


**RStudio + Git = **

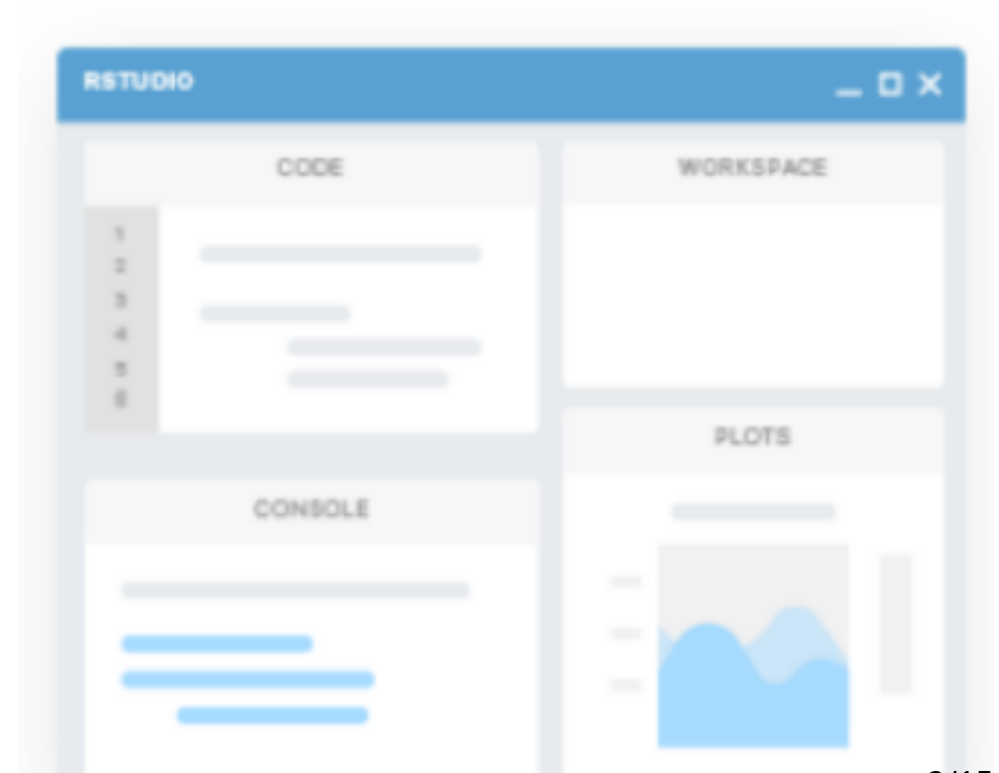
[jeroen.staab@posteo.de](mailto:jeroen.staab@posteo.de)

15.7.2020

# R Studio?

- *Integrated development environment* (IDE)  
-> Editor, Console, Plots, Versioning and more
- *R* is a widely spread data science language
- *RStudio* is developed from useRs for useRs
- It's free and open source ♥

Visit [RStudio.com](https://www.rstudio.com)



# Pane Layout (left)!

## Editor

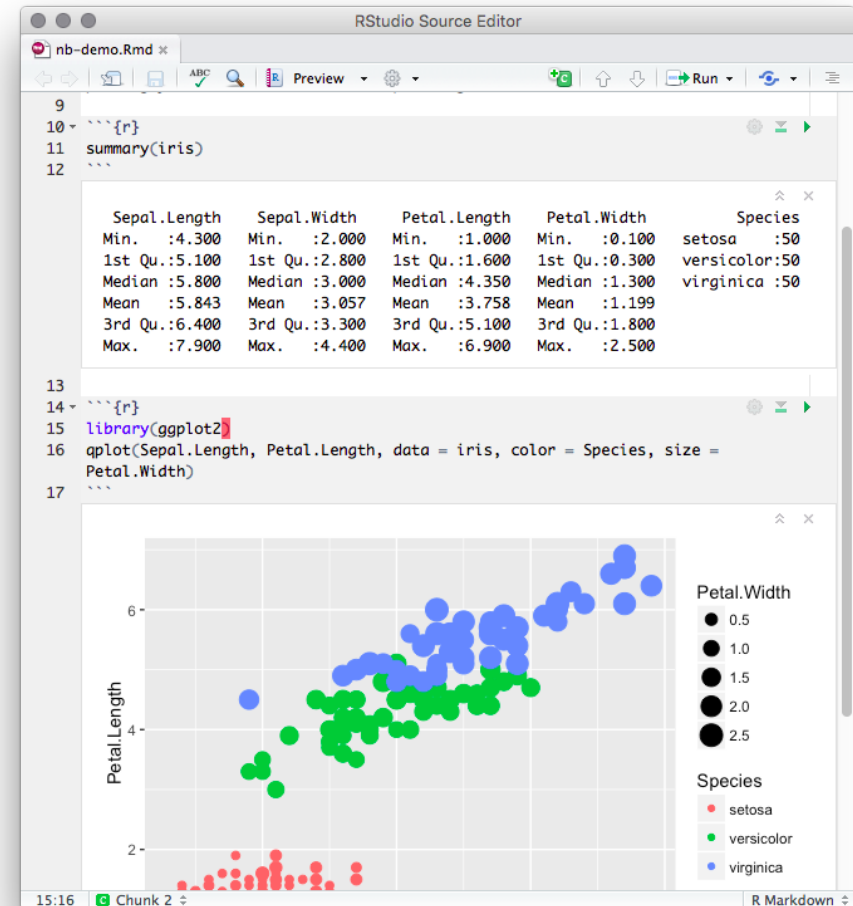
- Show code in new window
- Jump to function (F2)
- File navigation
- Multicursor

