

# Package: quantsig (via r-universe)

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**Type** Package

**Title** Sigmoidal Quantile Function Estimator

**Version** 0.1.0

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**Description** A sigmoidal quantile function estimator based on a newly defined generalized expectile function. The generalized sigmoidal quantile function can estimate quantiles beyond the range of the data, which is important for certain applications given smaller sample sizes. The package is based on the method introduced in Hutson (2024) <doi:10.1080/03610918.2022.2032161>.

**License** GPL-3

**Encoding** UTF-8

**NeedsCompilation** no

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**Repository** <https://hy-roswell.r-universe.dev>

**RemoteUrl** <https://github.com/cran/quantsig>

**RemoteRef** HEAD

**RemoteSha** 48fe9976fa1558b6a36d94b95844de6987a2c25d

## Contents

quantsig . . . . .	2
<b>Index</b>	<b>3</b>

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`quantsig`*Sigmoidal quantile function estimator*

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**Description**

This function implements the sigmoidal quantile function estimator, which is a smooth nonparametric quantile function estimator based on a newly defined generalized expectile function.

**Usage**

```
quantsig(x, p)
```

**Arguments**

`x` a numeric whose sample quantiles are wanted.  
`p` the probability with values in (0,1).

**Value**

The estimated quantile.

**Author(s)**

Alan Hutson, Han Yu

**References**

Hutson AD. The generalized sigmoidal quantile function. *Communications in Statistics-Simulation and Computation*. 2024 Feb 1;53(2):799-813.

**Examples**

```
x <- c(1, 2, 3, 4, 5, 6, 7, 8, 8, 9)
quantsig(x, 0.5)
```

# Index

quantsig, [2](#)