Package ‘ggmosaic’

October 13, 2022

**Title**  Mosaic Plots in the 'ggplot2' Framework

**Version**  0.3.3

**Description**  Mosaic plots in the 'ggplot2' framework. Mosaic plot functionality is provided in a single 'ggplot2' layer by calling the geom 'mosaic'.

**License**  GPL (>= 2)

**URL**  https://github.com/haleyjeppson/ggmosaic

**BugReports**  https://github.com/haleyjeppson/ggmosaic

**Depends**  ggplot2 (>= 3.3.0), R (>= 3.5.0)

**Imports**  productplots, dplyr, plotly (>= 4.5.5), purrr, rlang, tidyr, ggrepel, scales

**Suggests**  gridExtra, knitr, NHANES, rmarkdown, patchwork

**VignetteBuilder**  knitr

**Encoding**  UTF-8

**LazyData**  true

**RoxygenNote**  7.1.1

**NeedsCompilation**  no

**Author**  Haley Jeppson [aut, cre],
           Heike Hofmann [aut],
           Di Cook [aut],
           Hadley Wickham [ctb]

**Maintainer**  Haley Jeppson <hjeppson@iastate.edu>

**Repository**  CRAN

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**R topics documented:**

- ddecker .......................................................... 2
- fly ............................................................... 3
Template for a double decker plot. A double decker plot is composed of a sequence of spines in the same direction, with the final spine in the opposite direction.

**Usage**

ddecker(direction = "h")

**Arguments**

direction  direction of first split
Description

Data from the results of a SurveyMonkey survey commissioned by FiveThirtyEight for the story 41 Percent of Fliers Say It’s Rude To Recline Your Airplane Seat.

Usage

fly

Format

A data frame with 1040 rows and 27 variables:

- id  Respondent ID
- flight_freq  How often do you travel by plane?
- do_you_recline  Do you ever recline your seat when you fly?
- height  How tall are you?
- has_child_under_18  Do you have any children under 18?
- three_seats_two_arms  In a row of three seats, who should get to use the two arm rests?
- two_seats_one_arm  In a row of two seats, who should get to use the middle arm rest?
- window_shade  Who should have control over the window shade?
- rude_to_move_to_unsold_seat  Is it rude to move to an unsold seat on a plane?
- rude_to_talk_to_neighbor  Generally speaking, is it rude to say more than a few words to the stranger sitting next to you on a plane?
- six_hr_flight_leave_seat  On a six hour flight from NYC to LA, how many times is it acceptable to get up if you’re not in an aisle seat?
- reclining_obligation_to_behind  Under normal circumstances, does a person who reclines their seat during a flight have any obligation to the person sitting behind them?
- rude_to_recline  Is it rude to recline your seat on a plane?
- eliminate_reclining  Given the opportunity, would you eliminate the possibility of reclining seats on planes entirely?
- rude_to_switch_seats_friends  Is it rude to ask someone to switch seats with you in order to be closer to friends?
- rude_to_switch_seats_family  Is it rude to ask someone to switch seats with you in order to be closer to family?
- rude_to_wake_neighbor_bathroom  Is it rude to wake a passenger up if you are trying to go to the bathroom?
- rude_to_wake_neighbor_walk  Is it rude to wake a passenger up if you are trying to walk around?
- rude_to带来_baby  In general, is it rude to bring a baby on a plane?
**rude_tobring_unruly_child**  In general, is it rude to knowingly bring unruly children on a plane?

**use_electronics_takeoff**  Have you ever used personal electronics during take off or landing in violation of a flight attendant’s direction?

**smoked_inflight**  Have you ever smoked a cigarette in an airplane bathroom when it was against the rules?

**gender**  Gender

**age**  Age

**household_income**  Household Income

**education**  Education

**region**  Region

**Source**

Description

A mosaic plot is a convenient graphical summary of the conditional distributions in a contingency
table and is composed of spines in alternating directions.

