Package ‘strm’

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Title Spatio-Temporal Regression Modeling

Version 0.1.2


Depends R (>= 4.0), spatialreg (>= 1.1)

Imports rlang (>= 0.4), dplyr (>= 1.0.5), tidyr (>= 1.1.3), purrr (>= 0.3.4), magrittr (>= 2.0.1), rgdal (>= 1.5.23), testthat (>= 3.0.2), rmarkdown (>= 2.6.6), knitr (>= 1.33), stats, grDevices, methods, graphics, utils

Suggests splm (>= 1.4.11), spdep (>= 1.1-7), rgeos (>= 0.5-5), sf (>= 0.9-8), Ecdat (>= 0.3-9), tidycensus (>= 0.11.4), ggplot2 (>= 3.3.3), patchwork (>= 1.1.1), gt (>= 0.2.2), markdown

VignetteBuilder knitr, rmarkdown

Encoding UTF-8

License GPL (>= 2)

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BugReports https://github.com/mkamenet3/strm/issues

LazyData true

RoxygenNote 7.1.1

SystemRequirements C++11, GDAL (>= 1.11.4), GEOS (>= 3.4.0), PROJ (>= 6.3.1)

NeedsCompilation yes

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Repository CRAN

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Description

Creates lagged explanatory and response variables for data in long format.

Usage

```r
createlagvars(data, vars, id, time = time, wide, filter_options)
```

Arguments

data Name of dataframe that has been transformed in strm (object `modframe0`).
vars Response and explanatory variables to be lagged.
id Group identifier (example: state).
time Number of time periods in the dataset. Lags will be taken for each time period. Default is 2 time periods. For a spatial-only regression model, set time=1.
wide Boolean indicator. Takes TRUE if data is in wide format and FALSE if data is in long format. Default is FALSE.
filter_options Additional arguments to be passed to `dplyr::filter()`.

Details

Create lagged and transformed variables
Description

We use the example from Chi, G. and Zhu, J. (2019) Spatial Regression Models for the Social Sciences. The example uses population growth data from 2000 to 2010. Data are at the minor civil division (MCD) level in Wisconsin. There are two years of data: 2000 and 2010. The subset of variables we use are:

- POLD00: percentage of the old population (age sixty-five and older) in 2000.
- POLD90: percentage of the old population (age sixty-five and older) in 1990.

Usage

data(sptdmg3)

Format

An object of class SpatialPolygonsDataFrame with 1837 rows and 7 columns.

References


Examples

data(sptdmg3)
class(sptdmg3)
names(sptdmg3)

Description

We use two 5-year ACS county level data in Wisconsin downloaded using the tidycensus R package. The example uses raw 5-year estimates from 2013-2017 and 2014-2018 ACS data at the county-level in Wisconsin. The variables downloaded are:

- B17020_002 - Estimate: Total - Income in the past 12 months below poverty level
- B17020_001 - Estimate: Total - Poverty Status in the past 12 months.
• B23022_026 - Estimate: Total Female by Work Status by weeks worked in the past 12 months for the population 16-64 years old.
• B23022_001 - Estimate: Total: status in the past 12 months by usual hours worked per week in the past 12 months by weeks worked in the past 12 months for the population 16-64 years old (Male and Female)

Usage

data(wi_raw)

Format

An object of class sf (inherits from data.frame) with 576 rows and 7 columns.

References


Examples

data(wi_raw)
class(wi_raw)
names(wi_raw)
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