Introduction

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Tutorial of basic remote sensing and GIS methodologies using open source software (GDAL in R).

Why R?

- Easy to learn
  - Interpreted, dynamically typed programming language
  - Test out your code in R's interpreter as you write your script (see Rstudio for a lovely IDE)
- Very large community
  - Innumerable examples on blogs, StackOverflow, Github, etc.
    - See R-bloggers
  - New scientific algorithms or techniques are often first available as an R package
  - CRAN is huge
- Free

Dependencies

The following R libraries will be needed for this tutorial:

- raster
- rgdal
- sp
- randomForest

Install them as such:

```
install.packages(c('raster', 'rgdal', 'sp', 'randomForest'))
```

Chapters

1. Exploring GIS packages in R
2. Your first remote sensing vegetation index
3. Plotting and visualizing your data
4. Importing and using vector data
5. Classification of land cover