Usage

geom_mosaic(
  mapping = NULL,
  data = NULL,
  stat = "mosaic",
  position = "identity",
  na.rm = FALSE,
  divider = mosaic(),
  offset = 0.01,
  show.legend = NA,
  inherit.aes = FALSE,
  ...
)

stat_mosaic_text(
  mapping = NULL,
  data = NULL,
  geom = "Text",
  position = "identity",
  na.rm = FALSE,
  divider = mosaic(),
  show.legend = NA,
  inherit.aes = TRUE,
  offset = 0.01,
  ...
)

stat_mosaic(
  mapping = NULL,
  data = NULL,
  geom = "mosaic",
  position = "identity",
  na.rm = FALSE,
  divider = mosaic(),
  show.legend = NA,
  inherit.aes = TRUE,
  offset = 0.01,
  ...
Arguments

mapping Set of aesthetic mappings created by aes() or aes(). If specified and inherit.aes
= TRUE (the default), it is combined with the default mapping at the top level of
the plot. You must supply mapping if there is no plot mapping.

data The data to be displayed in this layer. There are three options:
If NULL, the default, the data is inherited from the plot data as specified in the
call to ggplot().
A data.frame, or other object, will override the plot data. All objects will be
fortified to produce a data frame. See fortify() for which variables will be
created.
A function will be called with a single argument, the plot data. The return
value must be a data.frame, and will be used as the layer data. A function
can be created from a formula (e.g. ~ head(.x, 10)).

stat The statistical transformation to use on the data for this layer, as a string.

position Position adjustment, either as a string, or the result of a call to a position adjust-
ment function.

na.rm If FALSE (the default), removes missing values with a warning. If TRUE silently
removes missing values.

divider Divider function. The default divider function is mosaic() which will use spines
in alternating directions. The four options for partitioning:
• vspine Vertical spine partition: width constant, height varies.
• hspine Horizontal spine partition: height constant, width varies.
• vbar Vertical bar partition: height constant, width varies.
• hbar Horizontal bar partition: width constant, height varies.

offset Set the space between the first spine

show.legend logical. Should this layer be included in the legends? NA, the default, includes if
any aesthetics are mapped. FALSE never includes, and TRUE always includes. It
can also be a named logical vector to finely select the aesthetics to display.

inherit.aes If FALSE, overrides the default aesthetics, rather than combining with them.
This is most useful for helper functions that define both data and aesthetics and
shouldn’t inherit behaviour from the default plot specification, e.g. borders().

... other arguments passed on to layer. These are often aesthetics, used to set an
aesthetic to a fixed value, like color = ’red’ or size = 3. They may also be
parameters to the paired geom/stat.

geom The geometric object to use display the data

Computed variables

x location of center of the rectangle
y location of center of the rectangle
xmin location of bottom left corner
geom_mosaic

xmax location of bottom right corner
ymin location of top left corner
ymax location of top right corner

Examples

data(titanic)

ggplot(data = titanic) +
  geom_mosaic(aes(x = product(Class), fill = Survived))
# good practice: use the 'dependent' variable (or most important variable)
# as fill variable

ggplot(data = titanic) +
  geom_mosaic(aes(x = product(Class, Age), fill = Survived))

ggplot(data = titanic) +
  geom_mosaic(aes(x = product(Class), conds = product(Age), fill = Survived))

ggplot(data = titanic) +
  geom_mosaic(aes(x = product(Survived, Class), fill = Age))

# Just excluded for timing. Examples are included in testing to make sure they work
## Not run:
data(happy)

ggplot(data = happy) + geom_mosaic(aes(x = product(happy)), divider="hbar")

ggplot(data = happy) + geom_mosaic(aes(x = product(happy))) +
  coord_flip()

# weighting is important

ggplot(data = happy) +
  geom_mosaic(aes(weight=wtssall, x=product(happy)))

ggplot(data = happy) + geom_mosaic(aes(weight=wtssall, x=product(health), fill=happy)) +
  theme(axis.text.x=element_text(angle=35))

ggplot(data = happy) +
  geom_mosaic(aes(weight=wtssall, x=product(health), fill=happy), na.rm=TRUE)

ggplot(data = happy) +
  geom_mosaic(aes(weight=wtssall, x=product(health, sex, degree), fill=happy),
    na.rm=TRUE)

# here is where a bit more control over the spacing of the bars is helpful:
# set labels manually:

ggplot(data = happy) +
  geom_mosaic(aes(weight=wtssall, x=product(age), fill=happy), na.rm=TRUE, offset=0) +
  scale_x_productlist("Age", labels=c(17+1:72))
### geom_mosaic_jitter

Jittered dots in Mosaic plots.

