Package 'jpmesh'

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Type Package

Title Utilities for Japanese Mesh Code

Version 1.1.2

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Description Helpful functions for using mesh code (80km to 125m) data in Japan. Visualize mesh code using 'ggplot2' and 'leaflet', etc.

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URL https://github.com/uribo/jpmesh#readme

BugReports https://github.com/uribo/jpmesh/issues

Depends R (>= 3.1)

Imports leaflet (>= 1.1.0), miniUI (>= 0.1.1), purrr (>= 0.2.4), rlang (>= 0.1.4), sf (>= 0.5-5), shiny (>= 1.0.5), tibble (>= 1.3.4), units (>= 0.5-1), magrittr (>= 1.5)

Suggests knitr (>= 1.20), lwgeom (>= 0.1-4), testthat (>= 1.0.2), rmarkdown (>= 1.10)

VignetteBuilder knitr

LazyData true

Encoding UTF-8

RoxygenNote 6.1.1.9000

NeedsCompilation no

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Repository CRAN

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R topics documented:

`administration_mesh` *Extract administration mesh*

Description

Extract administration mesh

Usage

```
administration_mesh(code, type = c("city", "prefecture"))
```

Arguments

code	administration code
type	administration type. Should be one of "prefecture" or "city".

Examples

```
## Not run:
administration_mesh(code = c(35201), type = "city")
administration_mesh(code = "08220", type = "city")
administration_mesh(code = c("08220", "08221"), type = "city")
administration_mesh(code = 35, type = "prefecture")
administration_mesh(code = c(33, 34), type = "prefecture")

## End(Not run)
```

coarse_gather *Gather more coarse mesh*

Description

Return coarse gather mesh codes

Usage

```
coarse_gather(meshes, distinct = FALSE)
```

Arguments

meshes	mesh code sets
distinct	return unique meshcodes

Value

character vector

Examples

```
m <- c("493214294", "493214392", "493215203", "493215301")
coarse_gather(m)
coarse_gather(coarse_gather(m))
coarse_gather(coarse_gather(m), distinct = TRUE)
```

coords_to_mesh *Convert from coordinate to mesh code*

Description

From coordinate to mesh codes.

Usage

```
coords_to_mesh(longitude, latitude, mesh_size = "1km", geometry = NULL,
  ...)
```

Arguments

longitude	longitude that approximately to .120.0 to 154.0 (double)
latitude	latitude that approximately to 20.0 to 46.0 (double)
mesh_size	mesh type. From 80km to 125m
geometry	XY sfg object
...	other parameters

Value

mesh code (default 3rd meshcode aka 1km mesh)

References

Akio Takenaka: http://takenaka-akio.org/etc/j_map/index.html

See Also

`mesh_to_coords()` for convert from meshcode to coordinates

Examples

```
coords_to_mesh(141.3468, 43.06462, mesh_size = "10km")
coords_to_mesh(139.6917, 35.68949, mesh_size = "250m")
coords_to_mesh(139.71475, 35.70078)

library(sf)
coords_to_mesh(geometry = st_point(c(139.71475, 35.70078)))
coords_to_mesh(geometry = st_point(c(130.4412895, 30.2984335)))
```

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cut_off *Cutoff mesh of outside the area*

Description

Cutoff mesh of outside the area

Usage

```
cut_off(meshcode)
```

Arguments

meshcode	integer. mesh code

eval_jp_boundary *Check include mesh areas*

Description

It roughly judges whether the given coordinates are within the mesh area.

Usage

```
eval_jp_boundary(longitude = NULL, latitude = NULL, ...)
```

Arguments

longitude	longitude that approximately to .120.0 to 154.0 (double)
latitude	latitude that approximately to 20.0 to 46.0 (double)
...	other parameters

Examples

```
## Not run:
eval_jp_boundary(139.71471056, 35.70128943)

## End(Not run)
```

export_mesh *Export meshcode to geometry*

Description

Convert and export meshcode area to sfc_POLYGON.

