

Package ‘rfishdraw’

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Type Package

Title Automatically Generated Fish Drawings via JavaScript

Version 0.1.0

Date 2021-09-06

Maintainer Liuyong Ding <ly_ding@126.com>

Description Automatic generation of fish drawings based on JavaScript library <<https://github.com/LingDong-/fishdraw>>, including JavaScript code for dynamic generation of fish drawings.

Depends R (>= 3.5.0)

Imports jsonlite, ggplot2

Suggests rmarkdown, knitr, prettydoc, patchwork, devtools

VignetteBuilder knitr

License Artistic-2.0

URL <https://github.com/Otoliths/rfishdraw>

BugReports <https://github.com/Otoliths/rfishdraw/issues>

Encoding UTF-8

RoxygenNote 7.1.1

NeedsCompilation no

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 rfishdraw-package *Automatically Generated Fish Drawings via JavaScript*

Description

This package is designed for programmatically generated fish drawings via ggplot2 based on JavaScript library <<https://github.com/LingDong-/fishdraw>>.

Details

Package: rfishdraw
 Type: Package
 Title: Automatically Generated Fish Drawings via JavaScript
 Version: 0.1.0
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 Maintainer: Liuyong Ding <ly_ding@126.com>
 Description: Automatic generation of fish drawings based on JavaScript library <<https://github.com/LingDong-/fishdraw>>
 Depends: R (>= 3.5.0)
 Imports: jsonlite, ggplot2
 Suggests: rmarkdown, knitr, prettydoc, patchwork, devtools
 VignetteBuilder: knitr
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Index of help topics:

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rfishdraw-package	Automatically Generated Fish Drawings via JavaScript

Author(s)

Maintainer: Liuyong Ding <ly_ding@126.com>

`custom_params`*Create and implement a custom JS library.*

Description

Programmatically generated fish drawings via ggplot2 based on JavaScript library <https://github.com/LingDong-/fishdraw>.

Usage

```
custom_params(  
  path = "./fishdraw.js",  
  save = getwd(),  
  body_curve_type = 0,  
  body_curve_amount = 0.85,  
  body_length = 420,  
  body_height = 90,  
  scale_type = 1,  
  scale_scale = 1,  
  pattern_type = 3,  
  pattern_scale = 1,  
  dorsal_texture_type = 1,  
  dorsal_type = 0,  
  dorsal_length = 100,  
  dorsal_start = 8,  
  dorsal_end = 27,  
  wing_texture_type = 0,  
  wing_type = 0,  
  wing_start = 6,  
  wing_end = 6,  
  wing_y = 0.7,  
  wing_length = 130,  
  wing_width = 10,  
  pelvic_start = 9,  
  pelvic_end = 14,  
  pelvic_length = 85,  
  pelvic_type = 0,  
  pelvic_texture_type = 0,  
  anal_start = 19,  
  anal_end = 29,  
  anal_length = 50,  
  anal_type = 0,  
  anal_texture_type = 0,  
  tail_type = 0,  
  tail_length = 75,  
  finlet_type = 0,  
  neck_type = 0,
```

```

nose_height = 0,
mouth_size = 8,
head_length = 30,
head_texture_amount = 60,
has_moustache = 1,
moustache_length = 10,
has_beard = 0,
has_teeth = 1,
teeth_length = 8,
teeth_space = 3.5,
beard_length = 30,
eye_type = 0,
eye_size = 10,
jaw_size = 1,
jaw_open = 1
)

```

Arguments

path	Path for JavaScript fishdraw.js
save	Save path for custom JavaScript fishdraw.js(e.g.getwd())
body_curve_type	numeric body_curve_type options:0 or 1.
body_curve_amount	numeric body_curve_amount options:0.5,0.85 or 0.98.
body_length	numeric body_length options:200,350 or 420.
body_height	numeric body_height options:45,90 or 150.
scale_type	numeric scale_type options:0,1,2 or 3.
scale_scale	numeric scale_scale options:0.8,1 or 1.5.
pattern_type	numeric pattern_type options:0,1,2,3 or 4.
pattern_scale	numeric pattern_scale options:0.5,1 or 2.
dorsal_texture_type	numeric dorsal_texture_type options:0 or 1.
dorsal_type	numeric dorsal_type options:0 or 1.
dorsal_length	numeric dorsal_length options:30,90 or 180.
dorsal_start	numeric dorsal_start options:7,8,15;11,12,16.
dorsal_end	numeric dorsal_end options:20,27,28;19,21,24.
wing_texture_type	numeric wing_texture_type options:0 or 1.
wing_type	numeric wing_type options:0 or 1.
wing_start	numeric wing_start options:5,6 or 8.
wing_end	numeric wing_end options:5,6 or 8.
wing_y	numeric wing_y options:0.45,0.7 or 0.85.

