 %>%
  rtf_body(col_rel_width = c(3,1,3,1,3,1,3,5),
           text_justification = c("l",rep("c",7)),
           last_row = FALSE) %>%
  attributes()
```

rtf_colheader	<i>Add column header to the table</i>
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Description

Add column header to the table

Usage

```
rtf_colheader(
  tbl,
  colheader = NULL,
  border_left = "single",
  border_right = "single",
  border_top = NULL,
  border_bottom = "",
  border_color_left = NULL,
  border_color_right = NULL,
  border_color_top = NULL,
  border_color_bottom = NULL,
  border_width = 15,
  cell_justification = "c",
  col_rel_width = NULL,
  page_width = 8.5,
  col_total_width = page_width/1.4,
  cell_height = 0.15,
  text_justification = "c",
  text_font = 1,
  text_format = NULL,
  text_color = NULL,
  text_background_color = NULL,
  text_font_size = 9,
  text_space_before = 15,
```

```

    text_space_after = 15,
    first_row = FALSE
)

```

Arguments

<code>tbl</code>	A data frame
<code>colheader</code>	A string that uses " " to separate column names.
<code>border_left</code>	left border type
<code>border_right</code>	right border type
<code>border_top</code>	top border type
<code>border_bottom</code>	bottom border type
<code>border_color_left</code>	left border color
<code>border_color_right</code>	right border color
<code>border_color_top</code>	top border color
<code>border_color_bottom</code>	bottom border color
<code>border_width</code>	border width in twips
<code>cell_justification</code>	justification for cell
<code>col_rel_width</code>	column relative width in a vector eg. c(2,1,1) refers to 2:1:1
<code>page_width</code>	page width in inches
<code>col_total_width</code>	column total width for the table
<code>cell_height</code>	height for cell in twips
<code>text_justification</code>	justification for text
<code>text_font</code>	text font type
<code>text_format</code>	text format
<code>text_color</code>	text color
<code>text_background_color</code>	text background color
<code>text_font_size</code>	text font size
<code>text_space_before</code>	line space before text
<code>text_space_after</code>	line space after text
<code>first_row</code>	boolean value to indicate whether column header is the first row of the table

Value

the same data frame `tbl` with additional attributes for table column header

Examples

```
library(dplyr) # required to run examples
data(tbl_1)
tbl_1 %>%
  rtf_colheader(colheader = "Treatment | N | Mean (SD) | N | Mean (SD) | N |
                          Mean (SD) | LS Mean (95% CI)\dagger") %>%
  attr("rtf_colheader")
```

rtf_encode

Render to RTF Encoding

Description

This function extracts table/figure attributes and render to RTF encoding that is ready to save to an RTF file.

Usage

```
rtf_encode(tbl, type = "table")

as_rtf(tbl, type = "table")
```

Arguments

`tbl` a data frame for table or a list of binary string for figure
`type` the type of input, default is table.

Value

For `\code{rtf_encode}`, a vector of RTF code.
 For `\code{write_rtf}`, no return value.

Examples

```
library(dplyr) # required to run examples

# Example 1
head(iris) %>%
  rtf_body() %>%
  rtf_encode() %>%
  write_rtf(file = file.path(tempdir(), "table1.rtf"))
```



```

# Example 2
library(dplyr) # required to run examples
file <- file.path(tempdir(), "figure1.png")
png(file)
plot(1:10)
dev.off()

# Read in PNG file in binary format
rtf_read_png(file) %>% rtf_figure() %>%
  rtf_encode(type = "figure") %>%
  write_rtf(file = file.path(tempdir(), "figure1.rtf"))

# Example 3

## convert tbl_1 to the table body. Add title, subtitle, two table
## headers, and footnotes to the table body.
data(tbl_1)
data(tbl_2)
data(tbl_3)
## convert tbl_2 to the table body. Add a table column header to table body.
t2 <- tbl_2 %>%
  rtf_colheader(colheader = "Pairwise Comparison |
                        Difference in LS Mean(95% CI)\dagger | p-Value",
                text_justification = c("l", "c", "c")) %>%
  rtf_body(col_rel_width = c(8,7,5),
           text_justification = c("l", "c", "c"),
           last_row = FALSE);

# concatenate a list of table and save to an RTF file
t2 %>% rtf_encode() %>% write_rtf(file.path(tempdir(), "table2.rtf"))

```

rtf_figure

Add Figure Attributes

Description

Add Figure Attributes

Usage

```

rtf_figure(
  tbl,
  page_width = 8.5,
  page_height = 11,
  orientation = "portrait",
  doctype = "wma",
  fig_width = 5,
  fig_height = 5
)

```

Arguments

tbl	A data frame
page_width	page width in inches
page_height	page height in inches
orientation	Orientation in 'portrait' or 'landscape'
doctype	doctype in 'csr', 'wma', or 'wmm'
fig_width	the width of figures in inch
fig_height	the height of figures in inch

Value

the same data frame tbl with additional attributes for figure body

Examples

```
library(dplyr) # required to run examples
file <- file.path(tempdir(), "figure1.png")
png(file)
plot(1:10)
dev.off()

# Read in PNG file in binary format
rtf_read_png(file) %>% rtf_figure() %>%
  attributes()
```

rtf_footnote

Add footnote attributes to the table

Description

Add footnote attributes to the table

Usage

