

Introduction to RStudio

Introduction to Data Management Practices course

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<https://nbisweden.github.io/module-rstudio-intro-dm-practices/>



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1. What is R?
 2. What is Rstudio and how does it work?
 3. How to create an R Project?
 4. How to create a README in Markdown format

- R is a powerful programming language used for statistical computing and graphics, popular among data analysts, statisticians, and researchers.
- R has a large and active community of users and developers, which provides extensive support, documentation, and packages for various tasks, such as data manipulation, machine learning, and data visualization.
- R is an open-source language, which means it is free to use, modify, and distribute, making it accessible to a wide range of users.

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- R is an open-source language, which means it is free to use, modify, and distribute, making it accessible to a wide range of users.
 - R has a rich ecosystem of packages that extend its functionality, allowing users to tailor their analyses to specific domains or tasks, and making it a flexible and customizable scripting language for data analysis and visualization.

- RStudio is an Integrated Development Environment (IDE) for working with R.
- The RStudio IDE is open-source and the product is free under the [Affero General Public License \(AGPL\) v3](#)
- We can use RStudio IDE to write code, navigate the files on our computer, inspect the variables we are going to create, and visualize the plots we will generate.

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- Source Editor Pane (default: upper left)
 - Environment and History Pane (default: upper right)
 - Plots and Help Pane (default: bottom right)
 - Console Pane (default: bottom left)

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- It is good practice to create a [README](#) at the top level of your working directory to provide the context of the files in the directory.
 - Making this a habit can save you many hours of work, as it will allow you to quickly get into a project again after being away from it for some time.
 - You may also find a README file helpful when you collaborate with others around a bunch of files.

A lightweight markup language. Relatively easy to add text formatting.

- Heading: `## Header (down to #####, 6 hashtags)`
- Bold: `**bold text**`
- Italic: `*italicized text*`
- Ordered list:
 1. First item
 2. Second item
- Unordered list:
 - */- First item
 - */- Second item
- Code: ``Code` (back ticks)`
- Link: `[title](https://www.example.com)`

- Important concept to understand
 - It is the place from where R will be looking for and saving files
 - When you write code for your project, it should refer to files in relation to the root of your working directory and only need files within this structure.
- Using RStudio projects makes this easy and ensures that your working directory is set properly.