

AGEC936 Spatial Econometrics Homework 2

Due 29 March 11:59 pm via email to twgriffin@ksu.edu

HW2 Part 1 Application Programming Interface & Spatial Diagnostics Exercise

Goals

The idea behind this homework is to have you take a close look at analyzing spatial data by accessing publicly available data via Application Programming Interface (API), and be able to access data from multiple sources using API capabilities from R. In this exercise your role is as an economic analyst working for a firm where your colleagues (likely an executive) “breaks” your R scripts and ask you to correct their mistakes.

How does the process work?

Many publicly (and privately) available data are available via APIs. These APIs can be accessed via R or several other methods including web browsers. Typically, an API key is required to gain access to the data and is usually easy to obtain.

Assignment

Obtain unique API key from USDA NASS. See <https://quickstats.nass.usda.gov/api> for useful details.

Open the R script named “AGEC936HW2broken.R” and insert your unique API key from USDA NASS in appropriate location. Find the three errors in the R script that prevent your analysis from completing. There are at least one syntax error and at least two omissions of functions to perform relevant spatial tasks. Once the script properly runs such that you obtain the correct map and results from Moran’s I test, name the script “GriffinHW2Part1.R” but with your name instead of “Griffin”. Email the corrected script to twgriffin@ksu.edu (no later than due date).

When Griffin runs your *.R code, expectations are 1) the data to be successfully accessed, downloaded, 2) map generated, and 3) Moran’s I test statistic is correct.

Hint: you’ll need the shapefile named Lower48test in your working directory