

Data Science

CS301

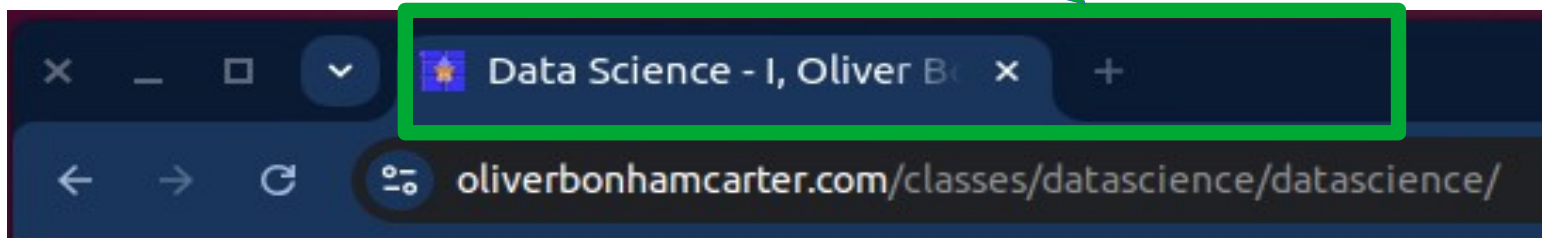
Installing R and Rstudio

Week 1

Fall 2025

Oliver BONHAM-CARTER

Just Link-IN!



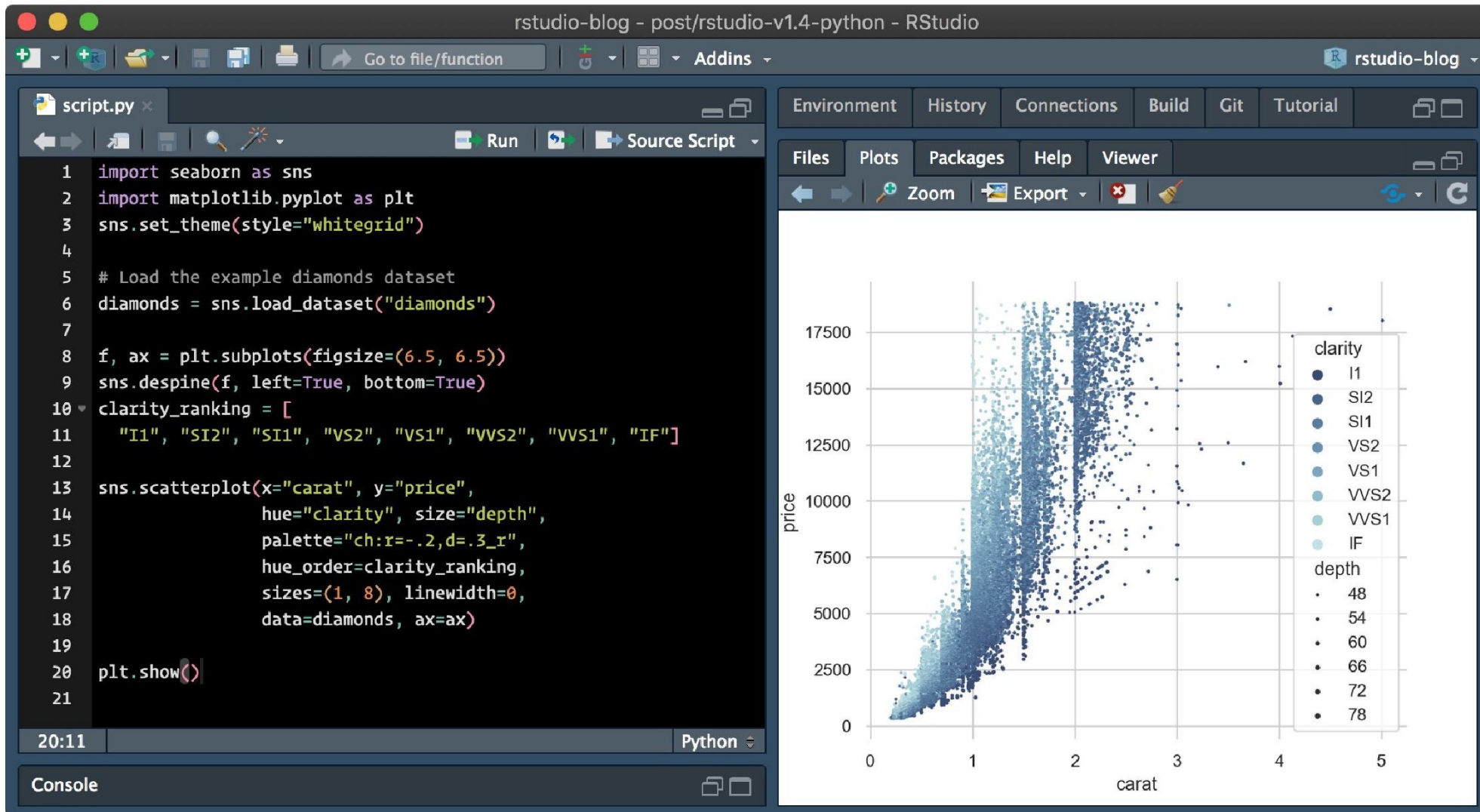
- Course web site:
 - <https://www.oliverbonhamcarter.com/classes/datascience/datascience/>
- Syllabus, Planning and ClassDocs/:
 - <https://github.com/AlleghenyCollege-CIS-301-F2025/classDocs>



