

# CAR00110 - Aula 01

## Linguagem R e Sintaxe Básica

Prof. Lucas Helal, MMSc, PhD

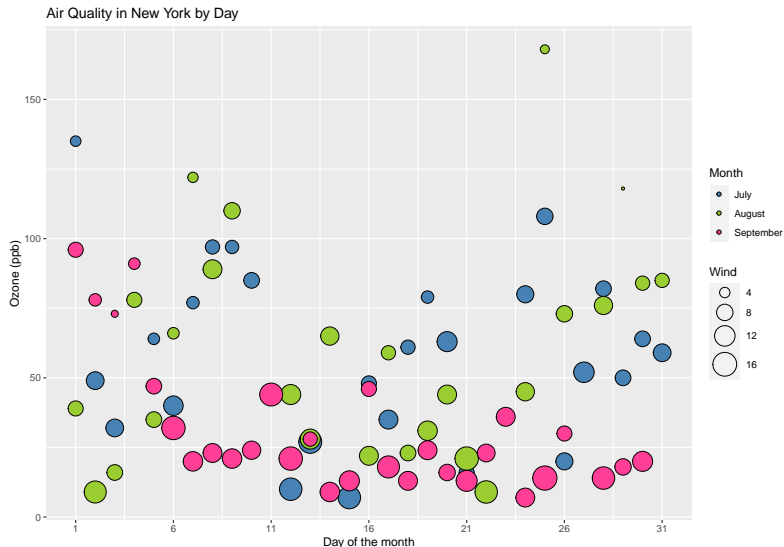
2023-08-10

# O que é a linguagem R?

People still using excel  
for data analysis



# O que é a linguagem R?



# O que é a linguagem R?

</> </> </>

.

.

**AND**

.

.

$$\hat{y} = \beta_0 + \beta_1 x_1 + \dots + \beta_n x_n + \varepsilon_i$$

# O que é a linguagem R?



.



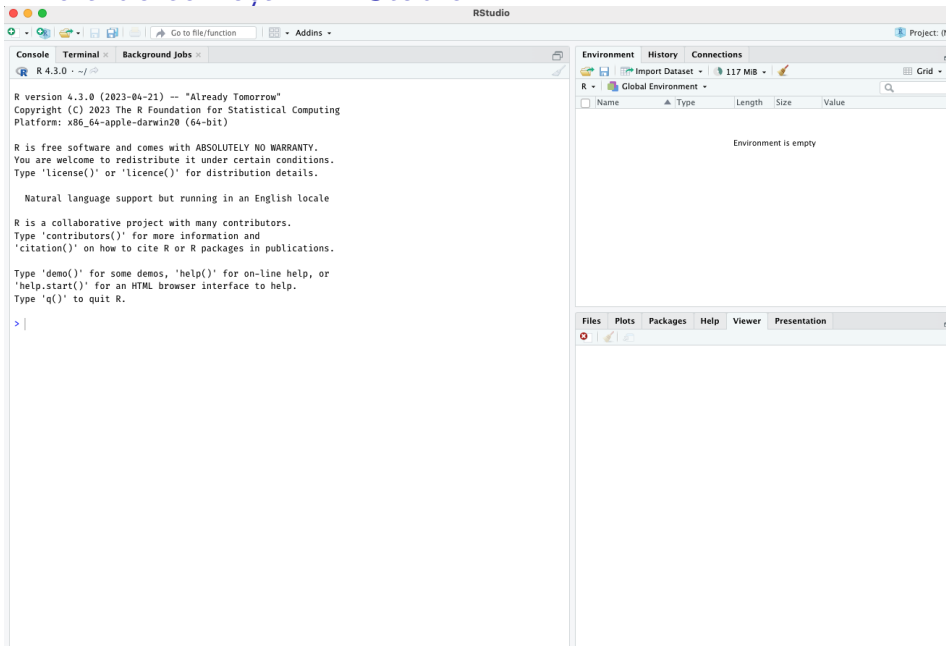
,



# O que é a linguagem R?

Cria códigos.. faz operações diversas.. suporta outras linguagens... e além de tudo, **opera estatística**

# É hora de começar - R Studio



The screenshot displays the RStudio application window. The top menu bar includes 'File', 'Edit', 'Session', 'View', 'Help', and 'Project: (None)'. Below the menu bar is a toolbar with icons for file operations and a search bar. The main workspace is divided into four panes: Console, Terminal, Background Jobs, and Environment. The Console pane shows the R version 4.3.0 (2023-04-21) and the R Foundation's copyright notice. The Environment pane shows the Global Environment with a table of variables. The bottom pane shows the Files, Plots, Packages, Help, Viewer, and Presentation tabs.

