Package 'NVIpretty'

June 13, 2025

Title Tools for making R-output pretty in accord with NVI's graphical profile

Version 0.5.0

Date 2025-06-13

Description Provides tools for styling output from R in accord with NVI's graphical profile. Included are colour palettes and a NVI-theme for ggplot2 as well as tools to format and style output in Excel.

URL https://github.com/NorwegianVeterinaryInstitute/NVIpretty

BugReports https://github.com/NorwegianVeterinaryInstitute/NVIpretty/issues

Depends R (>= 4.1.0)

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LazyData true

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ggplot2,
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openxlsx,
NVIcheckmate (>= 0.5.0),
NVIdb (>= 0.13.1)

Suggests covr,
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NVIrpackages,
R.rsp

Remotes NorwegianVeterinaryInstitute/NVIcheckmate,
NorwegianVeterinaryInstitute/NVIdb,
NorwegianVeterinaryInstitute/NVIpackager,
NorwegianVeterinaryInstitute/NVIrpackages

VignetteBuilder knitr, R.rsp

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Contents

`add_formatted_worksheet` *Add excel sheet with a formatted header*

Description

Add excel sheet with a header formatted with bold font, column labels and column width. The function is a wrapper for `openxlsx::addWorksheet` and are using `NVIdb::standardize_columns` to standardize columns.

Usage

```
add_formatted_worksheet(
  data,
  workbook,
  sheet,
  wrapHeadlineText = FALSE,
  collabels = TRUE,
  colwidths = TRUE,
  standards = NULL,
  dbsource = deparse(substitute(data)),
  FUN = NULL,
  ...
)
```

Arguments

data	[data.frame] The data to export to the Excel sheet.
workbook	[work book object] The workbook object used to create the Excel workbook.
sheet	[character(1)] The Excel sheet name.
wrapHeadlineText	[logical(1)] Should headline allow wrapping of text. Defaults to FALSE.
collabels	[logical(1)] Should headline be changed to standard labels. Defaults to TRUE.
colwidths	[logical(1)] or "auto" Should defined standard column widths be used. Defaults to TRUE.
standards	[data.frame | list | character(1)] The column standards to be used as input for NVIdb::standardize_columns when formatting the Excel sheet columns, see details. Defaults to NULL.
dbsource	[character(1)] Database source of data in column standards table. Defaults to name of input data.
FUN	[function] Function for additional formatting of the worksheet. Either predefined functions in this package or self made. Defaults to NULL.
...	Other arguments to be passed to FUN.

Details

Add excel sheet with a formatted header. The header will be formatted with bold text.

collabels = TRUE the column names are translated to column labels in accord with the column standards table, see NVIdb::standardize_columns.

colwidths = TRUE the column widths are given in accord with the column standards table, see NVIdb::standardize_columns.

colwidths = "auto" the column widths are given automatic column width. This is not recommend for large tables.

wrapHeadlineText = TRUE the headline text is allowed to wrap on two or more lines. The parameter should be chosen in accord with what looks nice depending on column labels and column widths.

standards is the name of the table or file with column standards. If standards = NULL the file "columns_standards.csv" is used. Column names are translated to column labels in accord with the column standards table, see NVIdb::standardize_columns.

It is also possible to give the standards as a data.frame or as a list. The list input to column_standards must follow a specific format. It is a list with at least three named vectors:

- colname: a vector of all columns in in the source file that should be included in the Excel report with the selection list.
- collabel: A vector with the labels that should be used in the Excel report.
- colwidth: A vector with the column width that should be used in the Excel report.

In addition one may input:

- colorder: the order of the columns to be used in the Excel report. The default is to use the same order as they are entered in the vectors.
- column_db: input added as a possibility to keep on the same format as column_standards. Not necessary to input.
- table_db: input added as a possibility to keep on the same format as column_standards. Must be the same as dbsource. Not necessary to input.

All vectors must have the same order and the same length. #' dbsource is the dbsource in the column standards table making it possible to tailer the column labels and column widths per table.

Value

None. A new sheet with formatted headline is added to the workbook object.

