

# Package: plotbb (via r-universe)

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**Title** Grammar of Graphics for 'base' Plot

**Version** 0.0.6

**Description** Proof of concept for implementing grammar of graphics using base plot. The `bbplot()` function initializes a 'bbplot' object to store input data, aesthetic mapping, a list of layers and theme elements. The object will be rendered as a graphic using base plot command if it is printed.

**Imports** graphics, magrittr, rlang, scales, methods, utils

**Suggests** stats, ape, aplot (>= 0.0.8), dplyr, ggplotify (>= 0.1.0), knitr, rmarkdown, prettydoc

**VignetteBuilder** knitr

**ByteCompile** true

**License** Artistic-2.0

**Encoding** UTF-8

**RoxygenNote** 7.1.1

**NeedsCompilation** no

**Author** Guangchuang Yu [aut, cre, cph]  
(<https://orcid.org/0000-0002-6485-8781>)

**Maintainer** Guangchuang Yu <guangchuangyu@gmail.com>

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**Repository** <https://guangchuangyu.r-universe.dev>

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as.bbplot	<i>as.bbplot</i>
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## Description

convert a base plot function to a bbplot object

## Usage

```
as.bbplot(fun)
```

## Arguments

fun                    a function that plot something in base graphics

## Details

the base plot function will be plotted as a canvas and users can apply theme and add layers to it

## Value

A bbplot object

## Author(s)

Guangchuang Yu

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bbplot	<i>bbplot</i>
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**Description**

bbplot

**Usage**

```
bbplot(data, mapping = bb_aes())
```

**Arguments**

data	data
mapping	variable mapping

**Details**

a proof of concept for grammar of graphics based on base plot. The `bbplot` class contains data (input data), mapping (aesthetic mapping), layer (a list of plot layers), theme (theme setting) and labs (label setting, including title, subtitle, x and y labels).

**Value**

bbplot object

**Author(s)**

Guangchuang Yu

**Examples**

```
library(plotbb)
p <- bbplot(mtcars, bb_aes(mpg, disp, col=factor(cyl)))
p + bb_grid(col='grey50', lty='dashed') + bb_point(pch=19)
```

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bb_aes	<i>bb_aes</i>
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**Description**

aesthetic mapping

**Usage**

```
bb_aes(x, y, ...)
```

**Arguments**

x	x variable
y	y variable
...	other mappings

**Details**

aesthetic mapping for bbplot

**Value**

enquo expression describing variables mapping to aesthetic attributes

**Author(s)**

Guangchuang Yu

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bb_grid	<i>bb_grid</i>
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**Description**

add grid lines

**Usage**

```
bb_grid(col = "lightgray", lty = par("lty"), lwd = par("lwd"), bg = TRUE)
```

**Arguments**

col	line color
lty	line type
lwd	line width
bg	whether plot the grid lines as background

**Value**

A modified `bbplot` object

**Author(s)**

Guangchuang Yu

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<code>bb_labs</code>	<i>bb_labs</i>
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**Description**

change labels for `bbplot`

**Usage**

```
bb_labs(title = NULL, sub = NULL, xlab = NULL, ylab = NULL)
```

```
bb_title(title)
```

```
bb_sub(sub)
```

```
bb_xlab(xlab)
```

```
bb_ylab(ylab)
```

**Arguments**

<code>title</code>	<code>title</code>
--------------------	--------------------

<code>sub</code>	<code>sub</code>
------------------	------------------

<code>xlab</code>	<code>xlab</code>
-------------------	-------------------

<code>ylab</code>	<code>ylab</code>
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**Details**

setting one or several of 'title', 'sub', 'xlab', and 'ylab'

**Value**

A modified `bbplot` object

**Author(s)**

Guangchuang Yu

**Examples**

```
library(plotbb)
p <- bbplot(mtcars, bb_aes(mpg, disp, col=factor(cyl))) + bb_point(pch=19)
p + bb_labs(title = "hello", sub = "just for demo",
            xlab="this is xlab", ylab = "this is ylab") +
  bb_title("hello world") # last one rules
```

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bb\_lm

*layer*


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**Description**

layer

**Usage**

```
bb_lm(mapping = NULL, data = NULL, ...)

bb_point(mapping = NULL, data = NULL, position = "identity", ...)

bb_text(mapping = NULL, data = NULL, ...)

bb_tile(mapping = NULL, data = NULL, ...)
```

**Arguments**

mapping	aesthetic mapping
data	layer data
...	addition parameter for the layer
position	one of 'identity' or 'jitter'

**Details**

bbplot layers

**Value**

A modified bbplot object

**Author(s)**

Guangchuang Yu

**Examples**

```
library(plotbb)
p <- bbplot(mtcars, bb_aes(mpg, disp, col=factor(cyl))) +
  bb_point() + bb_lm(bb_aes(group=cyl), lwd=2)
```

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`bb_scale_col_palette`    *bb\_scale\_col\_palette*

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**Description**

change col palette

**Usage**

`bb_scale_col_palette(palette = NULL)`

**Arguments**

`palette`            color palette

**Value**

A modified `bbplot` object

**Author(s)**

Guangchuang Yu

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`bb_theme`            *bb\_theme*

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**Description**

bbplot theme

**Usage**

`bb_theme(...)`

`bb_theme_expand(...)`

`bb_theme_grey(...)`

`bb_theme_deepblue(...)`

**Arguments**

`...`            parameters for `graphics::par`

**Details**

setting visual details of `bbplot`

**Value**

A modified bbplot object

**Author(s)**

Guangchuang Yu

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set_bb_theme	<i>set_bb_theme</i>
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**Description**

set bb\_theme

**Usage**

```
set_bb_theme(theme)
```

**Arguments**

theme            bb\_theme

**Details**

setting bb\_theme for ordinary base plot command. It internally use par to set global graphic parameters. Users need to explicitly call unset\_bb\_theme() to restore original setting.

**Value**

setting selected theme as default (has side effect and will affect other base plot)

**Author(s)**

Guangchuang Yu

**Examples**

```
library(plotbb)
set_bb_theme(bb_theme_deepblue)
bbplot(mtcars, bb_aes(mpg, disp, col=factor(cyl))) + bb_point(pch=19)
```



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<code>unset_bb_theme</code>	<i>unset_bb_theme</i>
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**Description**

`unset bb_theme`

**Usage**

`unset_bb_theme()`

**Details**

remove all the themes by `set_bb_theme`

**Value**

unset theme (i.e., restore par setting)

**Author(s)**

Guangchuang Yu

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