# Package: bstrap (via r-universe)

May 24, 2026

**Title** Obtain and plot bootstrap sampling distributions of the sample mean

**Version** 0.0.1

**Description** Many common tests assume sufficient normality of the data distribution, with the received wisdom that if the sample size is ``large", the normality doesn't matter so much (because of the Central Limit Theorem). It is difficult to judge the normality is good enough, or whether the sample size is big enough. A better way to investigate is to obtain a bootstrap sampling distribution of the sample mean (by taking repeated bootstrap samples), and to assess that distribution for normality. If it is, the normal-theory test will work; if not, not.

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**Encoding** UTF-8

**Roxygen** list(markdown = TRUE)

**RoxygenNote** 7.3.3

**URL** https://worktree.ca/nxskok/bstrap
https://nxskok.r-universe.dev/bstrap

**Imports** dplyr, ggplot2, magrittr, tibble, tidyr

**Suggests** testthat (>= 3.0.0)

**Config/testthat/edition** 3

**Depends** R (>= 3.5)

**LazyData** true

**Config/pak/sysreqs** libicu-dev

**Repository** https://nxskok.r-universe.dev

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# Contents



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`home_prices` *Home prices data*

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## Description

Selling prices of 3-bedroom and 4-bedroom homes in West Lafayette, Indiana

## Usage

```
home_prices
```

## Format

A dataframe with 37 rows and 2 columns:

**price** Selling price in US $

**bdrms** Number of bedrooms (3 or 4)

## Source

http://ritsokiguess.site/datafiles/homes.csv

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`make_dist` *Generate bootstrap samples and calculate sample means*

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## Description

Generate bootstrap samples and calculate sample means

## Usage

```
make_dist(x, nsim = 100)
```

## Arguments

| | |
|---|---|
| `x` | vector of data to sample from |
| `nsim` | number of bootstrap samples |

## Value

dataframe containing column x_mean

## Examples

```
make_dist(1:5, 20)
make_dist(mtcars$disp, 30)
```

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`make_several` *Obtain bootstrap sampling distributions for several samples*

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## Description

Obtain bootstrap sampling distributions for several samples

## Usage

```
make_several(x, g = "a", nsim = 10000)
```

## Arguments

| | |
|---|---|
| `x` | vector of observations |
| `g` | vector of group membership of each observation |
| `nsim` | number of bootstrap samples to draw for each group |

## Value

dataframe containing columns `x_mean` containing bootstrap sample and `group`, group for which that bootstrap sample was drawn

## Examples

```
with(mtcars, make_several(disp, cyl, 5))
```

## plot_dist *Obtain and plot bootstrap sampling distribution of sample mean*

### Description

Obtain and plot bootstrap sampling distribution of sample mean

### Usage

```
plot_dist(x)
```

### Arguments

| | |
|---|---|
| x | vector of (quantitative) data |

### Value

ggplot2 normal quantile plot of bootstrap sampling distribution

### Examples

```
plot_dist(1:100)
plot_dist(mtcars$disp)
```

## plot_several *Obtain and plot bootstrap sampling distributions of sample means by group*

### Description

Obtain and plot bootstrap sampling distributions of sample means by group

### Usage

```
plot_several(x, g)
```

### Arguments

| | |
|---|---|
| x | vector of observations |
| g | vector of groups that go with the observations |

### Value

ggplot graph of normal quantile plots, facetted

### Examples

```
with(mtcars, plot_several(disp, cyl))
```

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