#### Description

A mosaic plat with jittered dots

#### Usage

```r
geom_mosaic_jitter(
    mapping = NULL,
    data = NULL,
    stat = "mosaic_jitter",
    position = "identity",
    na.rm = FALSE,
    divider = mosaic(),
    offset = 0.01,
    drop_level = FALSE,
)```
geom_mosaic_jitter

```r
show.legend = NA,
inherit.aes = FALSE,
```

```
stat_mosaic_jitter(
  mapping = NULL,
  data = NULL,
  geom = "mosaic_jitter",
  position = "identity",
  na.rm = FALSE,
  divider = mosaic(),
  show.legend = NA,
  inherit.aes = TRUE,
  offset = 0.01,
  drop_level = FALSE,
```

```
Arguments

mapping Set of aesthetic mappings created by `aes()` or `aes_()`. If specified and `inherit.aes = TRUE` (the default), it is combined with the default mapping at the top level of the plot. You must supply mapping if there is no plot mapping.

data The data to be displayed in this layer. There are three options:

If `NULL`, the default, the data is inherited from the plot data as specified in the call to `ggplot()`.

A `data.frame`, or other object, will override the plot data. All objects will be fortified to produce a data frame. See `fortify()` for which variables will be created.

A function will be called with a single argument, the plot data. The return value must be a `data.frame`, and will be used as the layer data. A function can be created from a formula (e.g. `~ head(.x, 10)`).

stat The statistical transformation to use on the data for this layer, as a string.

position Position adjustment, either as a string, or the result of a call to a position adjustment function.

na.rm If `FALSE` (the default), removes missing values with a warning. If `TRUE` silently removes missing values.

divider Divider function. The default divider function is `mosaic()` which will use spines in alternating directions. The four options for partitioning:

- `vspine` Vertical spine partition: width constant, height varies.
- `hspine` Horizontal spine partition: height constant, width varies.
- `vbar` Vertical bar partition: height constant, width varies.
- `hbar` Horizontal bar partition: width constant, height varies.

offset Set the space between the first spine

drop_level Generate points for the max - 1 level
```
show.legend  
logical. Should this layer be included in the legends? NA, the default, includes if any aesthetics are mapped. FALSE never includes, and TRUE always includes. It can also be a named logical vector to finely select the aesthetics to display.

inherit.aes  
If FALSE, overrides the default aesthetics, rather than combining with them. This is most useful for helper functions that define both data and aesthetics and shouldn’t inherit behaviour from the default plot specification, e.g. borders().

...  
other arguments passed on to layer. These are often aesthetics, used to set an aesthetic to a fixed value, like color = ‘red’ or size = 3. They may also be parameters to the paired geom/stat.

gem  
The geometric object to use display the data

Computed variables

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>xmin</td>
<td>location of bottom left corner</td>
</tr>
<tr>
<td>xmax</td>
<td>location of bottom right corner</td>
</tr>
<tr>
<td>ymin</td>
<td>location of top left corner</td>
</tr>
<tr>
<td>ymax</td>
<td>location of top right corner</td>
</tr>
</tbody>
</table>

Examples

data(titanic)

```r
ggplot(data = titanic) +
  geom_mosaic(aes(x = product(Class), fill = Survived), alpha = 0.3) +
  geom_mosaic_jitter(aes(x = product(Class), color = Survived))
```

```r
ggplot(data = titanic) +
  geom_mosaic(aes(x = product(Class)), alpha = 0.1) +
  geom_mosaic_jitter(aes(x = product(Class), color = Survived), drop_level = TRUE)
```

