Package 'SnowData'

March 15, 2025

Title Historical Data from John Snow's 1854 Cholera Outbreak Map

Version 1.0.0

Description Provides historical datasets related to John Snow's 1854 cholera outbreak study in London. Includes data on cholera cases, water pump locations, and the street layout, enabling analysis and visualisation of the outbreak.

License GPL-3

Encoding UTF-8

RoxygenNote 7.3.2

Depends R (>= 3.5)

Imports terra, utils

LazyData true

NeedsCompilation no

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Repository CRAN

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Contents

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cholera_cases   *Cholera Cases Dataset*

Description

A dataset containing the locations of cholera cases in 1854 Soho, London

Usage

```
data(cholera_cases)
```

Format

A data frame with 5 rows and 317 columns:

id Observation-level identifier

Count Count of cholera deaths

Angle Variable used for aligning barcharts along streets, for use when re-creating the barchart approach of John Snow

Easting X-coordinate in Ordnance Survey National Grid (OSGB36) projection

Northing Y-coordinate in Ordnance Survey National Grid (OSGB36) projection

Source

John Snow's 1854 cholera outbreak map, georeferenced and processed by Niamh Mimnagh. Original map and data can be found in the public domain at: Snow, J. (1855). On the Mode of Communication of Cholera. (Online) Available: https://commons.wikimedia.org/wiki/File:Snow-cholera-map-1.jpg

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load_map   *Load TIF File of John Snow's 1854 Map*

Description

This function loads the included .tif file using terra.

Usage

```
load_map()
```

Value

A SpatRaster object.

Examples

```
tif <- load_map()
```

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pump_locations	*Water Pump Locations Dataset*

Description

A dataset containing the locations of water pumps in 1854 Soho, London

Usage

```
data(pump_locations)
```

Format

A data frame with 3 rows and 13 columns:

id Observation-level identifier

Easting X-coordinate in Ordnance Survey National Grid (OSGB36) projection

Northing Y-coordinate in Ordnance Survey National Grid (OSGB36) projection

Source

John Snow's 1854 cholera outbreak map, georeferenced and processed by Niamh Mimnagh. Original map and data can be found in the public domain at: Snow, J. (1855). On the Mode of Communication of Cholera. (Online) Available: https://commons.wikimedia.org/wiki/File:Snow-cholera-map-1.jpg

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streets	*Streets Dataset*

Description

A dataset containing the start-points and end-points of streets in 1854 Soho, London

Usage

```
data(streets)
```

Format

A data frame with 5 rows and 317 columns:

id Observation-level identifier

dist Length of street section in metres

start_point Street start-point identifier

end_point Street end-point identifier

start_coord_east X-coordinate in Ordnance Survey National Grid (OSGB36) projection of the start-point

start_coord_north Y-coordinate in Ordnance Survey National Grid (OSGB36) projection of the start-point

end_coord_east X-coordinate in Ordnance Survey National Grid (OSGB36) projection of the end-point

end_coord_north Y-coordinate in Ordnance Survey National Grid (OSGB36) projection of the end-point

Source

John Snow's 1854 cholera outbreak map, georeferenced and processed by Niamh Mimnagh. Original map and data can be found in the public domain at: Snow, J. (1855). On the Mode of Communication of Cholera. (Online) Available: https://commons.wikimedia.org/wiki/File:Snow-cholera-map-1.jpg

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