

# Package ‘ggmatplot’

October 13, 2022

**Title** Plot Columns of Two Matrices Against Each Other Using 'ggplot2'

**Version** 0.1.2

**Description** A quick and easy way of plotting the columns of two matrices or data frames against each other using 'ggplot2'. Although 'ggmatplot' doesn't provide the same flexibility as 'ggplot2', it can be used as a workaround for having to wrangle wide format data into long format for plotting with 'ggplot2'.

**URL** <https://github.com/xuan-liang/ggmatplot>,  
<https://xuan-liang.github.io/ggmatplot/>

**BugReports** <https://github.com/xuan-liang/ggmatplot/issues>

**License** GPL-3

**Encoding** UTF-8

**RoxygenNote** 7.1.2

**Depends** R (>= 3.4.0), ggplot2

**Imports** stats

**Suggests** rmarkdown, knitr, testthat (>= 3.0.0), vdiffr, tibble, tidyr,  
dplyr, covr

**VignetteBuilder** knitr

**Config/testthat/edition** 3

**NeedsCompilation** no

**Author** Xuan Liang [aut, cre] (<<https://orcid.org/0000-0002-0792-3751>>),  
Francis K. C. Hui [aut] (<<https://orcid.org/0000-0003-0765-3533>>),  
Emi Tanaka [aut] (<<https://orcid.org/0000-0002-1455-259X>>),  
Dilinie Seimon [aut] (<<https://orcid.org/0000-0003-4431-6077>>)

**Maintainer** Xuan Liang <xuan.liang@anu.edu.au>

**Repository** CRAN

**Date/Publication** 2022-05-17 02:20:02 UTC

## R topics documented:

ggmatplot . . . . . 2

**Index** . . . . . 5

ggmatplot                      *ggmatplot*

### Description

ggmatplot is a quick and easy way of plotting the columns of two matrices or data frames against each other using [ggplot2](#).

### Usage

```
ggmatplot(
  x = NULL,
  y = NULL,
  plot_type = c("point", "line", "both", "density", "histogram", "boxplot", "dotplot",
    "errorplot", "violin", "ecdf"),
  color = NULL,
  fill = NULL,
  shape = NULL,
  linetype = NULL,
  xlim = c(NA, NA),
  ylim = c(NA, NA),
  log = NULL,
  main = NULL,
  xlab = NULL,
  ylab = NULL,
  legend_label = NULL,
  legend_title = NULL,
  desc_stat = "mean_se",
  asp = NA,
  ...
)
```

### Arguments

`x, y`                      Vectors or matrices of data.

- The number of rows of `x` and `y` should be the same.
- Either `x` or `y` should be a vector, unless the number of columns of `x` and `y` are the same.
- Missing values (NAs) are allowed.
- If either `x` or `y` is missing, the other is used as `y` and a vector of `1:n` is used as `x`.

plot_type	A string specifying the type of plot. Possible plot types are point, line, both(point + line), density, histogram, boxplot, dotplot, errorplot, violin, and ecdf. Default plot_type is point.
color, fill	Vectors of colors. Defining only one of them will update both color and fill aesthetics of the plot by default, unless they are both defined simultaneously. <ul style="list-style-type: none"> <li>• The number of colors should match the higher number of columns of matrices x or y, and will correspond to each of those columns.</li> <li>• If only a single color is given, the same color will be used for all columns.</li> </ul>
shape, linetype	A vector of shapes or line types respectively. <ul style="list-style-type: none"> <li>• The number of shapes/line types should match the higher number of columns of matrices x or y, and will correspond to each of those columns.</li> <li>• If only a single shape/line type is given, the same shape/line type will be used for all columns.</li> </ul>
xlim, ylim	Ranges of x and y axes. <ul style="list-style-type: none"> <li>• Each of them should be a two element vector specifying the lower and upper limits of the scale.</li> <li>• If the larger value is given first, the scale will be reversed. If one of the limits is given as NA, the corresponding limit from the range of data will be used.</li> </ul>
log	A string defining which axes to transform into a log scale. (x, y or xy)
main, xlab, ylab, legend_title	Strings to update plot title, x axis label, y axis label and legend title respectively.
legend_label	A vector of strings, to rename the legend labels.
desc_stat	Descriptive statistics to be used for visualizing errors, in errorplot. Possible values are mean_se, mean_sd, mean_range, median_iqr and median_range. Default desc_stat is mean_se.
asp	The y/x aspect ratio.
...	Other arguments passed on to the plot. Possible arguments are those that can be passed on to the <a href="#">underlying ggplot layers</a> .

**Value**

A ggplot object. The columns of the input matrices will be plotted against each other using the defined plot type.

**Plot Types**

ggmatplotplots are built upon ggplot2 layers. The following is a list of ggmatplot plot types, along with their underlying [ggplot geoms](#) or [stats](#).

- [point geom\\_point](#)
- [line geom\\_line](#)
- [both geom\\_point + geom\\_line](#)

- **density** `geom_density`
- **histogram** `geom_histogram`
- **boxplot** `geom_boxplot`
- **dotplot** `geom_dotplot`
- **errorplot** `geom_pointrange`
- **violin** `geom_violin`
- **ecdf** `stat_ecdf`

### Examples

```
# Define a data set
iris_sub <- subset(iris, Species == "setosa")
ggmatplot(iris_sub[, c(1, 3)], iris_sub[, c(2, 4)])
# Modify legend label and axis
ggmatplot(iris_sub[, c(1, 3)], iris_sub[, c(2, 4)],
  shape = c(4, 6),
  legend_label = c("Sepal", "Petal"), legend_title = "",
  xlab = "Length", ylab = "Width"
)
```

# Index

geom\_boxplot, 4  
geom\_density, 4  
geom\_dotplot, 4  
geom\_histogram, 4  
geom\_line, 3  
geom\_point, 3  
geom\_pointrange, 4  
geom\_violin, 4  
ggmatplot, 2  
stat\_ecdf, 4