## Console

Execute commands

- Print output - Command history

## R Notebooks



# Pane Layout (right)!

## Environment, History

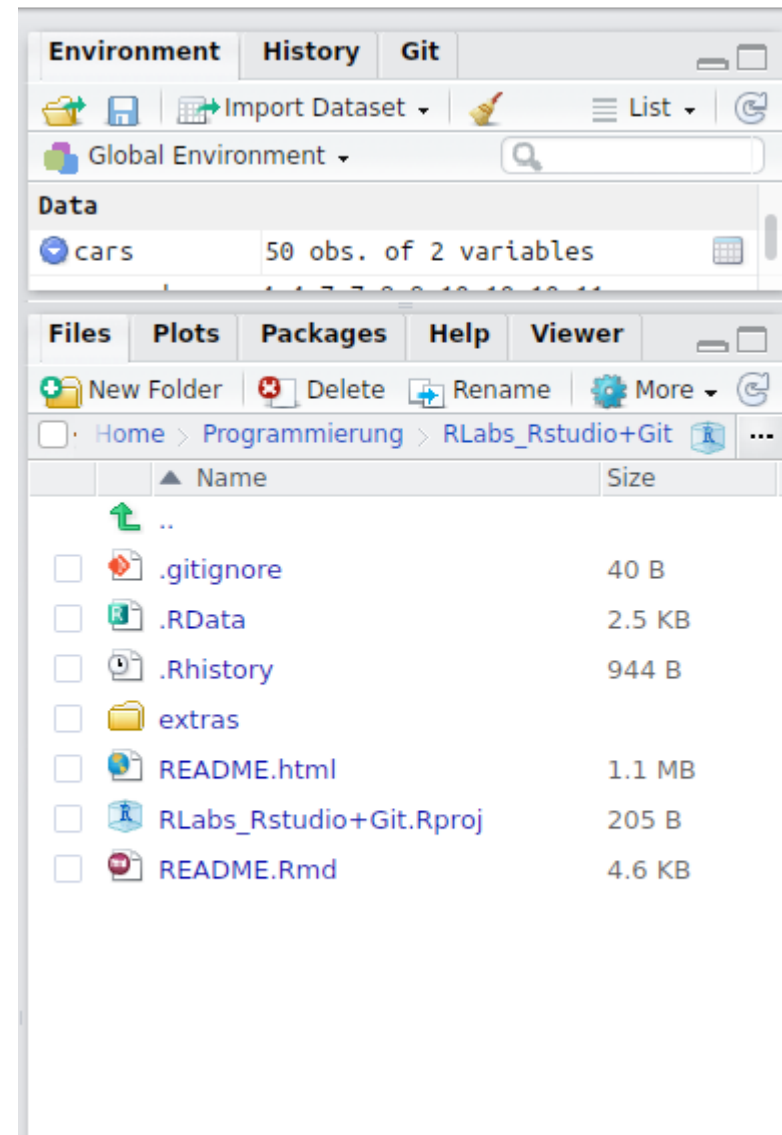
- Additional Panes

## Files

- Browse files / rename
- `setwd()` [MORE]
- open native file browser [...]

