GIS in R Command Cheat Sheet

August 31, 2015

Vector Data

Installing

Update R to version > 3.1. On Windows:

- `install.packages(c(''sp'',''raster''))`
- `install.packages(''rgdal'')`

On OSX:

- `install.packages(c(''sp'',''raster''))`
- Download and install GDAL Complete
- Download rgdal package.
- Open .dmg file and place `rgdal_0.9-1.tgz` on desktop.
- Run `install.packages("~/Desktop/rgdal_0.9-1.tgz",repos=NULL)`

Creating Spatial Objects

POINTS:
Points: `SpatialPoints([ matrix of coordinates] )`
Points with DF: `SpatialPointsDataFrame([Spatial Points Obj] , [ DataFrame] )`

POLYGONS:
Polygon: `Polygon([matrix of coordinates of vertices])`
Collection of Polygons: `Polygons([list of Polygon Objs], [names for Polygons])`
Collection of SPATIAL Polygons: `SpatialPolygons([list of Polygons Objs], [names for Polygons])`

- *Spatial Polygons are Polygons with associated projection data*

Spatial Polygons with DF:`SpatialPolygonsDataFrame([SpatialPolygons Obj, dataframe])`

Loading Spatial Objects from Files

fillin

Interrogating Spatial Objects
Quick summary: `summary([spatial_object])`
Longer summary of contents: `str([spatial_object])`
Full list of contents: `attributes([spatial_object])`
Check if projected: `is.projected([spatial_object])`

EXTRACT ATTRIBUTES:
Bounding Box: `bbox([spatial_object])`
Get full projection info: `proj4string([spatial_object])`
Get associated coordinates: `coordinates([spatial_object])`

Raster Data