The R Programming Language

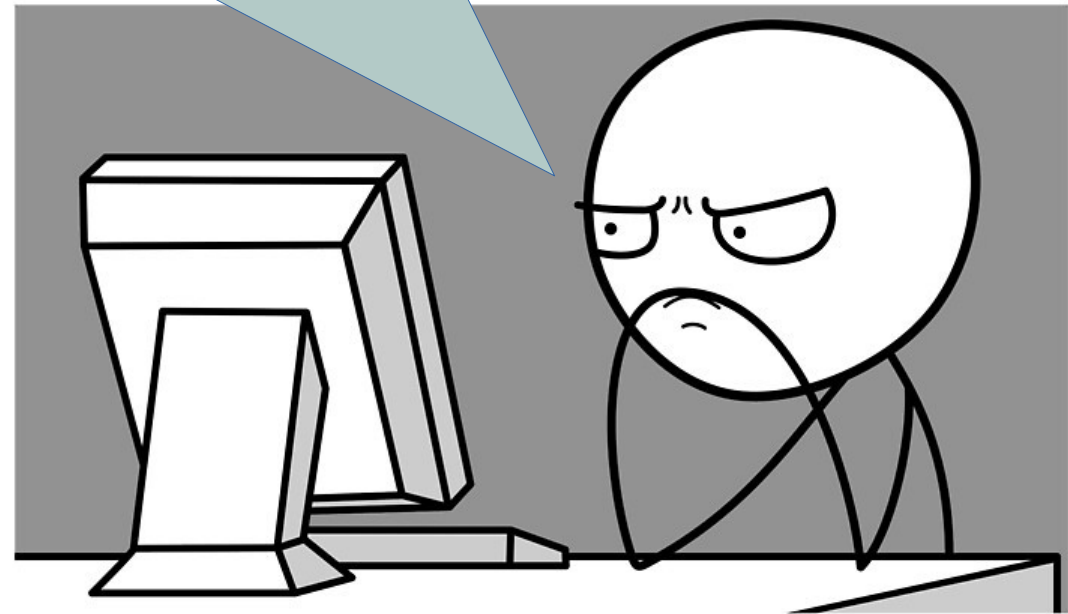
- <https://www.r-project.org/>
- What is the R language?
 - An open source, well-developed programming platform for work in statistics, mathematics and data analytics
 - Cross platform; runs on major OSs
 - Popular programming skill among Big Data analysts, and data scientists
- Community Blogs:
 - <https://www.r-bloggers.com/>
 - <https://twitter.com/rstudiotips/>
 - <https://towardsdatascience.com>







Let's take a moment
to install these
software packages!





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COLLEGE

**Install
links**



RStudio download

<https://posit.co/downloads/>



R Programming Language

<https://cran.rstudio.com/>

Verify Your Installation!

- Wait! R or RStudio? Same language!