## Packages

- `library()` / `detach()`
- `install.packages()`



# Keyboard Shortcuts 1!

## Multicursor

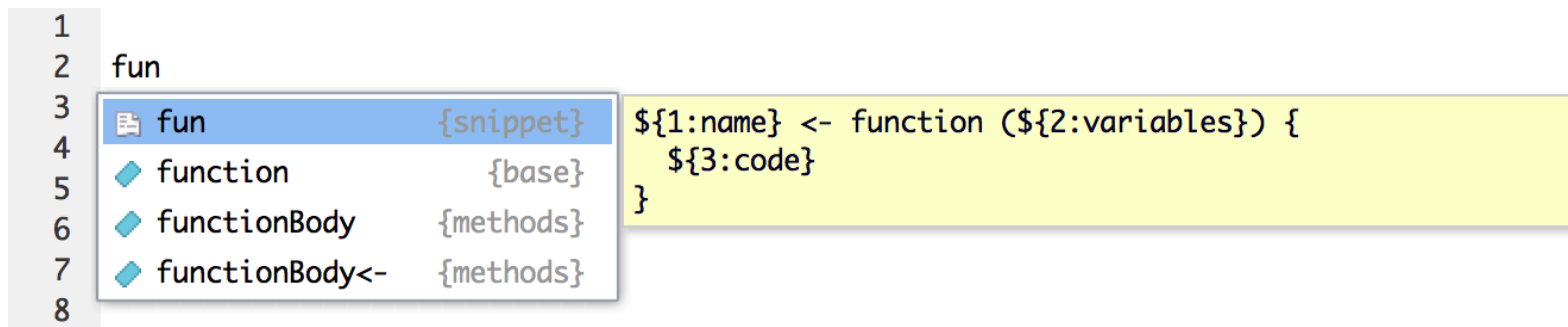
Select multiple lines/positions for parallel editing

- with Mouse: CTRL+ALT+Click
- keyboard: CTRL+ALT+UP/DOWN
- rename variable: Select it and CTRL+ALT+K

## Code snippets

Text macros that are used for quickly inserting common snippets of code ([see Blog](#)). - Try fun, lib, apply, ...

- Type fun and press TAB for shifting through arguments



Test out

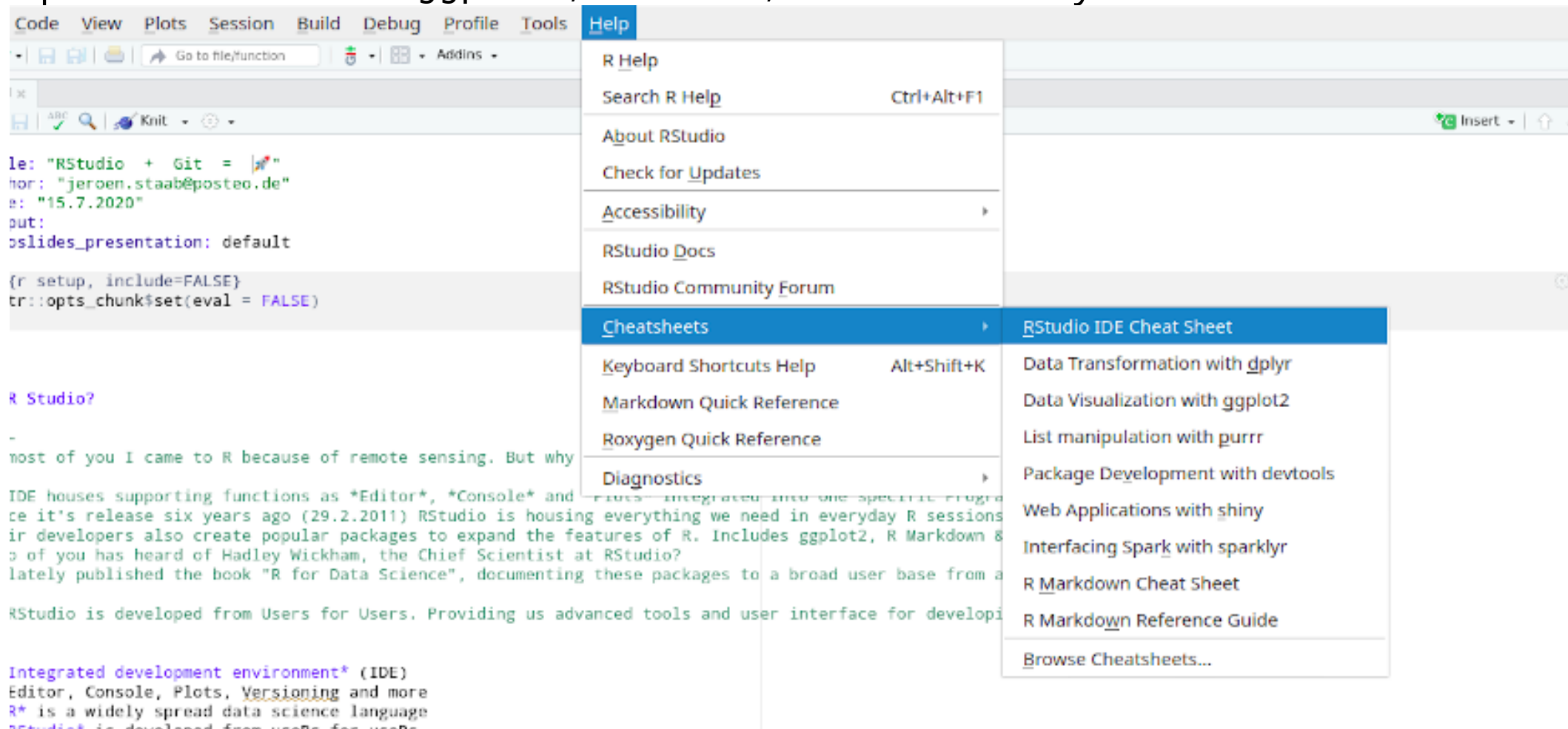
# Keyboard Shortcuts 2!

