# Package 'poissoned'

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**Type** Package

**Title** Poisson Disk Sampling in 2D and 3D

**Version** 0.1.3

**Maintainer** Mike Cheng <mikefc@coolbutuseless.com>

**Description** Poisson disk sampling is a method of generating blue noise sample patterns where all samples are at least a specified distance apart. Poisson samples may be generated in two or three dimensions with this package. The algorithm used is an implementation of Bridson's ``Fast Poisson disk sampling in arbitrary dimensions" <doi:10.1145%2F1278780.1278807>.

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**Encoding** UTF-8

**RoxygenNote** 7.3.2

**URL** https://github.com/coolbutuseless/poissoned

**BugReports** https://github.com/coolbutuseless/poissoned/issues

**Suggests** testthat (>= 3.0.0)

**Config/testthat/edition** 3

**NeedsCompilation** yes

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**Repository** CRAN

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## Contents

## poisson2d *Generate Poisson disk samples in 2D*

### Description

Generate Poisson disk samples in 2D

### Usage

```
poisson2d(w = 10, h = 10, r = 2, k = 30L, verbosity = 0L)
```

### Arguments

| | |
|---|---|
| w, h | width and height of region |
| r | minimum distance between points |
| k | number of sample points to generate at each iteration. default 30 |
| verbosity | Verbosity level. default: 0 |

### Value

data.frame with x and y coordinates. Points are returned in the order in which they were generated.

### Examples

```
pts <- poisson2d(w = 40, h = 40, r = 1)
plot(pts, asp = 1, ann = FALSE, axes = FALSE, pch = 19)
```

## poisson3d *Generate Poisson disk samples in 3D*

### Description

Generate Poisson disk samples in 3D

### Usage

```
poisson3d(w = 10, h = 10, d = 10, r = 4, k = 30L, verbosity = 0L)
```

### Arguments

| | |
|---|---|
| w, h, d | width and height and depth of region |
| r | minimum distance between points |
| k | number of sample points to generate at each iteration. default 30 |
| verbosity | Verbosity level. default: 0 |

## Value

data.frame with x, y and z coordinates. Points are returned in the order in which they were generated.

## Examples

```
poisson3d(w = 10, h = 10, d = 10, r = 5)
```

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