Geographic Data Science for Public Policy

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2021-10-27

Description

This course offers an introduction to *Geographic Data Science for Public Policy*. It provides a general framework to develop understanding of the ways in which geographic data analytics can be used to turn raw data into actionable information that can inform decision making. The course adopts a problem-to-solution teaching approach, defining a practical problem and illustrating how geographic data science can enable understanding to make critically informed decisions. It uses a learning-by-doing approach based on real-world examples. This also teaches how to conduct statistical and geographic data analysis in *R*.

Before the course please ensure you have installed *R*. Follow the instructions below.

Computational Environment

You need the most recent version of R and packages. These can be installed following the instructions provided in our R installation guide.

Dependency list

The list of libraries that we will use is provided below. If you have followed the instructions provided in our R installation guide and will be using Docker, you can relax and these libraries have already been installed for you.

If you have `natively` installed *R* and *RStudio*, you need to ensure you have installed the list of libraries used in this book following the steps provided here.

- `arm`
- `car`
- `corrplot`
- `FRK`
- `gghighlight`
- `ggplot2`
- `ggmap`
- `GISTools`
- `gridExtra`
- `gstat`
- `jtools`
- `kableExtra`

- knitr
- lme4
- lmtest
- lubridate
- MASS
- merTools
- plyr
- RColorBrewer
- rgdal
- sf
- sjPlot
- sp
- spgwr
- spatialreg
- spacetime
- stargazer
- tidyverse
- tmap
- viridis