To run:
Find its icon or type *rstudio* at terminal

```
R version 3.2.2 (2015-08-14) -- "Fire Safety"
Copyright (C) 2015 The R Foundation for Statistical Computing
Platform: x86_64-pc-linux-gnu (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.

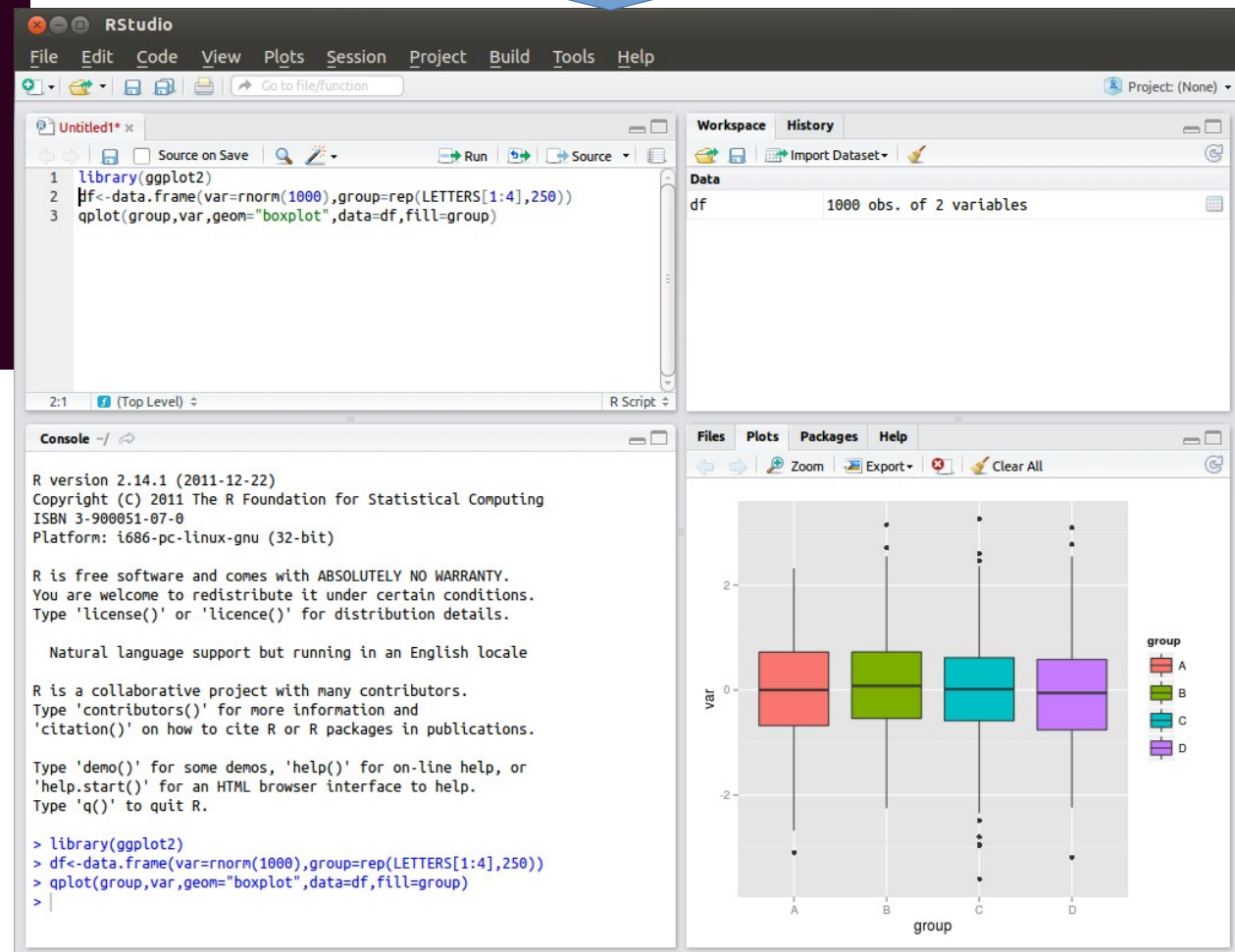
Natural language support but running in an English locale

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.

> |
```

To run:
Type “R” at terminal





Getting Help in R

- Online help: place a “?” in front of a keyword
 - Ex: ?print

The screenshot displays the R Studio environment. The console on the left shows the R version (3.4.0) and the command prompt with `?paste` and `?print` entered. The top-right pane shows the Environment tab with a variable `x` of type `int [1:1000]`. The bottom-right pane, highlighted with a red border, shows the Help tab with the documentation for `paste` selected. The documentation includes the function signature `paste(..., sep = " ", collapse = NULL)`, a description of concatenating vectors, usage examples, and a list of arguments.

Please take notes!!
We will be coding together.

R: Concatenate Strings Find in Topic

paste {base} R Documentation

Concatenate Strings

Description

Concatenate vectors after converting to character.

Usage

```
paste(..., sep = " ", collapse = NULL)
paste0(..., collapse = NULL)
```

Arguments

...	one or more R objects, to be converted to character vectors.
sep	a character string to separate the terms. Not NA_character_ .
collapse	an optional character string to separate the results. Not NA_character_ .