

# Introduction to spatial analyses



# Schedule

- Monday. Introduction to spatial data in R (Søren + Adrian)
- Tuesday. Handling data from large online databases (Søren + Adrian)
- Wednesday. MCMCglmm (Ferran + Søren)
- Thursday. Spatial analyses in R (Søren + Adrian)
- Friday: Excercises (Søren + Adrian)



# Zoom etiquette

- If your internet can handle it please keep cameras on.
- Please mute microphone when not speaking



# Daily Schedule

9.00-9.? Quick meeting generally with short lecture

9?-12 Independent work on tutorial

12-13 Lunch

13.00-13? Quick meeting

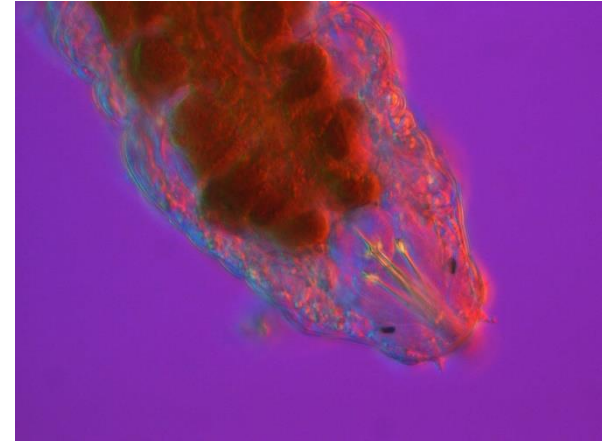
13?-15.45 Independent work on tutorial

15.45-16.00 Wrap up



# Who is who?

- Name
- Home country
- Quick summary of what you are working on
- Level of R experience
- Odd or fun fact about you



**BROWN BEAR**  
(*URSUS ARCTOS*)

Centuries of hunting reduced the bear's range. Recent conservation efforts fostered some expansion near Yellowstone.

# Work at your own speed

- Some people are really fast on computers.
- Some are not.
- It is better to take it slow and learn something than to rush through everything



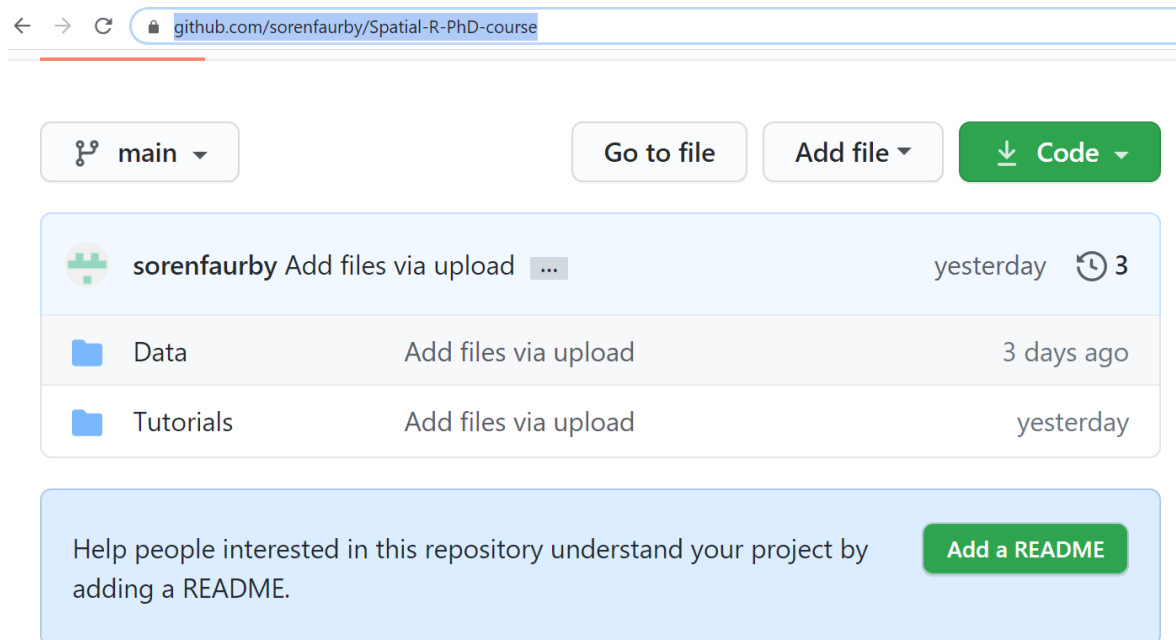


# Data

Tutorials:

<https://github.com/sorenfaurby/Spatial-R-PhD-course/>

Download everything after clicking on the green Code field





Studio<sup>®</sup>





**slack**



**stack overflow**

# Spatial orientation



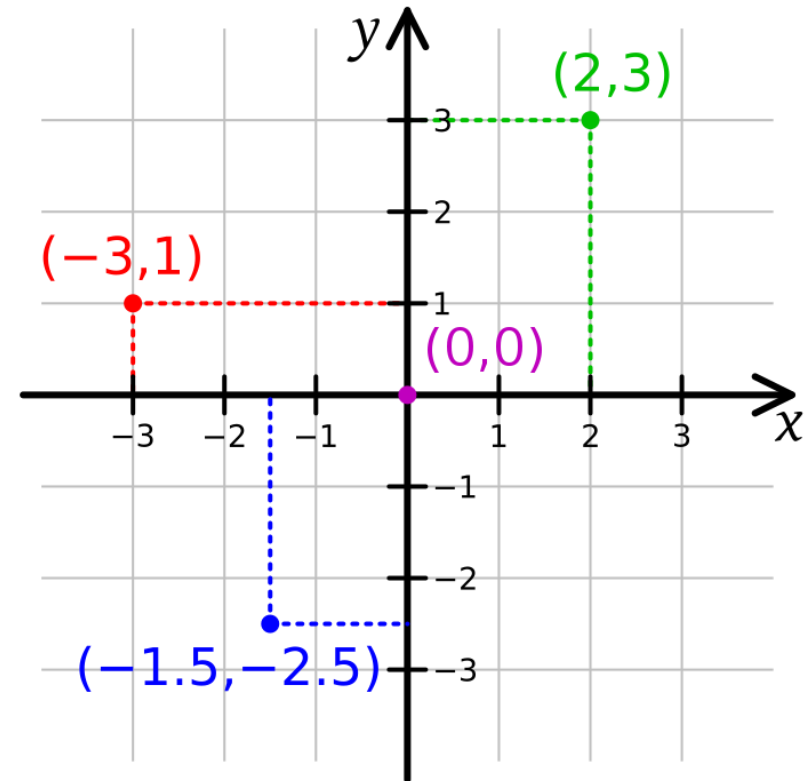
coordinates gothenburg

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About 309 000 results (0,62 seconds)

Gothenburg / Coordinates

57.7089° N, 11.9746° E

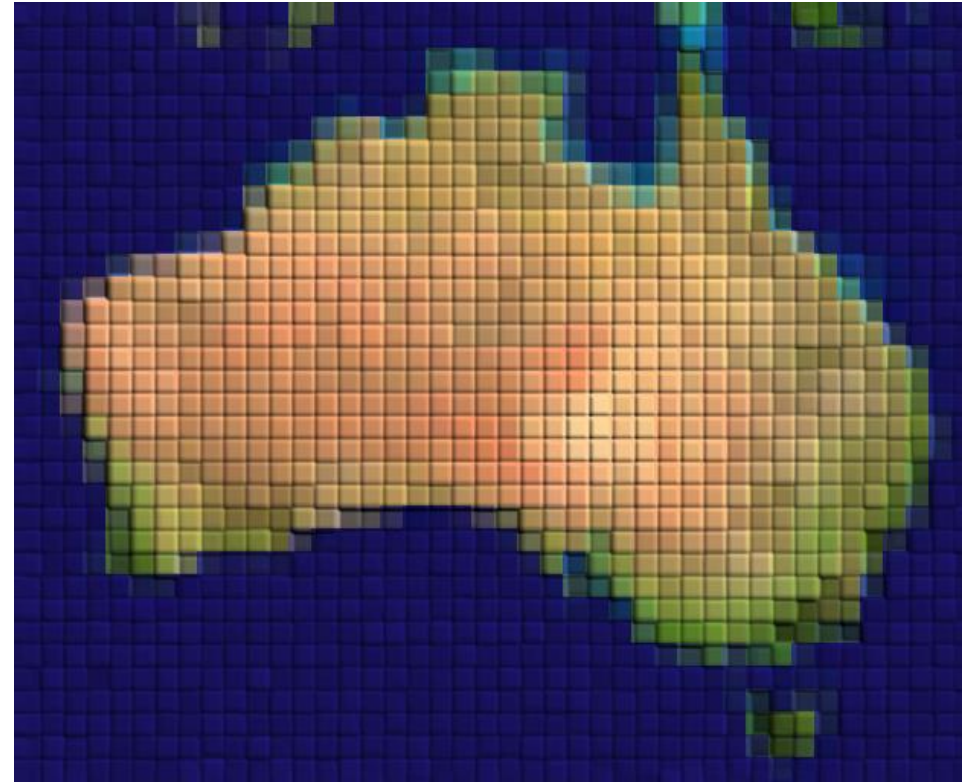


# Datatype: Polygon

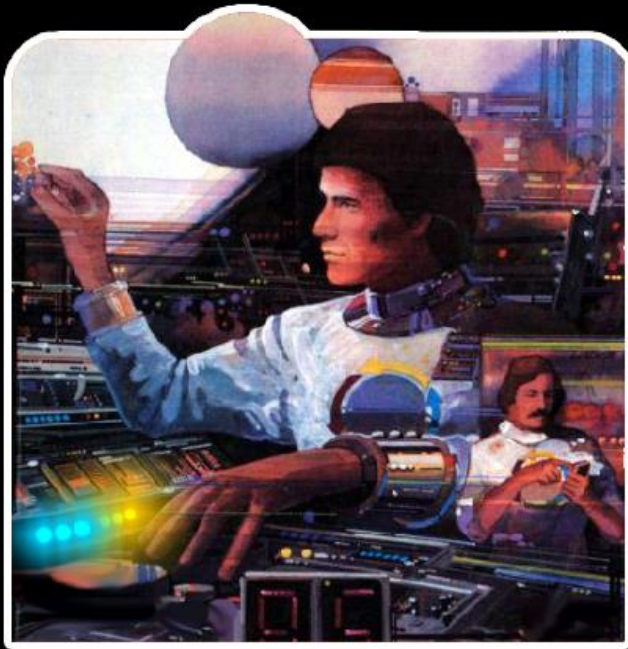


# Datatype: Rasters

- Conceptually think of an aeral photo
- Each pixel has
  - Dimensions (X and Y axis)
  - Midpoint coordinates
  - Color



# THE TWO STATES OF EVERY PROGRAMMER



**I AM A GOD.**



**I HAVE NO IDEA  
WHAT I'M DOING.**

@george3dr