Package 'WeibullR.plotly'

November 6, 2024

Type Package

Title Interactive Weibull Probability Plots

Version 0.3

Description Build interactive Weibull Probability
Plots with 'WeibullR' by David Silkworth and Jurgen Symynck (2022)
<<https://CRAN.R-project.org/package=WeibullR>>, an R package for
Weibull analysis, and 'plotly' by Carson Sievert (2020) <<https://plotly-r.com>>,
an interactive web-based graphing library.

URL <https://paulgovan.github.io/WeibullR.plotly/>,
<https://github.com/paulgovan/WeibullR.plotly>

BugReports <https://github.com/paulgovan/WeibullR.plotly/issues>

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Imports plotly, ReliaGrowR, WeibullR

Suggests knitr, rmarkdown, spelling, testthat (>= 3.0.0),
WeibullR.learnr, WeibullR.shiny

Encoding UTF-8

RoxygenNote 7.3.2

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Language en-US

NeedsCompilation no

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Contents

plotly_contour   *Interactive Contour Plot.*

Description

Interactive Contour Plot.

Usage

```
plotly_contour(
  wblr_obj,
  main = "Contour Plot",
  xlab = "Eta",
  ylab = "Beta",
  showGrid = TRUE,
  col = "black",
  gridCol = "lightgray",
  signif = 3
)
```

Arguments

wblr_obj	An object of class 'wblr'.
main	Main title.
xlab	X-axis label.
ylab	Y-axis label.
showGrid	Show grid (TRUE) or hide grid (FALSE).
col	Color of the model contour
gridCol	Color of the grid.
signif	Significant digits of results

Value

The function returns no value.

Examples

```
library(WeibullR)
library(WeibullR.plotly)
failures<-c(30, 49, 82, 90, 96)
obj<-wblr.conf(wblr.fit(wblr(failures), method.fit = 'mle'), method.conf = 'lrb')
plotly_contour(obj)
```

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plotly_duane	*Interactive Duane Plot.*

Description

Interactive Duane Plot.

Usage

```
plotly_duane(
  duane_obj,
  showGrid = TRUE,
  main = "Duane Plot",
  xlab = "Cumulative Time",
  ylab = "Cumulative MTBF",
  pointCol = "black",
  fitCol = "black",
  gridCol = "lightgray"
)
```

Arguments

duane_obj	An object of class 'duane'.
showGrid	Show grid (TRUE) or hide grid (FALSE).
main	Main title.
xlab	X-axis label.
ylab	Y-axis label.
pointCol	Color of the point values.
fitCol	Color of the model fit.
gridCol	Color of the grid.

Value

The function returns no value.

Examples

```
library(ReliaGrowR)
times<-c(100, 200, 300, 400, 500)
failures<-c(1, 2, 1, 3, 2)
fit<-duane_plot(times, failures)
plotly_duane(fit)
```

---

plotly_rga   *Interactive Reliability Growth Plot.*

Description

Interactive Reliability Growth Plot.

Usage

```
plotly_rga(
  rga_obj,
  showConf = TRUE,
  showGrid = TRUE,
  main = "Reliability Growth Plot",
  xlab = "Cumulative Time",
  ylab = "Cumulative Failures",
  pointCol = "black",
  fitCol = "black",
  confCol = "black",
  gridCol = "lightgray",
  breakCol = "black"
)
```

Arguments

rga_obj	An object of class 'rga'.
showConf	Show the confidence bounds (TRUE) or not (FALSE).
showGrid	Show grid (TRUE) or hide grid (FALSE).
main	Main title.
xlab	X-axis label.
ylab	Y-axis label.
pointCol	Color of the point values.
fitCol	Color of the model fit.
confCol	Color of the confidence bounds.
gridCol	Color of the grid.
breakCol	Color of the breakpoints.

Value

The function returns no value.

Examples

```
library(ReliaGrowR)
times<-c(100, 200, 300, 400, 500)
failures<-c(1, 2, 1, 3, 2)
rga<-rga(times, failures)
plotly_rga(rga)
```

| plotly_wblr | *Interactive Probability Plot.* |

Description

Interactive Probability Plot.

Usage

```
plotly_wblr(
  wblr_obj,
  susp = NULL,
  showConf = TRUE,
  showSusp = TRUE,
  showRes = TRUE,
  showGrid = TRUE,
  main = "Probability Plot",
  xlab = "Time to Failure",
  ylab = "Probability",
  probCol = "black",
  fitCol = "black",
  confCol = "black",
  intCol = "black",
  gridCol = "lightgray",
  signif = 3
)
```

Arguments

wblr_obj	An object of class 'wblr'.
susp	An optional numeric vector of suspension data.
showConf	Show the confidence bounds (TRUE) or not (FALSE).
showSusp	Show the suspensions plot (TRUE) or not (FALSE).
showRes	Show the results table (TRUE) or not (FALSE).
showGrid	Show grid (TRUE) or hide grid (FALSE).
main	Main title.
xlab	X-axis label.

ylab	Y-axis label.
probCol	Color of the probability values.
fitCol	Color of the model fit.
confCol	Color of the confidence bounds.
intCol	Color of the intervals for interval censored models.
gridCol	Color of the grid.
signif	Significant digits of results

Value

The function returns no value.

Examples

```
library(WeibullR)
library(WeibullR.plotly)
failures<-c(30, 49, 82, 90, 96)
obj<-wblr.conf(wblr.fit(wblr(failures)))
plotly_wblr(obj)
```

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