

R Quick Guide and Course Introduction

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Course Format

Before each lecture I will upload a half-empty code version for you to type and follow in class, after class, I will upload the full version of the code. It's strongly recommended that you type during the lecture.

Lecture 0: R basics

Lecture 1: ggplot2

Lecture 2: Draw maps (points/polyline/and polygon)

Lecture 3: Raster data

Lecture 4: Geocoding and Geocomputaton

R is a free software environment for statistical computing and graphics.

RStudio is an integrated development environment (IDE) for R (provide friendly coding environment).

R Markdown provides an authoring framework for data science. This is like the log file in stata, but it can do more than just save and execute the code, it generates high quality reports that can be shared with an audience.

Installation

Please install R and RStudio from the following websites. You should first install R and then install RStudio. We use the R version of 3.6.0 (or later) and RStudio Desktop.

1. Open an INTERNET browser and go to www.r-project.org.
2. Click the “download R” link in the middle of the page under “Getting Started.”
3. Select a CRAN location (a mirror site) and click the corresponding link.
4. Click on the “Download R for Windows” or “Download R for (Mac) OS X”. You could also use Linux if you are a Linux User.
5. Click on the file containing the latest version of R under “Files.”
6. Save the file, double-click it to open, and follow the installation instructions.

1. Go to <https://www.rstudio.com/products/rstudio/download/>
2. Click on Download RStudio Desktop.
3. Click on the version recommended for your system, save the downloaded file on your computer, double-click it to open, and follow the installation instructions.

Working Directory

1. Where to download course materials: <https://github.com/sshaa/IM4D>
2. Build a new folder called IM4D in your PC and locate the directory in “Property”
3. Download all materials from github and save to the folder “IM4D”

Get the API key from Google

1. Go to the Google Cloud Platform Console.
2. Create the project for which you want to add an API key.
3. Click the menu button and select APIs & Services → Credentials.
4. On the Credentials page, click Create credentials → API key.
5. The API key created dialog displays your newly created API key.
6. Click Close.
7. The new API key is listed on the Credentials page under API keys.