Author(s)

Petter Hopp Petter.Hopp@vetinst.no

Examples

```
## Not run:
# Attach packages and set up with temporary directory
td <- tempdir()
library(NVIpretty)
library(openxlsx)


# Generate Excel-sheet
workbook <- createWorkbook()

# Add a sheet to the workbook
add_formatted_worksheet(iris,
                        workbook,
                        sheet = "iris",
                        wrapHeadlineText = TRUE,
                        collabels = TRUE,
                        colwidths = FALSE,
                        standards = NULL)

# Save the workbook
saveWorkbook(wb = workbook,
             file = paste0(td, "/iris.xlsx"),
                         overwrite = TRUE)

print(paste("One may examine the Excel workbook at", normalizepath(td, )))

## End(Not run)
```

append_text_line *Append new last row with text*

Description

Function to add new row with text in a data frame. This is intended for appending explanation text (footnotes etc.) to data frames that should be published in Excel.

Usage

```
append_text_line(data, text, empty_rows = 0)
```

Arguments

data	[data.frame] The data that should get a new row with the text.
text	[character(1)] The text that should be appended.
empty_rows	[integer(1)] Number of empty rows between the data and the text. Defaults to 0.

Details

Two rows are appended to the data frame, the first is empty, the second has the generated date in the first column. The

Value

A data frame with two more rows, one empty and one with generated data in the first column.

Author(s)

Petter Hopp Petter.Hopp@vetinst.no

Examples

```
## Not run:
# Add row with generated date using standard values
gris_virus_slaktegris_utvalg <- append_date_generated_line(gris_virus_slaktegris_utvalg)

## End(Not run)
```

palette_gradient_green *Palette with colours for graphs for 2025 - today's date*

Description

A vector with the hex values for colours to be used in graphs. The order of the colours are as they should be used in the graphs.

Colour gradients with six levels for six different base colours. The colours in the NVI profile are used as base colours and the gradients are developed from these.

Usage

```
palette_gradient_green

palette_gradient_red

palette_gradient_air

palette_gradient_darkblue

palette_gradient_earth

palette_gradient_food

palette_gradient_graa

palette_gradient_grey

palette_gradient_gul

palette_gradient_jord

palette_gradient_lightblue

palette_gradient_luft

palette_gradient_mat

palette_gradient_red

palette_gradient_vann

palette_gradient_water

palette_gradient_yellow
```

Format

A vector with 15 unnamed colours:

Jord #59CD8B

Luft #D7F4FF

Vann #1C4FB9

Svart #091A3E

Lys jord #BCEED1

Mørk luft #95D9F3

Lyst vann #C7D9FF

Mat #FF5447

Lys mat #FFDAD4

Gul #F5D34A

Lys gul #FBECB2

Lilla #9A55D2

Lys lilla #DEC2F5

Orange #FCA446

Lys orange #F9D3A9

A vector with unnamed colours:

palette_gradient_green Green colour gradient based on the NVI colour "Jord".

palette_gradient_jord Alternative name for the green colour gradient based on the NVI colour "Jord".

palette_gradient_earth Alternative name for the green colour gradient based on the NVI colour "Jord".

palette_gradient_darkblue Blue colour gradient based on the NVI colour "Vann".

palette_gradient_vann Alternative name for the blue colour gradient based on the NVI colour "Vann".

palette_gradient_water Alternative name for the blue colour gradient based on the NVI colour "Vann".

palette_gradient_lightblue Blue colour gradient based on the NVI colour "Luft".

palette_gradient_luft Alternative name for the blue colour gradient based on the NVI colour "Luft".

palette_gradient_air Alternative name for the blue colour gradient based on the NVI colour "Luft".

palette_gradient_red Red colour gradient based on the NVI colour "Mat".

palette_gradient_mat Alternative name for the red colour gradient based on the NVI colour "Mat".

palette_gradient_food Alternative name for the red colour gradient based on the NVI colour "Mat".

palette_gradient_yellow Yellow colour gradient based on the NVI colour "Gul".

palette_gradient_gul Alternative name for the yellow colour gradient based on the NVI colour "Gul".

palette_gradient_grey Grey colour gradient based on the NVI colour "Svart".

palette_gradient_graa Alternative name for the grey colour gradient based on the NVI colour "Svart".