```r
ggplot(data = titanic) +
  geom_mosaic(alpha = 0.3, aes(x = product(Class, Sex), fill = Survived),
              divider = c("vspine", "hspine", "hspine")) +
  geom_mosaic_jitter(aes(x = product(Class, Sex), color = Survived),
                     divider = c("vspine", "hspine", "hspine"))
```

```r
ggplot(data = titanic) +
  geom_mosaic(alpha = 0.3, aes(x = product(Class), conds = product(Sex), fill = Survived),
              divider = c("vspine", "hspine", "hspine")) +
  geom_mosaic_jitter(aes(x = product(Class), conds = product(Sex), fill = Survived),
                     divider = c("vspine", "hspine", "hspine"))
```

---

**geom_mosaic_text**  
Labeling for Mosaic plots.

Description

A mosaic plot with text or labels
Usage

geom_mosaic_text(
  mapping = NULL,
  data = NULL,
  stat = "mosaic",
  position = "identity",
  na.rm = FALSE,
  divider = mosaic(),
  offset = 0.01,
  show.legend = NA,
  inherit.aes = FALSE,
  repel = FALSE,
  repel.params = NULL,
  checkoverlap = FALSE,
  ...
)

Arguments

mapping
- Set of aesthetic mappings created by aes() or aes_(). If specified and inherit.aes = TRUE (the default), it is combined with the default mapping at the top level of the plot. You must supply mapping if there is no plot mapping.

data
- The data to be displayed in this layer. There are three options:
  - If NULL, the default, the data is inherited from the plot data as specified in the call to ggplot().
  - A data.frame, or other object, will override the plot data. All objects will be fortified to produce a data frame. See fortify() for which variables will be created.
  - A function will be called with a single argument, the plot data. The return value must be a data.frame, and will be used as the layer data. A function can be created from a formula (e.g. ~ head(.x, 10)).

stat
- The statistical transformation to use on the data for this layer, as a string.

position
- Position adjustment, either as a string, or the result of a call to a position adjustment function.

na.rm
- If FALSE (the default), removes missing values with a warning. If TRUE silently removes missing values.

divider
- Divider function. The default divider function is mosaic() which will use spines in alternating directions. The four options for partitioning:
  - vspine Vertical spine partition: width constant, height varies.
  - hspine Horizontal spine partition: height constant, width varies.
  - vbar Vertical bar partition: height constant, width varies.
  - hbar Horizontal bar partition: width constant, height varies.

offset
- Set the space between the first spine
show.legend logical. Should this layer be included in the legends? NA, the default, includes if any aesthetics are mapped. FALSE never includes, and TRUE always includes. It can also be a named logical vector to finely select the aesthetics to display.

inherit.aes If FALSE, overrides the default aesthetics, rather than combining with them. This is most useful for helper functions that define both data and aesthetics and shouldn’t inherit behaviour from the default plot specification, e.g. borders().

as.label Show as a ggplot label (box with round corners)

repel Use ggrepel wo labels don’t overlap

repel_params List of ggrepel parameters (e.g. list(point.padding = 0))

check_overlap If TRUE, text that overlaps previous text in the same layer will not be plotted. check_overlap happens at draw time and in the order of the data. Therefore data should be arranged by the label column before calling geom_label() or geom_text().

... other arguments passed on to layer. These are often aesthetics, used to set an aesthetic to a fixed value, like color = 'red' or size = 3. They may also be parameters to the paired geom/stat.

Examples

data(titanic)

ggplot(data = titanic) +
  geom_mosaic(aes(x = product(Class), fill = Survived)) +
  geom_mosaic_text(aes(x = product(Class), fill = Survived))

ggplot(data = titanic) +
  geom_mosaic(aes(x = product(Class, Sex), fill = Survived),
              divider = c("vspine", "hspine", "hspine") +
  geom_mosaic_text(aes(x = product(Class, Sex), fill = Survived),
              divider = c("vspine", "hspine", "hspine"), size = 2)

ggplot(data = happy) +
  geom_mosaic(aes(x = product(health), fill = happy), na.rm = TRUE, show.legend = FALSE) +
  geom_mosaic_text(aes(x = product(happy, health)), na.rm = TRUE)

# avoid overlapping text
ggplot(data = happy) +
  geom_mosaic(aes(x = product(health), fill = happy), na.rm = TRUE, show.legend = FALSE) +
  geom_mosaic_text(aes(x = product(happy, health)), na.rm = TRUE, check_overlap = TRUE)

# or use ggrepel
ggplot(data = happy) +
  geom_mosaic(aes(x = product(health), fill = happy), na.rm = TRUE, show.legend = FALSE) +
  geom_mosaic_text(aes(x = product(happy, health)), na.rm = TRUE, repel = TRUE)

# and as a label
ggplot(data = happy) +
  geom_mosaic(aes(x = product(health), fill = happy), na.rm = TRUE, show.legend = FALSE) +
  geom_mosaic_text(aes(x = product(happy, health)), na.rm = TRUE, repel = TRUE, as.label=TRUE)
happy

Data related to happiness from the general social survey.

Description
The data is a small sample of variables related to happiness from the general social survey (GSS). The GSS is a yearly cross-sectional survey of Americans, run since 1972. We combine data for more than 25 years to yield over 60 thousand observations, and of the over 5,000 variables, we select some variables that are related to happiness:

Usage
data(happy)

Format
A data frame with 62466 rows and 11 variables
- year. year of the response, 1972 to 2018.
- age. age in years: 18–89 (89 stands for all 89 year olds and older).
- degree. highest education: lt high school, high school, junior college, bachelor, graduate.
- finrela. how is your financial status compared to others: far below, below average, average, above average, far above.
- happy. happiness: very happy, pretty happy, not too happy.
- health. health: excellent, good, fair, poor.
- marital. marital status: married, never married, divorced, widowed, separated.
- sex. sex: female, male.
- polviews. from extremely conservative to extremely liberal.
- partyid. party identification: strong republican, not str republican, ind near rep, independent, ind near dem, not str democrat, strong democrat, other party.
- wtssall. probability weight. 0.39–8.74

hbar

Horizontal bar partition: width constant, height varies.

Description
Horizontal bar partition: width constant, height varies.

Usage
hbar(data, bounds, offset = 0.02, max = NULL)
Arguments

- data: bounds data frame
- bounds: bounds of space to partition
- offset: space between spines
- max: maximum value

**Description**

Horizontal spine partition: height constant, width varies.

**Usage**

