

Package ‘jskm’

October 13, 2022

Title Kaplan-Meier Plot with 'ggplot2'

Version 0.4.3

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Description The function 'jskm()' creates publication quality Kaplan-Meier plot with at risk tables below. 'svyjskm()' provides plot for weighted Kaplan-Meier estimator.

Depends R (>= 3.4.0)

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Encoding UTF-8

Imports ggplot2, gridExtra, survival, survey, scales

RoxygenNote 7.1.1

URL <https://github.com/jinseob2kim/jskm>

BugReports <https://github.com/jinseob2kim/jstable/issues>

Suggests testthat, knitr, rmarkdown

VignetteBuilder knitr

NeedsCompilation no

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`jskm`*Creates a Kaplan-Meier plot for survfit object.*

Description

Creates a Kaplan-Meier plot with at risk tables below for survfit object.

Usage

```
jskm(  
  sfit,  
  table = FALSE,  
  xlab = "Time-to-event",  
  ylab = "Survival probability",  
  xlim = c(0, max(sfit$time)),  
  ylim = c(0, 1),  
  surv.scale = c("default", "percent"),  
  ystratalabs = names(sfit$strata),  
  ystrataname = "Strata",  
  timeby = signif(max(sfit$time)/7, 1),  
  main = "",  
  pval = FALSE,  
  pval.size = 5,  
  pval.coord = c(NULL, NULL),  
  pval.testname = F,  
  marks = TRUE,  
  shape = 3,  
  legend = TRUE,  
  legendposition = c(0.85, 0.8),  
  ci = FALSE,  
  subs = NULL,  
  label.nrisk = "Numbers at risk",  
  size.label.nrisk = 10,  
  linecols = "Set1",  
  dashed = FALSE,  
  cumhaz = F,  
  cluster.option = "None",  
  cluster.var = NULL,  
  data = NULL,  
  cut.landmark = NULL,  
  showpercent = F,  
  ...  
)
```

Arguments

`sfit` a survfit object

table	logical: Create a table graphic below the K-M plot, indicating at-risk numbers?
xlabs	x-axis label
ylabs	y-axis label
xlims	numeric: list of min and max for x-axis. Default = c(0,max(sfit\$time))
ylims	numeric: list of min and max for y-axis. Default = c(0,1)
surv.scale	scale transformation of survival curves. Allowed values are "default" or "percent".
ystratalabs	character list. A list of names for each strata. Default = names(sfit\$strata)
ystrataname	The legend name. Default = "Strata"
timeby	numeric: control the granularity along the time-axis; defaults to 7 time-points. Default = signif(max(sfit\$time)/7, 1)
main	plot title
pval	logical: add the pvalue to the plot?
pval.size	numeric value specifying the p-value text size. Default is 5.
pval.coord	numeric vector, of length 2, specifying the x and y coordinates of the p-value. Default values are NULL
pval.testname	logical: add '(Log-rank)' text to p-value. Default = F
marks	logical: should censoring marks be added?
shape	what shape should the censoring marks be, default is a vertical line
legend	logical. should a legend be added to the plot?
legendposition	numeric. x, y position of the legend if plotted. Default=c(0.85,0.8)
ci	logical. Should confidence intervals be plotted. Default = FALSE
subs	= NULL,
label.nrisk	Numbers at risk label. Default = "Numbers at risk"
size.label.nrisk	Font size of label.nrisk. Default = 10
linecols	Character. Colour brewer pallettes too colour lines. Default ="Set1", "black" for black with dashed line.
dashed	logical. Should a variety of linetypes be used to identify lines. Default = FALSE
cumhaz	Show cumulative incidence function, Default: F
cluster.option	Cluster option for p value, Option: "None", "cluster", "frailty", Default: "None"
cluster.var	Cluster variable
data	select specific data - for reactive input, Default = NULL
cut.landmark	cut-off for landmark analysis, Default = NULL
showpercent	Shows the percentages on the right side.
...	PARAM_DESCRIPTION

Details

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Plot

Author(s)

Jinseob Kim, but heavily modified version of a script created by Michael Way. <https://github.com/michaelway/ggkm/> I have packaged this function, added functions to namespace and included a range of new parameters.