The script for preparing the palette is given in "./data-raw/generate_NVI_palettes.R".

An object of class `character` of length 6.

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An object of class `character` of length 6.

An object of class `character` of length 6.

Details

The colour codes are based on the hex values in the Graphical profile handbook (available at NVI's intranet). The colours are displayed in the vignette "NVI colour palettes".

The script for preparing the palette is given in "./data-raw/generate_NVI_palettes.R".

The colour gradients are intended for choropleth maps, graphs and other figures where different gradients of one colour is wanted.

There are six different gradients, each with six colours. Each palette is given a name of the form "palette_gradient_xxxxxx" where xxxxxx is the name of the base colour. To make it easier to remember the gradient name, each gradient is represented by several palettes, for example the green gradient based on the NVI colour "Jord" is represented by the palettes: palette_gradient_jord, palette_gradient_earth, and palette_gradient_green.

The colours are displayed in the vignette "NVI colour palettes".

Source

Grafisk profil for Veterinærinstituttet version 2024 (available on NVI's intranet).

Grafisk profil for Veterinærinstituttet version 2024 (available on NVI's intranet).

palette_graph *Palette with NVI profile colours for 2025 - today's date*

Description

A vector with the hex values for NVI profile colours.

Usage

```
palette_graph
```

Format

A vector with 10 unnamed colours:

Jord #59CD8B

Luft #D7F4FF

Vann #1C4FB9

Hvit #F7FDFF

Svart #091A3E

Lys_jord #BCEED1

Mørk_luft #95D9F3

Lyst_vann #C7D9FF

Mat #FF5447

Lys_mat #FFDAD4

Details

The colour codes are based on the hex values in the Graphical profile handbook (available at NVI's intranet). The colours are displayed in the vignette "NVI colour palettes".

The script for preparing the palette is given in "./data-raw/generate_NVI_palettes.R".

Source

Grafisk profil for Veterinærinstituttet version 2024 (available on NVI's intranet).

palette_graph_2020 *Old palette with colours for graphs for 2020-2024*

Description

A vector with the hex values for colours to be used in graphs.

Usage

```
palette_graph_2020
```

Format

A vector with named colours:

colours 13 different colours

Details

The colour codes are based on the hex values in the Graphical profile handbook except for the body text where the cmyk value is used. There is not agreement between the hex and cmyk values, but hex seem to give the most correct colour.

The script for preparing the palette is given in "./data-raw/generate_NVI_palettes_2020.R".

Source

Grafisk profil for Veterinærinstituttet versjon 2020.

palette_NVI *Palette with NVI's profile colours for 2025 - today's date*

Description

A vector with the hex values for NVI's profile colours.

Usage

```
palette_NVI
```

Format

A vector with named colours:

Jord The green colour that signifies NVI's core area "Terestrial animals".

Luft A light blue colour".

Vann The blue colour that signifies NVI's core area "Aquatic animals".

Hvit Whitish. It is used in headings with a coloured or black background.

Svart Blackish for use in body text in reports etc. It can also be used in headings.

Lys jord Used in graphs.

Mørk luft Used in graphs.

Lyst vann Used in graphs.

Mat The red colour that signifies NVI's core area "Food and feed safety".

Lys mat Used in graphs.

Details

The colour codes are based on the hex values in the official colour profile.

The script for preparing the palette is given in "./data-raw/generate_NVI_palettes.R".

Source

Grafisk profil for Veterinærinstituttet version 2024 (available on NVI's intranet).

`palette_NVI_profile_2020`

Old palette with NVI's profile colours for 2020-2024

Description

A vector with the hex values for NVI's profile colours.

Usage

```
palette_NVI_profile_2020
```

Format

A vector with named colours:

blue The blue colour that signifies NVI's core area "Aquatic animals".

green The green colour that signifies NVI's core area "Terestrial animals".

red The red colour that signifies NVI's core area "Food and feed safety".

bodytext Black 80% for use in body text in reports etc. It can also be used in headings.

headingblue Blue alternative for use in headings.

background Background colour for large areas as on stands.