Press SHIFT+ALT+K for “all” shortcuts:

Keyboard Shortcut Quick Reference					
Tabs		Source Navigation		Source Editor	
Ctrl+Shift+.	Switch to Tab...	Ctrl+F9	Back	Ctrl+Alt+I	Insert Chunk
Ctrl+Tab	Next Tab	Ctrl+F10	Forward	Ctrl+Shift+R	Insert Section...
Ctrl+Shift+Tab	Previous Tab	Ctrl+Alt+U	Find Usages	Ctrl+Alt+X	Extract Function
Ctrl+Shift+F11	First Tab	Ctrl+F3	Use Selection for Find	Ctrl+Alt+V	Extract Variable
Ctrl+Shift+F12	Last Tab	Ctrl+F	Find...	Ctrl+Shift+C	Comment/Uncomment
		Ctrl+G	Find Next	Ctrl+I	Reindent Lines
		Ctrl+Shift+G	Find Previous	Ctrl+Shift+/	Reflow Comment
		Ctrl+Shift+J	Replace and Find	Ctrl+Shift+A	Reformat Code
		Ctrl+.	Go To File/Function...	Ctrl+Shift+Alt+D	Show Diagnostics (Pro
		Shift+Alt+G	Go to Line...	Alt+L	Collapse Fold
		Shift+Alt+J	Jump To...	Shift+Alt+L	Expand Fold
		Ctrl+P	Jump To Matching	Alt+O	Collapse All Folds
		Ctrl+Shift+Alt+E	Expand To Matching	Shift+Alt+O	Expand All Folds
		Ctrl+Shift+O	Show Document Outline	Alt+Up	Move Lines Up
		Ctrl+Shift+Up	Expand Selection	Alt+Down	Move Lines Down
		Ctrl+Shift+Down	Shrink Selection	Ctrl+D	Delete Line
		Ctrl+PgDn	Go to Next Section	Ctrl+U	Yank Line Up to Cursor
		Ctrl+PgUp	Go to Previous Section	Ctrl+K	Yank Line After Cursor
		Ctrl+Alt+A	Split Into Lines	Ctrl+Y	Insert Yanked Text
		Ctrl+Alt+Up	Add cursor above current cursor	Alt+-	Insert Assignment Op
		Ctrl+Alt+Down	Add cursor below current cursor	Ctrl+Shift+M	Insert Pipe Operator
		Ctrl+Shift+Alt+Up	Move active cursor up	Ctrl+Shift+Alt+M	Rename in Scope
		Ctrl+Shift+Alt+Down	Move active cursor down	Ctrl+Shift+Alt+R	Insert Roxygen Sकेल
				Shift+Tab	Insert Snippet
Files		Execute		Debug	
Ctrl+S	Save	Ctrl+Shift+S	Source Active File		