Usage

```
export_mesh(meshcode)
```

Arguments

meshcode	integer. mesh code

Value

sf object

Examples

```
export_mesh(6441427712)
```

export_meshes *Export meshcode to geometry*

Description

Convert and export meshcode area to sf.

Usage

```
export_meshes(meshes)
```

Arguments

meshes	mesh code sets

Examples

```
export_meshes("4128")
## Not run:
find_neighbor_mesh(37250395) %>%
  export_meshes()

## End(Not run)
```

fine_separate *Separate more fine mesh order*

Description

Return contains fine mesh codes

Usage

```
fine_separate(meshcode = NULL, ...)
```

Arguments

meshcode	integer. mesh code
...	other parameters for paste

Value

character vector

Examples

```
fine_separate(5235)
fine_separate(523504)
fine_separate(52350432)
fine_separate(523504321)
fine_separate(5235043211)
```

`is_mesh` *Predict meshcode format and positions*

Description

Predict meshcode format and positions for utility and certain.

Usage

```
is_meshcode(meshcode)

is_corner(meshcode)
```

Arguments

`meshcode`	`integer`. mesh code

`jpnrect` *Simple displaed as rectangel for Japan (fortified)*

Description

Rectangle Japanese prefectures positions.

Usage

```
jpnrect
```

Format

A data frame with 235 rows 11 variables:

- long
- lat
- order
- hole
- piece
- id

- group
- mesh_code
- latitude
- longitude
- abb_name

Examples

```
## Not run:
plot(jpnrect["abb_name"])

## End(Not run)
```

`meshcode_set` *Export meshcode vectors ranges 80km to 1km.*

Description

Unique 176 meshcodes. The output code may contain values not found in the actual mesh code.

Usage

```
meshcode_set(mesh_size = c("80km", "10km", "1km"))
```

Arguments

`mesh_size`	Export mesh size from 80km to 1km.

Examples

```
meshcode_set(mesh_size = "80km")
```

`mesh_to_coords` *Get from mesh code to latitude and longitude*

Description

mesh centroid

Usage

```
mesh_to_coords(meshcode, ...)
```

Arguments

meshcode	integer. mesh code
...	other parameters

References

Akio Takenaka: http://takenaka-akio.org/etc/j_map/index.html

See Also

coords_to_mesh() for convert from coordinates to meshcode

Examples

```
mesh_to_coords(64414277)
```

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mesh_viewer *interactive meshcode check*

Description

Shiny gadgets for jpmesh.

Usage

```
mesh_viewer(...)
```

Arguments

...	other parameters

Examples

```
## Not run:
mesh_viewer()

## End(Not run)
```

neighbor_mesh *Find out neighborhood meshes collection*

Description

input should use meshcode under the 1km mesh size.

Usage

```
neighbor_mesh(meshcode, contains = TRUE)
```

Arguments

meshcode	integer. mesh code
contains	logical. contains input meshcode (default TRUE)

Value

mesh code vectors (character)

Examples

```
neighbor_mesh(53394501)
neighbor_mesh(533945011)
neighbor_mesh(533945011, contains = FALSE)
```

rmesh *Generate random sample meshcode*

Description

Generate random sample meshcode

Usage

```
rmesh(n, mesh_size = c("1km"))
```

Arguments

n	Number of samples
mesh_size	Export mesh size from 80km to 1km.

Examples

```
rmesh(3, mesh_size = "1km")
```

sf_jpmesh *1:200,000 Scale Maps Name with Meshcode of Japan.*

Description

Information for the 1:200,000 Scale Maps.

Usage

```
sf_jpmesh
```

Format

A data frame with 175 rows 9 variables:

- meshcode: 80km meshcode
- name: names for map
- name_roman: names for map (roman)
- lng_center: centroid coordiates of mesh
- lat_center: centroid coordiates of mesh
- lng_error: mesh area
- lat_error: mesh area
- type: evalueate value to mesh

Examples

```
## Not run:
plot(sf_jpmesh["name_roman"])

## End(Not run)
```

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