Overview

We have 'flipped' the classroom for this module so we expect you to come to 'lecture' (*except* in Week 1!) having already watched the assigned videos and completed the assigned readings. You may be called upon to present a short summary of the key points in, and relevance of, an assigned video or reading to the rest of the class.

This means that there is a mix of 'asynchronous' (work that you do in your own time) and 'synchronous' (work that we do during scheduled hours) interaction. Synchronous activities will normally be recorded for review afterwards, but you should bear in the mind the following: 1) we cannot be responsible for equipment failure; 2) we are unable to record practicals and other small-group activities; and 3) a 2-hour video of a group discussion and live coding session will be rather less educational and informative than actually *being there*.

In short, recordings should not be used as a substitute for attendance save in *exceptional* circumstances.

Preparation

The nature and amount of preparation will vary from week to week, but may include:

- Readings from both academic and non-academic sources.
- Recorded lectures from CASA staff.
- Recorded videos from non-CASA staff.
- Short Moodle quizzes to test your completion of readings and videos.
- Preparing contributions to set tasks (e.g. summaries, Q&A, etc.)

To get the most value from the module you *must* do the readings even if we are not specifically referencing them in-class because of time-constraints. In previous years students who did not do the readings often failed the first assessment and struggled with the final assessment, leaving a lot of easy marks on the table. More importantly, we believe that the single most important skill that you can acquire from FSDS is *not* the ability to code, it's the ability to critically interrogate data and recognise the strengths and limitations that are relevant to the problem at-hand. You will learn the technical aspects of this in the practicals. You will learn the theoretical dimension from doing the readings.

Class

The 'lecture' in your timetable will be used for a mix of discussion and 'live coding' (eeek!) using the following framework:

- We will review questions and issues arising from the previous week's practical session and the weekly Padlet. We will use this to prioritise discussion around concepts and readings with which students are struggling or wish to engage further.
- We will have a 'live coding' session following an 'I do/We do' format: we will employ concepts covered in the week's activities, as well as approaches that will be explored further in the practical, to look a real-world data set *together* using code.

Practicals

In order to make use of these materials you will need to install the Spatial Data Science programming environment.

Practicals are run in small groups to maximise your ability to ask questions and interact with other students. You will be notified of your group by the Professional Services team; there may be limited opportunities to switch, but the best way would be to swap with another student and then notify us of the arrangment. You may wish to download the week's Jupyter notebook before the start of class in order to familiarise yourself with the material.