# Cheatsheets!

Open cheat sheets for ggplot2, markdown, and more directly from the menu bar:



# Addins

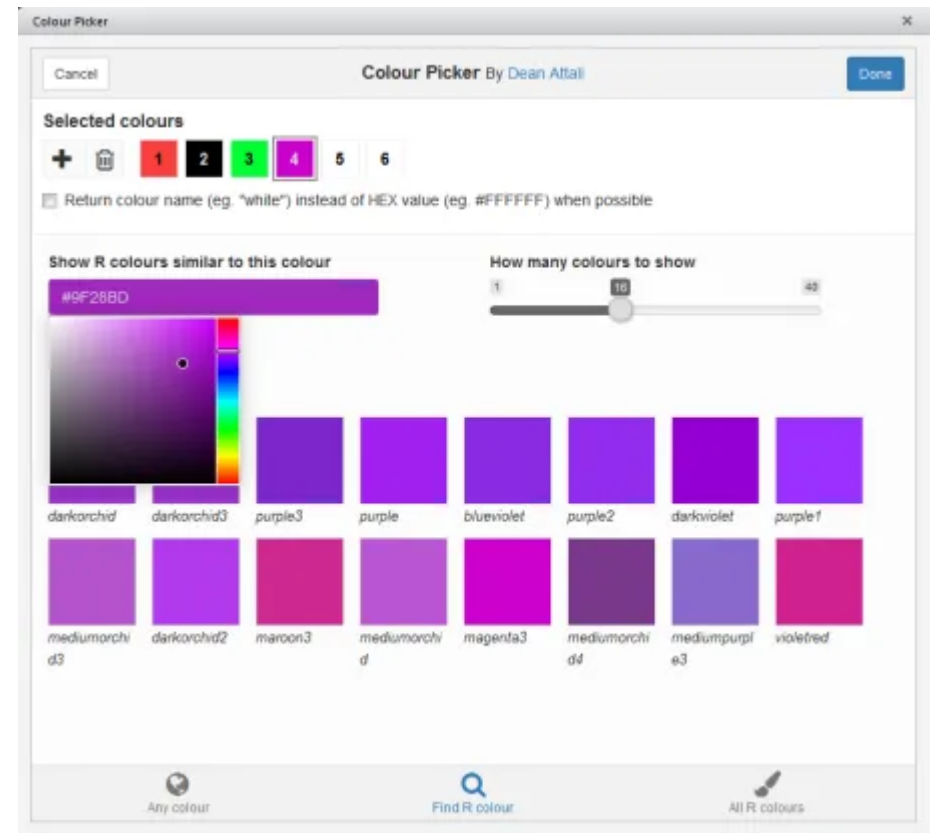
How to install RStudio Addins?

```
# install.packages("addinslist")  
addinslist::addinslistAddin()
```

## Example Color Picker

- Browse Addins
- Install colourpicker
- Click Addins > Colour picker
- Returns a vector  
`c("red", "black", "green", "purple")`

see also `colorHelper()`





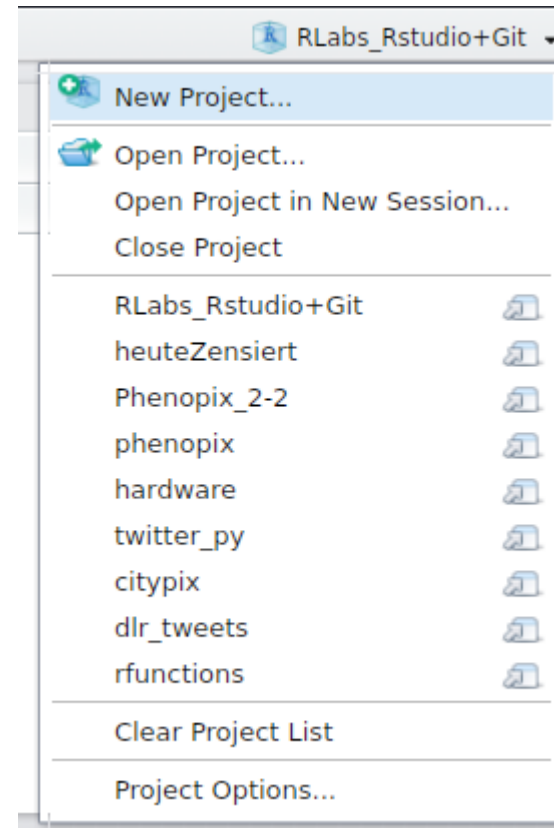
# Projects

You already organize your files in folders.

