

# Package ‘distcrete’

November 23, 2017

**Title** Discrete Distribution Approximations

**Version** 1.0.3

**Description** Creates discretised versions of continuous distribution functions by mapping continuous values to an underlying discrete grid, based on a (uniform) frequency of discretisation, a valid discretisation point, and an integration range. For a review of discretisation methods, see Chakraborty (2015) <doi:10.1186/s40488-015-0028-6>.

**License** MIT + file LICENSE

**LazyData** true

**URL** <https://github.com/reconhub/distcrete>

**BugReports** <https://github.com/reconhub/distcrete/issues>

**Suggests** knitr, rmarkdown, testthat

**RoxygenNote** 6.0.1

**VignetteBuilder** knitr

**NeedsCompilation** no

**Author** Steph Locke [cre],  
Rich FitzJohn [aut],  
Anne Cori [aut],  
Thibaut Jombart [aut]

**Maintainer** Steph Locke <steph@itsalocke.com>

**Repository** CRAN

**Date/Publication** 2017-11-23 13:50:05 UTC

## R topics documented:

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

---

`distcrete`*Discretise a distribution*

---

**Description**

Discretise a distribution.

**Usage**

```
distcrete(name, interval, ..., w = 0.5, anchor = 0)
```

**Arguments**

<code>name</code>	The name of a distribution function (e.g., <code>norm</code> , <code>gamma</code> ). The distribution must have a cdf function (e.g., <code>pnorm</code> ) and a quantile function (e.g., <code>qnorm</code> ) defined.
<code>interval</code>	The interval to discretise the interval onto.
<code>...</code>	Parameters to cdf. Can be matched positionally or by name.
<code>w</code>	How to weight the endpoints; must be between 0 and 1. If 0.5 then integration happens centred around the interval, if 0 floor, if 1 then ceiling.
<code>anchor</code>	Any location that is a valid <code>x</code>

**Author(s)**

Rich FitzJohn

**Examples**

```
library(distcrete)
set.seed(415)
d0 <- distcrete("gamma", 1, shape = 3, w = 0)
d0$d(1:10)
d0$p(c(.1, .5))
d0$q(c(.1, .5))
d0$r(10)
```

# Index

distcrete, [2](#)