Details

The colour codes are based on the hex values except for the body text where the cmyk value is used. There is not agreement between the hex and cmyk values, but hex seem to give the most correct colour.

The script for preparing the palette is given in "./data-raw/generate_NVI_palettes_2020.R".

Source

Grafisk profil for Veterinærinstituttet versjon 2020.

palette_table_blue_2020 *Old palette with colours for table with blue background for 2020-2024*

Description

A vector with the hex values for a table with blue background.

Usage

```
palette_table_blue_2020
```

Format

A vector with named colours:

blue1 Background colour for heading.

blue2 Background colour for sub-heading.

blue3 Background colour for sub-heading.

blue4 Background colour for table text.

blue5 Preferred background colour for table text.

bodytext Black 70% font colour for use in body text.

heading White font colour for headings.

Details

The colour codes are based on the hex values in the Graphical profile handbook except for the body text where the cmyk value is used. There is not agreement between the hex and cmyk values, but hex seem to give the most correct colour.

The script for preparing the palette is given in "./data-raw/generate_NVI_palettes_2020.R".

Source

Grafisk profil for Veterinærinstituttet versjon 2020.

palette_table_grey_2020 *Old palette with colours for table with grey background for 2020-2024*

Description

A vector with the hex values for a table with grey background.

Usage

```
palette_table_grey_2020
```

Format

A vector with named colours:

black1 Background colour for heading.

black2 Background colour for sub-heading.

black3 Background colour for sub-heading.

black4 Background colour for table text.

black5 Preferred background colour for table text.

bodytext Black 85% font colour for use in body text.

heading White font colour for headings.

Details

The colour codes are based on the cmyk values in the Graphical profile handbook.

The script for preparing the palette is given in "./data-raw/generate_NVI_palettes_2020.R".

Source

Grafisk profil for Veterinærinstituttet versjon 2020.

---

style_background_per_column

Style cell background in Excel sheet based on column name

Description

Style the cell background with different colours. The background colours are chosen based on the column names, for example "paavist" or "tvilsom". In each column, all cells that are following the given rule, will get the same background colour.

Usage

```
style_background_per_column(
  workbook = workbook,
  sheet = sheet,
  data = NULL,
  colnames_in_data = NULL,
  nrows_in_data = NULL,
  rule,
  colname,
  palette
)
```

Arguments

workbook	[work book object] The workbook object used to create the Excel workbook. Defaults to 'workbook'.
sheet	[character(1)] The Excel sheet name. Defaults to 'sheet'.
data	[data.frame] The data that have been exported to the Excel sheet. Used to find column number and number of rows in the workbook that should be styled. Can be NULL if both colnames_in_data and nrows_in_data are different from NULL. Defaults to NULL.
colnames_in_data	[character] The column names of the data frame that has been exported to Excel, i.e. colnames(data). Can be NULL if data has a non-NULL argument. Values in colnames_in_data have preference for values in data. Defaults to NULL.
nrows_in_data	[integer(1)] The number of rows of the data frame that has been exported to Excel, i.e. nrow(data). Can be NULL if data has a non-NULL argument. Values in nrows_in_data have preference for values in data. Defaults to NULL.
rule	[integer(1)] Rule that should be sourced to openxlsx::conditionalFormatting.
colname	[character] Vector with colour names from the palette that should be used for styling the columns. If the column name is not the same as the colour name in the palette, the colour name should be named with the column name in the data frame.
palette	[character] Palette with named colours.

Details

The columns will be styled with the colour in the palette that have the same name as the column. If the column name is not the same as the name of the colour in the palette, the vector of column names can be named with the corresponding colour name, see example.

Value

None. One or more columns in the workbook object is styled.

