



Journal of Statistical Software

MMMMMM YYYY, Volume VV, Issue II.

doi: 10.18637/jss.v000.i00

A Capitalized Title: Something about a Package foo

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Abstract

The abstract of the article.

Keywords: keywords, not capitalized, Java.

1. Introduction

SHORT INTRO [Geo data is increasingly important, review]

Our aim was to develop a R package to help researcher (in the clinical, social sciences, etc) in dealing with geospatial data.

We searched for geospatial packages in the CRAN repository. A short description of each package is available in Table1. Few of them are intended for the researcher who is not familiar with more complex coding.

Since tabular is the most used type of dataset, our package offers functions to extract and transform data from shapefiles to regular datasets.

@ Merge tabular and geospatial data

We also included functions to calculate distances between points in a shapefile. Our package calculate distances from raw addresses or coordinates (latitude, longitude). @ Minimum Distance

@ Given a list of address, returns the closest one

@ Adicionar quais aceitam endereços como entrada

2. An Example with Simulated Data

@ Distance to the school and school performance (school p ~ distance); @ Minimum distance to two schools.

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| Package | Description |
|----------------|---|
| APfun | Utilities for handling shapefiles and polygons (merge, etc.) |
| aspace | Centrographic statistics, computational geometry, and home range ecology for exploring human activities in cities |
| bbo | Geographical distribution of biological organisms |
| biogeo | Conversion of standards and units, outliers and error detection |
| BPEC | DNA Analysis of clusters and migration patterns using mitochondrial DNA |
| btb | Kernel density estimator for urban environment with geolocal data |
| ClustGeo | Hierarchical clustering with Ward criterion for geolocal data |
| gcKrig | Geospatial analysis with gaussian copulas |
| gdalUtils | Utilities for gdal (Geospatial Data Abstraction Library) |
| gdistance | Routes and distances in heterogeneous spaces using grids |
| gear | Statistical methods for spatial analysis (e.g. glm) |
| geoaxe | Cuts 'geospatial' objects into disjoint areas |
| geoBayes | Bayesian analysis with geographical data |
| GeoBoxplot | Boxplot for geospatial plots |
| geoCount | Generalized spatial models for count data |
| geodist | High performance geodesical distances |
| geofacet | Creates grid of plots in ggplot following the contour of a map |
| geofd | Kriging methods for prediction of spatially dependent curves. |
| geoGAM | Spatial prediction using complex models |
| geomerge | Merges rasters, polygons and points |
| geoR | Complete framework for geospatial analysis |
| geoRglm | geoR extension for generalized linear models |
| georob | Linear models with spatially correlated errors and cross-validation |
| georob | Functions for dealing with linear models with spatially correlated errors |
| geospacom | Calculate distance matrix from shapefiles |
| geospt | Network measures, variogram |
| geosptdb | Geostatistical analysis of spatial data |
| geostatsp | Geostatistical Analysis, spatial sampling networks |
| geotools | Functions for dealing with postal codes; distances between two coordinates |
| geotoolsR | Bootstrapping methods for geostatistics |
| geozoning | Zoning |
| Gmedian | Estimation of the geometric median, k-Gmedian clustering, PCA |
| gstat | Spatial and Spatio-Temporal geostatistical modelling, prediction and simulation |
| GWLeleast | Geographically weighted logistic elastic net regression |
| gwrr | Geographically weighted regression |
| krige | Kriging models for geographical point-referenced data |
| mapStats | Calculation and visualization of survey data |
| nngео | K-nearest neighbor (Clustering) for spatial data |
| pointdensityP | Point density for geospatial data |
| ramps | Bayesian geostatistical modeling of Gaussian processes |
| revgeo | Reverse geocode with APIs |
| rgdal | Bindings for the 'Geospatial' Data Abstraction Library (GDAL) |
| sgeostat | Functions for variogram estimation, variogram fitting, kriging, plotting |
| spcosa | Spatial coverage sampling and random sampling, clustering |
| vapour | Binding for GDAL |
| georob | Methods for fitting linear models with spatially correlated errors |
| geospacom DW | Distance matrix from shape files |
| geoSpectral DW | Functions for dealing with geo-spectral data |
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