Package 'GOSTlibs'

October 4, 2017

Type Package

Title The first GOST package

Version 0.1.0

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Description
This is an example package that we build during one of the Show Intel meetings at GOST - Worldbank, Washington D.C. The code is functional and allows you to Jitter GPS locations.

Depends rgdal, rgeos

License MIT

Encoding UTF-8

LazyData true

RoxygenNote 6.0.1.9000

ByteCompile TRUE

R topics documented:

`inAdmin` *A sample administraive boundaries dataset describing admin2 boundaries in Pakistan*

Description

To load the sample data, data(inAdmin)

Usage

```
data(inAdmin)
```

Format

a SpatialPolygonsDataFrame of the admin2 Pakistan boundaries

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inPts *A sample points dataset for testing point jittering*

Description

To load the sample data, data(inPts)

Usage

```
data(inPts)
```

Format

a SpatialPointsDataFrame of randomly dropped point locations inside the Pakistan admin2 boundaries

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jitterSurveyPoints *This is a function to jitter GPS survey points*

Description

Following DHS guidelines, survey GPS locations need to be purposefully displaced (jittered) before disseminating in order to preserve annonymity. Each point is displaced based on its urban/rural definition. All points must stay within the administrative 2 boundaries in which they originate.

Usage

```
jitterSurveyPoints(inPts, inAdmin, urbanField = "Id", urbanDist = 2000,
  ruralDist = 5000, ruralDistFar = 10000)
```

Arguments

inPts	SpatialPointsDataFrame containing the points to be jittered.
inAdmin	SpatialPolygonsDataFrame containing administrative boundaries. Jittered points are not allowed to be moved outside their original administrative boundary.
urbanField	string indicating the column that contains a binary indicator that defines urban and rural points. 1 = Rural.
urbanDist	(optional) numeric distance (in metres) to jitter urban points. Default is 2000m.
ruralDist	(optional) numeric distance (in metres) to jitter rural points. Default is 5000m.
ruralDistFar	(optional) numeric distance (in metres) to jitter 1% of rural points. Default is 10000m.

Value

A spatial data frame with randomly jittered coordinates

Examples

```
# First load the input points. You can use the example data:

data("inPts")

# As you can see this is a shapefile with the following structure:

str(inPts)

# You will also need administrative boundaries
to ensure that the Jittered survey locations remain within administrative units.

data("inAdmin")

# Finally pass on the objects to the jitterSurveyPoints function.

newPts = jitterSurveyPoints(inPts, inAdmin)
```

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