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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An Adverse Event Dataset

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
ads1

A Subject Level Demographic Dataset

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

Usage
ads1

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
An Efficacy Clinical Trial Data to Evaluate a Drug to Reduce Lower Back Pain

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/
**Description**

add table body attributes to the table

**Usage**

```r
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()
Arguments

tbl  A data frame
colheader  A string that uses " | " to separate column names.
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
cell_justification  justification for cell
col_rel_width  column relative width in a vector eg. c(2,1,1) refers to 2:1:1
page_width  page width in inches
col_total_width  column total width for the table
cell_height  height for cell in twips
text_justification  justification for text
text_font  text font type
text_format  text format
text_color  text color
text_background_color  text background color
text_font_size  text font size
text_space_before  line space before text
text_space_after  line space after text
first_row  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"))
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

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

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

---

**rtf_footnote**

*Add footnote attributes to the table*

Description

Add footnote attributes to the table

Usage

```r
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, 
)```
rtf_footnote

    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**
```r
code
```

**Arguments**
- `file`: a vector of PNG file path

**Value**
a list of binary data vector returned by `readBin`

**Examples**
```r
code
```

---

**rtf_source**  
*Add data source attributes to the table*

**Description**
Add data source attributes to the table

**Usage**
```r
code
```
rtf_source

```

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")
```
Add title attributes to the table

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

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>tbl</td>
<td>a data frame</td>
</tr>
<tr>
<td>title</td>
<td>title string</td>
</tr>
<tr>
<td>subtitle</td>
<td>subtitle string</td>
</tr>
<tr>
<td>font</td>
<td>text font type</td>
</tr>
<tr>
<td>format</td>
<td>text format</td>
</tr>
<tr>
<td>font_size</td>
<td>text font size</td>
</tr>
<tr>
<td>color</td>
<td>text color</td>
</tr>
<tr>
<td>background_color</td>
<td>text background color</td>
</tr>
<tr>
<td>justification</td>
<td>justification for text</td>
</tr>
<tr>
<td>indent_first</td>
<td>first indent</td>
</tr>
<tr>
<td>indent_left</td>
<td>left indent</td>
</tr>
<tr>
<td>indent_right</td>
<td>right indent</td>
</tr>
</tbody>
</table>
### tbl_1

**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**

```r
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")
```

---

<table>
<thead>
<tr>
<th>tbl_1</th>
<th>Within Group Results from an ANCOVA Model</th>
</tr>
</thead>
</table>

**Description**

A dataset containing within group results from an ANCOVA model.

**Usage**

`tbl_1`

**Format**

A data frame with 2 rows and 8 variables.

---

<table>
<thead>
<tr>
<th>tbl_2</th>
<th>Between Group Results from an ANCOVA Model</th>
</tr>
</thead>
</table>

**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

Write an RTF table to .rtf file

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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