```r
hspine(data, bounds, offset = offset, max = NULL)
```

Arguments

- data: bounds data frame
- bounds: bounds of space to partition
- offset: space between spines
- max: maximum value

**Description**

Template for a mosaic plot. A mosaic plot is composed of spines in alternating directions.

**Usage**

```r
mosaic(direction = "h")
```

Arguments

- direction: direction of first split
**product**

*Wrapper for a list*

---

**Description**

Wrapper for a list

**Usage**

```r
product(...)  
product(...)  
```

**Arguments**

... Unquoted variables going into the product plot.

**Examples**

```r
data(titanic)  
ggplot(data = titanic) +  
  geom_mosaic(aes(x = product(Survived, Class), fill = Survived))  
data(titanic)  
ggplot(data = titanic) +  
  geom_mosaic(aes(x = product(Survived, Class), fill = Survived))
```

---

**scale_type.productlist**

*Helper function for determining scales*

---

**Description**

Used internally to determine class of variable x

**Usage**

```r
## S3 method for class 'productlist'  
scale_type(x)
```

**Arguments**

- `x` variable

**Value**

character string "productlist"
scale_x_productlist  Determining scales for mosaics

Description
Determining scales for mosaics

Usage

```
scale_x_productlist(
  name = ggplot2::waiver(),
  breaks = product_breaks(),
  minor_breaks = NULL,
  labels = product_labels(),
  limits = NULL,
  expand = ggplot2::waiver(),
  oob = scales:::censor,
  na.value = NA_real_,
  trans = "identity",
  position = "bottom",
  sec.axis = ggplot2::waiver()
)
```

