Outline day 1

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Last version: January 27, 2025

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# 1. Set up

## 1.1 Git vs Github

* Difference between Git and GitHub.
* Why version control is important for collaboration.
* Hands-on: Creating and cloning repositories.

## 1.2 Rproject / Project Environment

* Overview of RStudio projects.
* Benefits of using a project environment.
* Setting up your first R project.

# 2. R Foundations

## 2.1 Rscript

* What is an R script?
* How to create and run scripts in RStudio.

## 2.2 Variable/Classes/Special Values

* Variables and data types (numeric, character, logical, etc.).
* Special values (e.g., NA, NaN, Inf, NULL).

## 2.3 Functions

* Creating and using functions.
* Built-in vs custom functions.

## 2.4 Scope

* Local vs global scope.
* The environment in R.

## 2.5 Packages

* Installing and loading packages.
* Exploring CRAN, Bioconductor, and GitHub.

# 3. In-class Exercise

* Practice using what we’ve learned so far.
* Tasks involving creating variables, using functions, and exploring packages.

# 4. Data Manipulation in R

## 4.1 Data Import/Export

* Reading data from CSV, Excel, and other formats.
* Writing data to files.

## 4.2 Clean Column Names

* Standardizing column names using janitor::clean\_names().

## 4.3 Simple Data Extraction

* Selecting rows and columns.

## 4.4 Data Summary

* Summarizing data with summary and skim.