Final project GIS and Spatial Data

In the final project you should apply the different skills you have acquired during the first part of the course. This means that you should find a topic which you find interesting and analyze the data it in a spatial context. In your project you should develop a R script which uses a publicly available API and download the data. Then you should combine this data with a polygon layer (Map) and use some of the analytical capabilities of the available packages in R for analyzing the spatial relationship in the data. A suggestion is that you collect the data and create a thematic map based on the results of your spatial operations. Your analysis should include all steps from capturing, cleaning, storing and finally visualizing the data using a shiny server.

In the final project you should include:

1) A script which sends a request to an API which returns data.
2) A script where the data is cleaned, organized and aggregated for presentation
3) A Shiny script where the result of the calculation is presented with a map and possibly tables
4) A web page where your results are displayed and word document where you explain what you have done. In this text you should include the following sections; Introduction, method, data, result and summary

I want you to hand in:

1) All scripts you have developed for solving the problem
2) A written text with not more than 2000 words where you describe the work process
3) A link to your shiny server solution

This project should be handed in by the end of the course. For details see the student handbook.

Some topics which might be interesting to explore:

Property prices in an area

Crime statistics

Population statistics

Accessibility to public transport

Distribution of plants in an area

Income distribution in an area

Remember that you can find public api:s and spatial data in many different locations. A few places which might be of interest for you in Sweden are:

Swedish transport administration API https://api.trafikinfo.trafikverket.se/

Statistics Sweden https://www.scb.se/vara-tjanster/oppna-data/

Svenska Lantbruksuniversitetet GET-Service (accessible from the DU portal)- Search “GET tjänst SLU” in Google log on with your university log in.

Geoda Center https://geodacenter.github.io/data-and-lab/

Trafiklab https://www.trafiklab.se/ Transit data in Sweden

All supervision is booked through Daniel Brandt via dbr@du.se

Good luck!

Daniel