# Package ‘SpatialPOP’

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**Type** Package

**Title** Generation of Spatial Data with Spatially Varying Model Parameter

**Version** 0.1.0

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**Depends** R (>= 2.10)

**Suggests** knitr, rmarkdown, testthat (>= 3.0.0)

**VignetteBuilder** knitr

**Description** A spatial population can be generated based on spatially varying regression model under the assumption that observations are collected from a uniform two-dimensional grid consist of (m * m) lattice points with unit distance between any two neighbouring points. For method details see Chao, Liu., Chuanhua, Wei. and Yunnan, Su. (2018).<DOI:10.1080/10485252.2018.1499907>. This spatially generated data can be used to test different issues related to the statistical analysis of spatial data. This generated spatial data can be utilized in geographically weighted regression analysis for studying the spatially varying relationships among the variables.

**License** GPL (>= 2.0)

**Encoding** UTF-8

**RoxygenNote** 7.1.2

**Imports** base, MASS, stats, qpdf, numbers

**NeedsCompilation** no

**Repository** CRAN

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spatialPOP

Generation of Spatial Data with Spatial Coordinates and Spatially Varying Model Parameters

Description

Generation of Spatial Data with Spatial Coordinates and Spatially Varying Model Parameters

Usage

spatialPOP(N, m, xlat, ylong)

Arguments

N integer; population size i.e. N= (m * m)
m integer
xlat numeric vector
ylong numeric vector

Value

returns a dataframe of spatially generated population consist of simulated response variable (i.e. Y) along with their spatial coordinates, spatially varying model parameters and one explanatory variable (i.e. X)

References


Examples

lattice_points<-spatial_grid(c(1:10),c(1:10))
spatial_data<-spatialPOP(100,10,c(1:10),c(1:10))
spatial_grid

Description

A uniform two-dimensional grid of lattice points.

Usage

spatial_grid(lat, long)

Arguments

lat, long  numeric vector

Value

Returns a dataframe of lattice points.

Examples

spatial_grid(c(1:10), c(1:10))
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