Intermediate R

# Day 1

## Data Manipulation: dplyr

* Introductions
* Intro to dplyr
* select()
* filter()
* summarize()

## Data Manipulation: dplyr and tidyr

* window functions
* spread()
* gather()

## Merging: base and dplyr

* Base merge()
* inner\_join()
* left\_join()
* full\_join()
* anti\_join()

## Functions and the apply() family

* Writing functions
* apply()
* lapply() and sapply()
* mapply()

# Day 2

## Plotting

* openair
* wind roses
* pollution roses
* trellis

## Spatial data

* creating sp objects
* spatial statistics

## Maps

* Plotting points
* Plotting sp objects
* heat maps

## Interactive plots and maps

* shiny

## GitHub

* If time allows