

Package ‘DEEVD’

July 11, 2019

Type Package

Title Density Estimation for Extreme Value Distribution

Version 0.1.0

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Description Provides mean square error (MSE) and plot the kernel densities related to extreme value distributions.

By using Gumbel and Weibull Kernel. See Salha et al. (2014) <doi:10.4236/ojs.2014.48061> and Khan and Akbar (2019).

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Imports evd

Encoding UTF-8

LazyData true

RoxygenNote 6.1.1

NeedsCompilation no

Repository CRAN

Date/Publication 2019-07-11 08:35:09 UTC

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figGum *Plot Density by Gumbel kernel.*

Description

Plot Kernel density by using Gumbel Kernel.

Usage

```
figGum(y, k, h)
```

Arguments

y	a numeric vector of positive values.
k	grid points.
h	the bandwidth

Value

Plot the density by using Gumbel Kernel

Examples

```
y<-rexp(23,1)
h<-0.79 * IQR(y) * length(y) ^ (-1/5)
figGum(y,80,h)
```

figWeibull *Plot Density by Weibull kernel.*

Description

Plot Kernel density by using weibull Kernel.

Usage

```
figWeibull(y, k, h)
```

Arguments

y	a numeric vector of positive values.
k	grid points.
h	the bandwidth

Value

Plot the density by using Weibull Kernel

Examples

```
y<-rexp(23,1)
h<-0.79 * IQR(y) * length(y) ^ (-1/5)
figWeibull(y,80,h)
```

msegum

Calculate Mean Square Error(MSE) when Gumbel kernel is used.

Description

Calculate MSE by using Gumbel Kernel.

Usage

```
msegum(y, k, h, type)
```

Arguments

y	a numeric vector of positive values.
k	grid points.
h	the bandwidth
type	mention distribution of vector.If Gumbeldistribution is used scale=1 then use "Gumbel". if use Weibull distribution with scale = 1 then use "Weibull". if use Frechet distribution with scale=1 and shape=1 then use "Frechet".

Value

MSE

Examples

```
y<-rweibull(350,1)
h<-0.79 * IQR(y) * length(y) ^ (-1/5)
msegum(y,200,h,"Weibull")
```

`mseweibull`*Calculate Mean Square Error(MSE) when Weibull kernel is used.*

Description

Calculate MSE by using Weibull Kernel.

Usage

```
mseweibull(y, k, h, type)
```

Arguments

<code>y</code>	a numeric vector of positive values.
<code>k</code>	grid points.
<code>h</code>	the bandwidth
<code>type</code>	mention distribution of vector.If Gumbeldistribution is used scale=1 then use "Gumbel". if use Weibull distribution with scale = 1 then use "Weibull". if use Frechet distribution with scale=1 and shape=1 then use "Frechet".

Value

MSE

Examples

```
y<-rweibull(350,1)
h<-0.79 * IQR(y) * length(y) ^ (-1/5)
mseweibull(y,200,h,"Weibull")
```

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