Get an Overview with overviewR: : CHEAT SHEET

Generate Tables

overview_tab generates a data frame that collapses the time condition for each id by taking into account potential gaps in the time frame

id	time	Var1	Var2
A	1990		
A	1991		
A	1992		
B	1990		

→

id	time
A	1990 - 1992
B	1990

```
output_table <-
overview_tab(
  dat = toydata,
  id = ccode,
  time = year)
```

add data frame

define your time and scope variables

It also works with multiple time arguments (day, month, and year)

id	year	month	day	Var1	Var2
A	1990	3	1		
A	1990	3	2		
A	1990	3	3		
B	1991	4	10		

→

id	time
A	1990-03-01 - 1990-03-03
B	1991-04-10

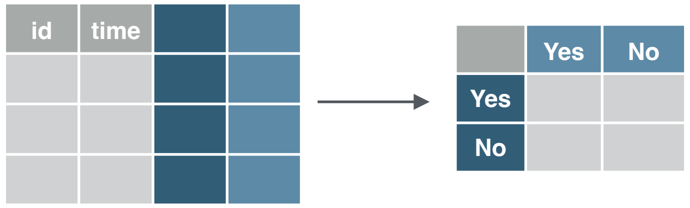
```
overview_tab(
  dat = toydata,
  id = ccode,
  time = list(year = toydata$year,
              month = toydata$month,
              day = toydata$day),
  complex_date = TRUE)
```

define the time variables

set argument complex_date to TRUE

overview_tab and **overview_na** can also handle **data.table** objects (all other functions currently only with **data.frames**) to increase the performance on larger data sets

overview_crosstab generates a cross table that divides the data based on two conditions



```
output_crosstab <-
overview_crosstab(
    dat = toydata,
    cond1 = gdp,
    cond2 = population,
    threshold1 = 25000,
    threshold2 = 27000,
    id = ccode,
    time = year
  )
```

define your conditions with cond1 and cond2

set your thresholds

⚠️ If a data set is used that has multiple observations on the id-time unit, the function automatically aggregates the data set using the mean of condition 1 (**cond1**) and condition 2 (**cond2**).

Workflows

All **overviewR** functions can be easily integrated in the **tidyverse**.

```
toydata %>%
  dplyr::filter(year > 1993) %>%
  overview_na()
```

The example shows how to filter or wrangle data before calling **overview_na**.

To change the visual appearance of plots, the user can rely on **ggplot2** layering logic.

Export Results

Tables

overview_latex generates a LaTeX output (works with both overview_tab and overview_crosstab output)

```
overview_latex(
     obj = output_table)
```

```
overview_latex(
     obj = output_crosstab,
     crosstab = TRUE)
```

TRUE for cross tables

The table can be modified with the **title**, **id**, **time**, **cond1**, and **cond2** arguments to replace default names

It also allows to save your output in a .tex file

```
overview_latex(
   obj = output_table,
   save_out = TRUE,
   file_path = “path/output.tex”)
```

define where your output should be stored

We introduced *overview_latex* (instead of *overview_print*) and *file_path* (instead of the separate *file* and *path* arguments) as of v0.0.12.

The outputs of **overview_tab** and **overview_crosstab** are also compatible with other packages and functions such as **xtable**, **flextable**, or **kable** from **knitr**.

To generate a table in Rmarkdown with **knitr::kable**:

```
knitr::kable(output_table)
```

Plots

As the plots are based on ggplot2, plots can be stored with **ggplot2::ggsave**

```
ggplot2::ggsave(
     output_plot,
     filename = "FILENAME.png")
```

add plot object

add filename

Alternatively, storing the object also works this way:

```
png("FILENAME.png")

output_plot

dev.off()
```

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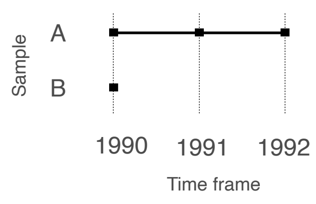
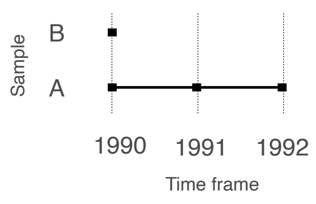
Generate Plots

Sample overview

overview_plot illustrates the information that is generated in overview_tab in a ggplot2 graphic

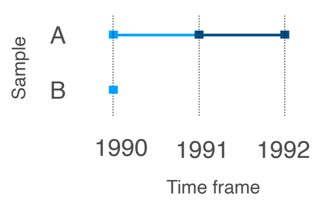


```
overview_plot(
      dat = toydata,
      id = ccode,
      time = year)
```