Examples

```
library(survival)
data(colon)
fit <- survfit(Surv(time,status)~rx, data=colon)
jskm(fit, timeby=500)
```

svyjskm	<i>Creates a Weighted Kaplan-Meier plot - svykm.object in survey package</i>
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Description

Creates a Weighted Kaplan-Meier plot - svykm.object in survey package

Usage

```
svyjskm(
  sfit,
  xlabs = "Time-to-event",
  ylabs = "Survival probability",
  xlims = NULL,
  ylims = c(0, 1),
  ystratalabs = NULL,
  ystrataname = NULL,
  surv.scale = c("default", "percent"),
  timeby = NULL,
  main = "",
  pval = FALSE,
  pval.size = 5,
  pval.coord = c(NULL, NULL),
  pval.testname = F,
  legend = TRUE,
  legendposition = c(0.85, 0.8),
  ci = NULL,
  linecols = "Set1",
  dashed = FALSE,
  cumhaz = F,
```

```

design = NULL,
subs = NULL,
table = F,
label.nrisk = "Numbers at risk",
size.label.nrisk = 10,
cut.landmark = NULL,
showpercent = F,
...
)

```

Arguments

<code>sfit</code>	a svykm object
<code>xlabs</code>	x-axis label, Default: 'Time-to-event'
<code>ylabs</code>	y-axis label.
<code>xlims</code>	numeric: list of min and max for x-axis. Default: NULL
<code>ylims</code>	numeric: list of min and max for y-axis. Default: c(0, 1)
<code>ystratalabs</code>	character list. A list of names for each strata. Default: NULL
<code>ystrataname</code>	The legend name. Default: 'Strata'
<code>surv.scale</code>	scale transformation of survival curves. Allowed values are "default" or "percent".
<code>timeby</code>	numeric: control the granularity along the time-axis; defaults to 7 time-points.
<code>main</code>	plot title, Default: ""
<code>pval</code>	logical: add the pvalue to the plot?, Default: FALSE
<code>pval.size</code>	numeric value specifying the p-value text size. Default is 5.
<code>pval.coord</code>	numeric vector, of length 2, specifying the x and y coordinates of the p-value. Default values are NULL
<code>pval.testname</code>	logical: add '(Log-rank)' text to p-value. Default = F
<code>legend</code>	logical. should a legend be added to the plot? Default: TRUE
<code>legendposition</code>	numeric. x, y position of the legend if plotted. Default: c(0.85, 0.8)
<code>ci</code>	logical. Should confidence intervals be plotted. Default = NULL
<code>linecols</code>	Character. Colour brewer pallettes too colour lines. Default: 'Set1', "black" for black with dashed line.
<code>dashed</code>	logical. Should a variety of linetypes be used to identify lines. Default: FALSE
<code>cumhaz</code>	Show cumulaive incidence function, Default: F
<code>design</code>	Data design for reactive design data , Default: NULL
<code>subs</code>	= NULL,
<code>table</code>	logical: Create a table graphic below the K-M plot, indicating at-risk numbers?
<code>label.nrisk</code>	Numbers at risk label. Default = "Numbers at risk"
<code>size.label.nrisk</code>	Font size of label.nrisk. Default = 10
<code>cut.landmark</code>	cut-off for landmark analysis, Default = NULL
<code>showpercent</code>	Shows the percentages on the right side.
<code>...</code>	PARAM_DESCRIPTION

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plot

Examples

```
library(survey)
data(pbc, package="survival")
pbc$randomized <- with(pbc, !is.na(trt) & trt>0)
biasmodel <- glm(randomized~age*edema,data=pbc)
pbc$randprob <- fitted(biasmodel)
dpbc <- svydesign(id=~1, prob=~randprob, strata=~edema, data=subset(pbc,randomized))
s1 <- svykm(Surv(time,status>0)~sex, design=dpbc)
svyjskm(s1)
```

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