Introduction to R & Data Management

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What is R

- R is both a scripted programming language and software environment for statistical computing.

- R is widely used for statistical analysis and creation of high-quality publishable graphics.

- It's open source, free to use and supported by a large community of users and developers.

- Flexible and highly scalable via user defined packages and functions.

Why R

- Reproducibility - one code; multiple users and projects .

- Flexible and easy to learn.

- Scalability - You can define/customize your own functions and/or packages.

- Interoperability - same code across platforms (mac, windows, linux etc).

Getting started - Installing R and Rstudio

- You can install the latest version of R from the CRAN repository. CRAN stands for **C**omprehensive **R A**rchive **N**etwork

- The latest version or R is 4.0.5 as of time of the slide creation. This might change with time

- Rstudio is an IDE (Intergrated Development Environment for R). You can install the latest version of Rstudio here
  - **NOTE:** You do not need Rstudio to use R, BUT it makes things easier. So I will highly recommend you to install Rstudio for easy and efficient coding in R.

Further Information

- History of R on Wikipedia

- Short video on What's R

- More about Rstudio IDE