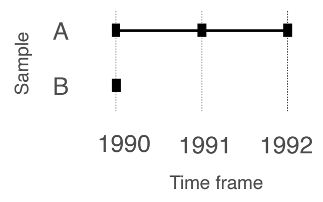
```
overview_plot(
      dat = toydata,
      id = ccode,
      time = year,
      asc = FALSE)
```

Reverse order of y-axis



```
overview_plot(
      dat = toydata,
      id = ccode,
      time = year,
      color = before)
```

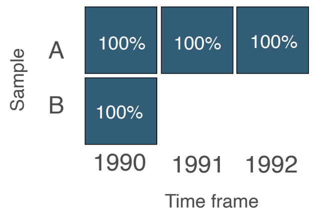
Add variable to identify time periods



```
overview_plot(
      dat = toydata,
      id = ccode,
      time = year,
      dot_size = 5)
```

change size of dots

overview_heat is similar to overview_plot but presents the frequency of data points by id-time-unit in a heat map

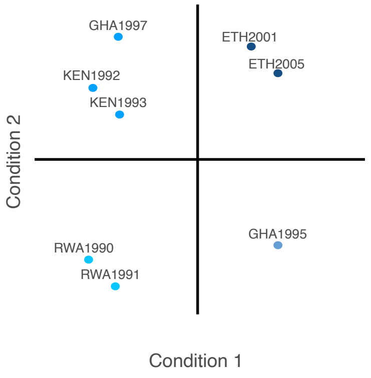


```
overview_heat(
      dat = toydata,
      id = ccode,
      time = year,
      perc = TRUE,
      exp_total = 12)
```

displays percentage

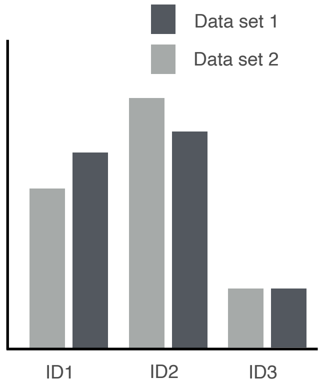
max observations by id-time unit

overview_crossplot allows to illustrate similar information as presented in a cross table (overview_crosstab)



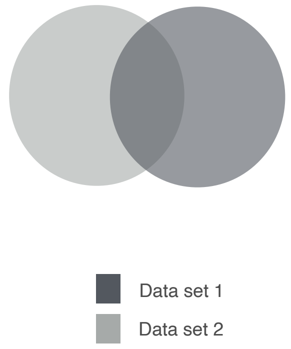
```
overview_crossplot(
  toydata,
  id = ccode,
  time = year,
  cond1 = gdp,
  cond2 = population,
  threshold1 = 25000,
  threshold2 = 27000,
  color = TRUE,
  label = TRUE
)
```

overview_overlap plots the overlap between two data sets



```
overview_overlap(
  dat1 = toydata,
  dat2 = toydata2,
  dat1_id = ccode,
  dat2_id = ccode,
  plot_type = "bar"
)
```

This is the default

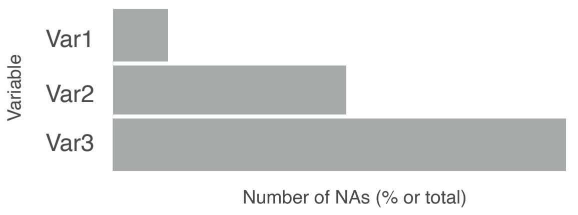


```
overview_overlap(
  dat1 = toydata,
  dat2 = toydata2,
  dat1_id = ccode,
  dat2_id = ccode,
  plot_type = “venn"
)
```

Represents a Venn diagramm

Missing values (NAs)

overview_na returns a horizontal ggplot2 bar plot that indicates the amount of missing data (NAs) for each variable (column-wise)



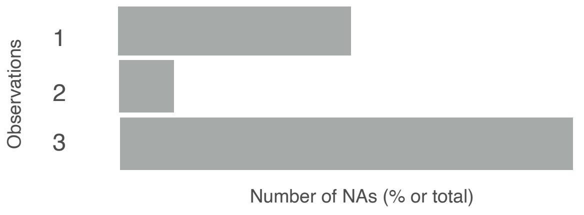
```
overview_na(toydata_with_na)
```

relative distribution

```
overview_na(toydata_with_na,
            perc = FALSE)
```

FALSE gives total number (instead of percentage)

It also allows you to plot the NAs row-wise. This can be helpful when looking at survey data where each respondent is represented in a row. Using this function then helps to understand the share of unit or item non-responses.



```
overview_na(toydata_with_na,
            row_wise = TRUE)
```

Plot NAs row-wise

```
overview_na(toydata_with_na,
            row_wise = TRUE,
            perc = FALSE)
```

FALSE gives total number (instead of percentage)

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