

Package ‘hyper.gam’

October 11, 2026

Type Package

Title Generalized Additive Models with Hyper Column

Version 0.3.4

Date 2026-10-11

Description An interactive HTML widget of the perspective plot for generalized additive models; an alternative solution of the function `mgcv::vis.gam()`. This R package author has retired from academic research. Accordingly, this package should not be considered a validated tool for use in peer-reviewed publications or as the basis for grant applications. Backward compatibility with user-code published in [<doi:10.1093/bioinformatics/btaf182>](https://doi.org/10.1093/bioinformatics/btaf182) and [<doi:10.1093/bioinformatics/btaf430>](https://doi.org/10.1093/bioinformatics/btaf430) is not maintained in versions $\geq 0.3.0$ (June 2026) of this package. The authors of those publications are the appropriate contacts for reproducibility inquiries.

Encoding UTF-8

License GPL-2

Language en-US

Depends R (≥ 4.6)

Imports cli, mgcv, plotly

Suggests htmlwidgets

Config/roxygen2/version 8.1.1

Config/roxygen2/markdown TRUE

NeedsCompilation no

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v0.2.3)

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Repository CRAN

Date/Publication 2026-10-11 14:10:50 UTC

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hyper.gam-package

hyper.gam: *Generalized Additive Models with Hyper Column*

Description

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widget_gam	Alternative <i>perspective</i> Plot for <i>gam</i> Model
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Description

An interactive *perspective* plot for *gam* model, rendered as an **htmlwidgets** using the package **plotly**.

Usage

```
widget_gam(x, ..., colorscale)
```

Arguments

x	a <i>gam</i> model
...	parameters of the function <i>vis.gam</i>
colorscale	to be passed into the function <i>add_surface</i>

Value

The function *widget_gam()* returns a pretty **htmlwidgets** created by **R** package **plotly**.

Note

The internal utility functions *persp_gam_int()* and *newd_gam_int()* are based on the function *vis.gam*.

Examples

```
library(mgcv)
colorscale = list(c(0, 1), c('white', 'lightgreen'))

# examples from ?mgcv::te
test1 = \(x,z,sx=0.3,sz=0.4) {
  x = x*20
  (pi*sx*sz)*(1.2*exp(-(x-0.2)^2/sx^2-(z-0.3)^2/sz^2)+
    0.8*exp(-(x-0.7)^2/sx^2-(z-0.8)^2/sz^2))
}
n = 500
x = runif(n)/20; z = runif(n);
xs = seq(0,1,length=30)/20; zs = seq(0,1,length=30)
pr = data.frame(x=rep(xs,30),z=rep(zs,rep(30,30)))
truth = matrix(test1(pr$x,pr$z),30,30)
persp(xs,zs,truth); title("truth")
f = test1(x,z)
y = f + rnorm(n)*0.2
b1 = gam(y ~ s(x,z))
b2 = gam(y ~ te(x,z))
b3 = gam(y ~ ti(x) + ti(z) + ti(x,z))
```

```
b4 = gam(y ~ ti(x) + ti(x,z,mc=c(0,1))) ## note z constrained!  
  
widget_gam(b1, colorscale = colorscale)  
widget_gam(b2, colorscale = colorscale)  
widget_gam(b3, colorscale = colorscale)  
widget_gam(b4, colorscale = colorscale)
```

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