R version 4.3.0 (2023-04-21) -- "Already Tomorrow"  
Copyright (C) 2023 The R Foundation for Statistical Computing  
Platform: x86\_64-apple-darwin20 (64-bit)

R is free software and comes with ABSOLUTELY NO WARRANTY.  
You are welcome to redistribute it under certain conditions.  
Type 'license()' or 'licence()' for distribution details.

Natural language support but running in an English locale

R is a collaborative project with many contributors.  
Type 'contributors()' for more information and  
'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or  
'help.start()' for an HTML browser interface to help.  
Type 'q()' to quit R.

> |

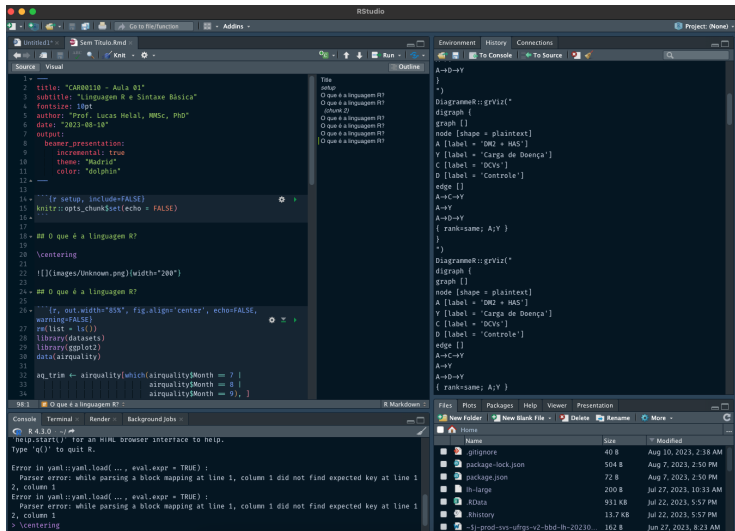
Environment History Connections

R - Global Environment

Name	Type	Length	Size	Value
Environment is empty				

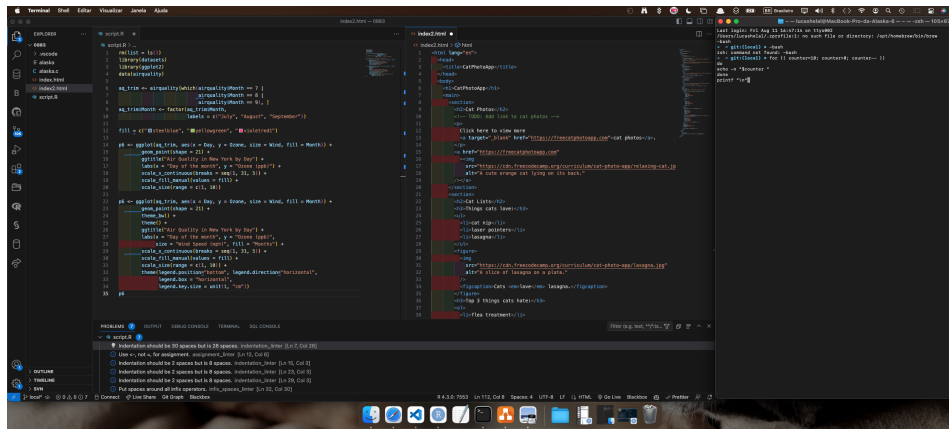
Files Plots Packages Help Viewer Presentation

# É hora de começar - R Studio?





## É hora de começar - R Studio?



# Como o R se comunica?

## 1 Atalhos/*Shortcuts*

**Assignment:** `<-`, colocamos: ...

**Pipe:** `|>` ou `%p%`, colocamos: ...

**Salvar:** File \ Save As, colocamos: ...

**Rodar comando:** ficar apertando o play o tempo inteiro ou...

# Como o R se comunica?

## 2 Operações

```
2+2
```

```
## [1] 4
```

```
2-1
```

```
## [1] 1
```

```
log(10)
```

```
## [1] 2.302585
```

```
sqrt(64)
```

```
## [1] 8
```

# Como o R se comunica?

3 Linhas de comando

```
## [1] 12.5
```

```
## [1] 1.870829
```

```
## [1] 12.5
```

```
## [1] 3.5
```

# Como o R se comunica?

3 Linhas de comando

# Como o R se comunica?

## 4 Orientação à objetos