Package: rfishdraw (via r-universe)

August 25, 2024

Type Package

Title Procedurally Generated Fish Drawings Via Javascript

Version 0.1.0

Date 2021-08-25

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

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

LazyData true

RoxygenNote 7.1.1

Repository https://otoliths.r-universe.dev

RemoteUrl https://github.com/otoliths/rfishdraw

RemoteRef HEAD

RemoteSha 2023942e5939b4e4ebadae28695579a5366a482c

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`rfishdraw-package` *Procedurally Generated Fish Drawings Via Javascript*

Description

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

Details

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Index: This package was not yet installed at build time.

Author(s)

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

Description

Procedurally generated fish drawings via ggplot2 based on fishdraw 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 fishdraw.js
save	save
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:0,0,0,0,0,1.

`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 *Procedurally generated fish drawings via ggplot2*

Description

Procedurally 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

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).

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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