```
scale_y_productlist(
  name = ggplot2::waiver(),
  breaks = product_breaks(),
  minor_breaks = NULL,
  labels = product_labels(),
  limits = NULL,
  expand = ggplot2::waiver(),
  oob = scales:::censor,
  na.value = NA_real_,
  trans = "identity",
  position = "left",
  sec.axis = ggplot2::waiver()
)
```

ScaleContinuousProduct

Arguments

- **name**
  - set to pseudo waiver function product_names by default.
- **breaks**
  - One of:
    - NULL for no breaks
    - waiver() for the default breaks computed by the transformation object
    - A numeric vector of positions
A function that takes the limits as input and returns breaks as output (e.g., a function returned by `scales::extended_breaks()`)

**minor_breaks**

One of:
- NULL for no minor breaks
- `waiver()` for the default breaks (one minor break between each major break)
- A numeric vector of positions
- A function that given the limits returns a vector of minor breaks.

**labels**

One of:
- NULL for no labels
- `waiver()` for the default labels computed by the transformation object
- A character vector giving labels (must be same length as breaks)
- A function that takes the breaks as input and returns labels as output

**limits**

One of:
- NULL to use the default scale range
- A numeric vector of length two providing limits of the scale. Use `NA` to refer to the existing minimum or maximum
- A function that accepts the existing (automatic) limits and returns new limits. Note that setting limits on positional scales will **remove** data outside of the limits. If the purpose is to zoom, use the limit argument in the coordinate system (see `coord_cartesian()`).

**expand**

For position scales, a vector of range expansion constants used to add some padding around the data to ensure that they are placed some distance away from the axes. Use the convenience function `expansion()` to generate the values for the expand argument. The defaults are to expand the scale by 5% on each side for continuous variables, and by 0.6 units on each side for discrete variables.

**oob**

One of:
- Function that handles limits outside of the scale limits (out of bounds).
- The default (`scales::censor()`) replaces out of bounds values with `NA`.
- `scales::squish()` for squishing out of bounds values into range.
- `scales::squish_infinite()` for squishing infinite values into range.

**na.value**

Missing values will be replaced with this value.

**trans**

For continuous scales, the name of a transformation object or the object itself. Built-in transformations include "asn", "atanh", "boxcox", "date", "exp", "hms", "identity", "log", "log10", "log1p", "log2", "logit", "modulus", "probability", "probit", "pseudo_log", "reciprocal", "reverse", "sqrt" and "time".

A transformation object bundles together a transform, its inverse, and methods for generating breaks and labels. Transformation objects are defined in the scales package, and are called `<name>_trans` (e.g., `scales::boxcox_trans()`). You can create your own transformation with `scales::trans_new()`.

**position**

For position scales, The position of the axis. *left* or *right* for y axes, *top* or *bottom* for x axes.

**sec.axis**

specify a secondary axis
Format
An object of class `ScaleContinuousProduct` (inherits from `ScaleContinuousPosition`, `ScaleContinuous`, `Scale`, `ggproto`, `gg`) of length 5.

<table>
<thead>
<tr>
<th>spine</th>
<th>Spine partition: divide longest dimension.</th>
</tr>
</thead>
</table>

Description
Spine partition: divide longest dimension.

Usage

```
spine(data, bounds, offset = offset, max = NULL)
```

Arguments

<table>
<thead>
<tr>
<th>data</th>
<th>bounds data frame</th>
</tr>
</thead>
<tbody>
<tr>
<td>bounds</td>
<td>bounds of space to partition</td>
</tr>
<tr>
<td>offset</td>
<td>space between spines</td>
</tr>
<tr>
<td>max</td>
<td>maximum value</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>squeeze</th>
<th>Internal helper function</th>
</tr>
</thead>
</table>

Description
Squeeze pieces to lie within specified bounds; directly copied from package productplots

Usage