```
rtf_footnote(
  tbl,
  footnote = NULL,
  font = 1,
  format = NULL,
  font_size = 9,
  color = NULL,
  background_color = NULL,
  justification = "c",
  indent_first = 0,
  indent_left = 0,
```

```

    indent_right = 0,
    space = 1,
    space_before = 0,
    space_after = 0,
    new_page = FALSE,
    hyphenation = TRUE
  )

```

Arguments

tbl	a data frame
footnote	footnote text
font	text font type
format	text format
font_size	text font size
color	text color
background_color	text background color
justification	justification for text
indent_first	first indent
indent_left	left indent
indent_right	right indent
space	paragraph space
space_before	line space before text
space_after	line space after text
new_page	boolean value to indicate whether to start a new page
hyphenation	boolean value to indicate whether to use hyphenation

Value

the same data frame `tbl` with additional attributes for table footnote

Examples

```

library(dplyr) # required to run examples
data(tbl_1)
tbl_1 %>% rtf_footnote("\\dagger Based on an ANCOVA model.") %>%
  attr("rtf_footnote")

```

rtf_read_png *Read PNG figures into Binary Files*

Description

Read PNG figures into Binary Files

Usage

```
rtf_read_png(file)
```

Arguments

file a vector of PNG file path

Value

a list of binary data vector returned by readBin

Examples

```
file <- file.path(tempdir(), "figure1.png")
png(file)
plot(1:10)
dev.off()

# Read in PNG file in binary format
rtf_read_png(file)
```

rtf_source *Add data source attributes to the table*

Description

Add data source attributes to the table

Usage

```
rtf_source(
  tbl,
  source = NULL,
  font = 1,
  format = NULL,
  font_size = 9,
  color = NULL,
  background_color = NULL,
```

```

justification = "c",
indent_first = 0,
indent_left = 0,
indent_right = 0,
space = 1,
space_before = 0,
space_after = 0,
new_page = FALSE,
hyphenation = TRUE
)

```

Arguments

tbl	A data frame
source	data source text
font	text font type
format	text format
font_size	text font size
color	text color
background_color	text background color
justification	justification for text
indent_first	first indent
indent_left	left indent
indent_right	right indent
space	paragraph space
space_before	line space before text
space_after	line space after text
new_page	boolean value to indicate whether to start a new page
hyphenation	boolean value to indicate whether to use hyphenation

Value

the same data frame `tbl` with additional attributes for data source of a table

Examples

```

library(dplyr) # required to run examples
data(tbl_1)
tbl_1 %>% rtf_source("Source: [study999:adam-adeff]") %>%
  attr("rtf_source")

```

rtf_title	<i>Add title attributes to the table</i>
-----------	--

Description

add title, subtitle, and other attributes to the object

Usage

```
rtf_title(
  tbl,
  title = NULL,
  subtitle = NULL,
  font = 1,
  format = NULL,
  font_size = 12,
  color = NULL,
  background_color = NULL,
  justification = "c",
  indent_first = 0,
  indent_left = 0,
  indent_right = 0,
  space = 1,
  space_before = 180,
  space_after = 180,
  new_page = FALSE,
  hyphenation = TRUE
)
```

Arguments

tbl	a data frame
title	title string
subtitle	subtitle string
font	text font type
format	text format
font_size	text font size
color	text color
background_color	text background color
justification	justification for text
indent_first	first indent
indent_left	left indent
indent_right	right indent

space	paragraph space
space_before	line space before text
space_after	line space after text
new_page	boolean value to indicate whether to start a new page
hyphenation	boolean value to indicate whether to use hyphenation

Value

the same data frame tbl with additional attributes for table title

Examples

```
library(dplyr) # required to run examples
data(tbl_1)
tbl_1 %>% rtf_title(title = "ANCOVA of Change from Baseline at Week 8") %>%
  attr("rtf_heading")
```

tbl_1	<i>Within Group Results from an ANCOVA Model</i>
-------	--

Description

A dataset containing within group results from an ANCOVA model.

Usage

```
tbl_1
```

Format

A data frame with 2 rows and 8 variables.

tbl_2	<i>Between Group Results from an ANCOVA Model</i>
-------	---

Description

A dataset containing between group results from an ANCOVA model.

Usage

```
tbl_2
```

Format

A data frame with 1 row and 3 variables.

`tbl_3`*Root Mean Square Error from an ANCOVA model*

Description

A dataset containing root mean square error from an ANCOVA model.

Usage`tbl_3`**Format**

A data frame with 1 row and 1 variable.

`unicode_latex`*Dictionary of Unicode and Latex Code*

Description

A dataset containing the mapping between unicode and latex code.

Usage`unicode_latex`**Format**

A data frame with 681 rows and 3 variables.

unicode unicode, UTF-8 code

latex latex, latex code

int int, Converted integer of the UTF-8 code

Source

<http://milde.users.sourceforge.net/LUCR/Math/data/unimathsymbols.txt>

write_rtf	<i>Write an RTF table to .rtf file</i>
-----------	--

Description

The write_rtf function writes rtf encoding string to an .rtf file

Usage

```
write_rtf(rtf, file)
```

Arguments

rtf	rtf encoding string rendered by as_rtf()
file	File name to write the output RTF table.

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