Author(s)

Petter Hopp Petter.Hopp@vetinst.no

Examples

```
## Not run:
# Attach packages and set up with temporary directory
td <- tempdir()
library(NVIpretty)
library(openxlsx)
```

```
# Make workbook object
workbook <- createWorkbook()

# Add a sheet to the workbook
add_formatted_worksheet(iris,
                        workbook,
                        sheet = "iris",
                        wrapHeadlineText = TRUE,
                        collabels = TRUE,
                        colwidths = FALSE,
                        standards = NULL)

style_background_per_column(workbook = workbook,
                            sheet = sheet,
                            data = iris,
                            rule = "> 3",
                            colname = c("bluegrey" = "Sepal.Length",
                                        "bluegrey" = "Sepal.Width",
                                        "green" = "Petal.Length"),
                            palette = c("bluegrey" = "#6fb2d3", "green" = "#579e65"))

# Save the workbook
saveWorkbook(wb = workbook, file = paste0(td, "/iris.xlsx"), overwrite = TRUE)

print(paste("You may examine the Excel workbook at", normalizePath(td, winslash = "/")))

## End(Not run)
```

`style_text_line` *Style a row in an Excel sheet based on the text in a cell*

Description

Style the row if at least one cell in the row includes the specified text. This can be used to style rows with footnotes, explanatory text, summary rows or similar.

Usage

```
style_text_line(
  workbook = workbook,
  sheet = sheet,
  data,
  text,
  text_decoration = NULL,
  wrap_text = FALSE,
  merge_cells = FALSE,
  heights = NULL,
  ...
)
```

Arguments

workbook	[work book object] The workbook object used to create the Excel workbook. Defaults to 'workbook'.
sheet	[character(1)] The Excel sheet name. Defaults to 'sheet'.
data	[data.frame] The data that have been exported to the Excel sheet. Used to find column number and row number for the pretext for which the row should be styled.
text	[character(1)] The text in the cell for which the row should be styled.
text_decoration	[character(1)] The text decoration style that should be used. Should be one of c("bold", "strikeout", "italic", "underline", "underline2"), see openxlsx::createStyle. Defaults to NULL.
wrap_text	[logical(1)] Should the text in the cell be wrapped to fit in the column. Defaults to FALSE.
merge_cells	[logical(1)] Should the cells in the row spanning the table be merged? Defaults to FALSE.
heights	[integer] The row height for the formatted row. Defaults to NULL.
...	Other arguments to be passed to openxlsx::createStyle.

Details

The whole line will be styled.

openxlsx::createStyle is used for formatting the row. Use text_decoration = "bold" to format the row with bold font. Use wrap_text = TRUE and merge_cells = TRUE if you want a footnote to span all cells under the table and potentially span more lines. If the text spans more than one line, the height of the row can be adjusted by setting heights = .

Value

None. One row in the workbook object is styled.

Author(s)

Petter Hopp Petter.Hopp@vetinst.no

---

theme_NVI *NVI theme for ggplot2*

Description

A complete ggplot2 theme in accord with NVI's graphical profile. The theme control all non-data display.

Usage

```
theme_NVI(
  base_size = 11,
  base_family = "",
  base_line_size = base_size/22,
  base_rect_size = base_size/22
)
```

Arguments

base_size	[numeric(1)] Base font size, given in pts. Defaults to 11.
base_family	[character(1)] Base font family. Defaults to "".
base_line_size	[numeric(1)] Base size for line elements. Defaults to ‘base_size‘ / 22.
base_rect_size	[numeric(1)] Base size for rectangular elements. Defaults to ‘base_size‘ / 22.

Details

The NVI theme without background for plot and legend, light grey horizontal support lines and dark grey axis’ marks.

Examples

```
library(ggplot2)
library(NVIpretty)

# Scatter plot
ggplot(iris, aes(Sepal.Length, Sepal.Width)) +
  geom_point(aes(color = Species)) +
  theme(legend.position = "right") +
  theme_NVI() +
  scale_colour_manual(values = palette_graph)

# Changing default theme for the whole session
theme_set(theme_NVI())

# The default them is now "theme_NVI" and there is no need to specify the theme within "ggplot".
# Box plot in accord with NVI's graphical profile
ggplot(iris, aes(Species, Sepal.Length)) +
  geom_boxplot(aes(fill = Species)) +
  theme(legend.position = "right") +
  scale_fill_manual(values = palette_graph)
```

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