```
squeeze(pieces, bounds = bound())
```

Arguments

<table>
<thead>
<tr>
<th>pieces</th>
<th>rectangle specified via l(left), r(right), b(ottom), t(op)</th>
</tr>
</thead>
<tbody>
<tr>
<td>bounds</td>
<td>rectangle specified via l(left), r(right), b(ottom), t(op)</td>
</tr>
</tbody>
</table>

Value
re-scaled values for piece according to boundaries given by bounds

Author(s)
Hadley Wickham
Traitement & Visualisation

**theme_mosaic**

*Theme for mosaic plots*

**Description**
Themes set the general aspect of the plot such as the colour of the background, gridlines, the size and colour of fonts. *theme_mosaic* provides access to the regular ggplot2 theme, but removes any background, most of the gridlines, and ensures an aspect ratio of 1 for better viewing of the mosaics.

**Arguments**
- `base_size`  base font size
- `base_family` base font family

**Examples**
```r
library(ggmosaic)
data(happy)
ggplot(data = happy) +
  geom_mosaic(aes(weight=wtssall, x=product(health), fill=happy), na.rm=TRUE) +
  theme_mosaic()
```
titanic  
*Passengers and crew on board the Titanic*

**Description**

A dataset containing some demographics and survival of people on board the Titanic

**Usage**

`titanic`

**Format**

A data frame with 2201 rows and 4 variables:

- **Class** factor variable containing the class of a passenger (1st, 2nd, 3rd) or crew.
- **Sex** Male/Female.
- **Age** Child/Adult. This information is not very reliable, because it was inferred from boarding documents that did not state actual age in years.
- **Survived** Yes/No.

---

**vbar**  
*Vertical bar partition: height constant, width varies.*

**Description**

Vertical bar partition: height constant, width varies.

**Usage**

`vbar(data, bounds, offset = 0.02, max = NULL)`

**Arguments**

- **data** bounds data frame
- **bounds** bounds of space to partition
- **offset** space between spines
- **max** maximum value
vspine

---

vspine  
*Vertical spine partition: width constant, height varies.*

---

**Description**

Vertical spine partition: width constant, height varies.

**Usage**

vspine(data, bounds, offset = offset, max = NULL)

**Arguments**

- **data**  
  bounds data frame
- **bounds**  
  bounds of space to partition
- **offset**  
  space between spines
- **max**  
  maximum value
Index

* datasets
  fly, 3
  GeomMosaic, 4
  GeomMosaicJitter, 4
  GeomMosaicText, 4
  happy, 13
  scale_x_productlist, 16
  StatMosaic, 19
  StatMosaicJitter, 19
  StatMosaicText, 19
  titanic, 20

  aes(), 6, 9, 11
  aes_(), 6, 9, 11

  borders(), 6, 10, 12

  coord_cartesian(), 17

  ddecker, 2

  expansion(), 17

  fly, 3
  fortify(), 6, 9, 11

  geom_mosaic, 5
  geom_mosaic_jitter, 8
  geom_mosaic_text, 10
  GeomMosaic, 4
  GeomMosaicJitter, 4
  GeomMosaicText, 4
  ggplot(), 6, 9, 11

  happy, 13
  hbar, 13
  hspine, 14

  mosaic, 14
  product, 15

  scale_type_productlist, 15
  scale_x_productlist, 16
  scale_y_productlist
    (scale_x_productlist), 16
  ScaleContinuousProduct
    (scale_x_productlist), 16
  scales::boxcox_trans(), 17
  scales::censor(), 17
  scales::extended_breaks(), 17
  scales::squish(), 17
  scales::squish_infinite(), 17
  scales::trans_new(), 17
  spine, 18
  squeeze, 18
  stat_mosaic (geom_mosaic), 5
  stat_mosaic_jitter
    (geom_mosaic_jitter), 8
  stat_mosaic_text (geom_mosaic), 8
  StatMosaic, 19
  StatMosaicJitter, 19
  StatMosaicText, 19

  theme_mosaic, 19
  titanic, 20
  transformation object, 16

  vbar, 20
  vspine, 21