wing_length	numeric wing_length options:40,130,200;40,150,350.
wing_width	numeric wing_width options:7,10,20;20,30,50.
pelvic_start	numeric pelvic_start options:7,9,11;7,9,12.
pelvic_end	numeric pelvic_end options:13,14,15
pelvic_length	numeric pelvic_length options:0 or 1.
pelvic_type	numeric pelvic_type options:0 or 1.
pelvic_texture_type	numeric pelvic_texture_type options:0 or 1.
anal_start	numeric anal_start options:16,19 or 23.
anal_end	numeric anal_end options:25,29 or 31.
anal_length	numeric anal_length options:20,50 or 80.
anal_type	numeric anal_type options:0 or 1.
anal_texture_type	numeric anal_texture_type options:0 or 1.
tail_type	numeric tail_type options:0,1,2,3,4 or 5.
tail_length	numeric tail_length options:50,75 or 180.
finlet_type	numeric finlet_type options:0,1,2 or 3.
neck_type	numeric neck_type options:0 or 1.
nose_height	numeric nose_height options:-50,0 or 35.
mouth_size	numeric mouth_size options:6,8 or 11.
head_length	numeric head_length options:20,30 or 50.
head_texture_amount	numeric head_texture_amount options:30,60 or 160.
has_moustache	numeric has_moustache options:0,0,0,1.
moustache_length	numeric moustache_length options:10,20,40.
has_beard	numeric has_beard options:0,0,0,0,1.
has_teeth	numeric has_teeth options:0,1,1.
teeth_length	numeric teeth_length options:5,8 or 15.
teeth_space	numeric teeth_space options:3,3.5 or 6.
beard_length	numeric beard_length options:20,30 or 50.
eye_type	numeric eye_type options:0 or 1.
eye_size	numeric eye_size options:8,10 or 28.
jaw_size	numeric jaw_size options:0.7,1 or 1.4.
jaw_open	numeric jaw_open options:0 or 1.

Value

Custom JS library.

Note

Note that some fish species might not be representable with this system, and passing "bad" params might produce weird results or crash the program.

Author(s)

Liuyong Ding <ly_ding@126.com>

Examples

```
## Not run:  
# create and implement a custom JS library  
custom_params(path = "./fishdraw.js", save = getwd())  
  
## End(Not run)
```

fish_draw

Automatically generated fish drawings via ggplot2

Description

Automatically generated fish drawings via ggplot2

Usage

```
fish_draw(data = NULL, x = x, y = y, group = group, ...)
```

Arguments

data	Path for *.json via get_polylines .
x	see aes for details
y	see aes for details
group	see aes for details
...	see geom_path for details

Value

ggplot object.

Author(s)

Liuyong Ding <ly_ding@126.com>

Examples

```
## Not run:
# fish drawings via plot
file <- system.file("extdata",package = "rfishdraw")
dat <- readRDS(paste0(file,"/", "output_json.rds"))
for (i in seq(length(dat))) {
  dat[[i]] <- cbind(dat[[i]],i)
}
plot(NA, xlim = c(0,520),ylim = c(-320,0),axes = F,xlab = " ",ylab = " ")
for(i in seq(length(dat))) {
  lines(x = dat[[i]][,1],y = -dat[[i]][,2], lwd=2, col = "blue")
}

# fish drawings via ggplot2
fish_draw()

## End(Not run)
```

get_polylines

*Get outputs polylines (supported format svg, json, csv, etc.)***Description**

Get outputs polylines (supported format svg, json, csv, etc.)

Usage

```
get_polylines(
  path = "./fishdraw.js",
  name = NULL,
  format = "svg",
  output = "output.svg",
  draw_type = "random"
)
```

Arguments

path	Path for fishdraw.js or customs.js via custom_params
name	The name string is used as the name of the fish (printed in the drawing). If unspecified, a random pseudo-Latin name will be auto generated.
format	Format options: svg (regular svg), smil (animated svg), csv (each polyline on a comma-separated line) and json.
output	Outputs polylines (supported format svg, json, csv, etc.)
draw_type	Draw_type options: random(by design fishdraw.js program is for randomly generated fishes),custom(by create and implement a custom customs.js for your favorite fish).

Value

Get outputs fish drawings polylines (in format .svg, .json and .csv).

Author(s)

Liuyong Ding <ly_ding@126.com>

Examples

```
## Not run:
# Get outputs polylines in svg
get_polylines(path = "inst/fishdraw.js",
              format = "svg",
              output = "output.svg",
              draw_type = "random")

# Get outputs polylines in json
get_polylines(path = "inst/fishdraw.js",
              format = "json",
              output = "output.json",
              draw_type = "random")

# Get outputs polylines in smil
get_polylines(path = "inst/fishdraw.js",
              format = "smil",
              output = "output.svg",
              draw_type = "random")

# browse animated svg
browseURL("inst/animated.svg")

## End(Not run)
```

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