Why not add an extra file organizing your R sessions?

## Project file .Rproj

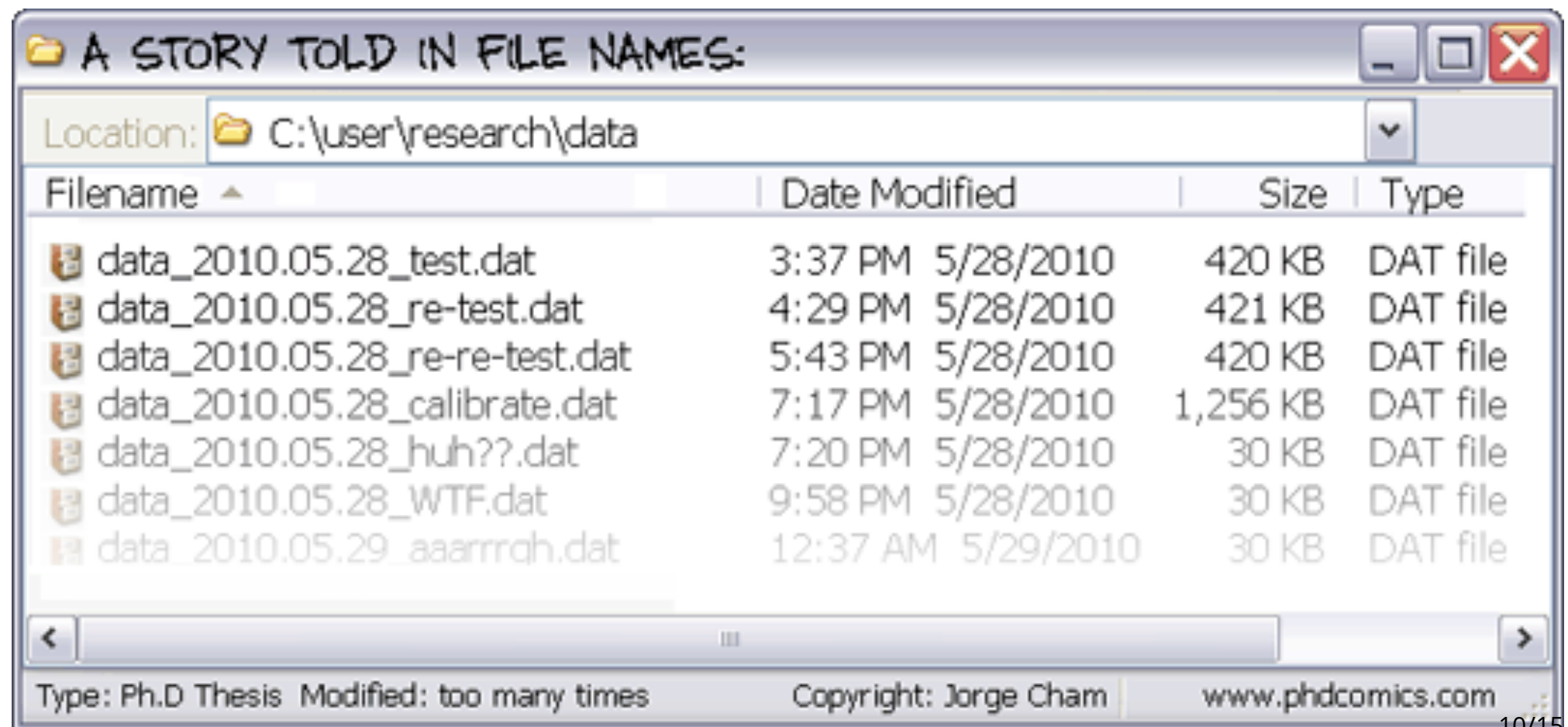
- Automatically `setwd()`
- Load .Rdata environment
- Load .Rhistory
- Easily switch between projects
- Build packages
- Versioning with `git`



# Versioning

edit -> save as

File name includes date and message



# Versioning with Git

edit -> save -> stage -> commit

Commit includes date and message

Versioning tools like git keeps track of file changes

## Organize Commits



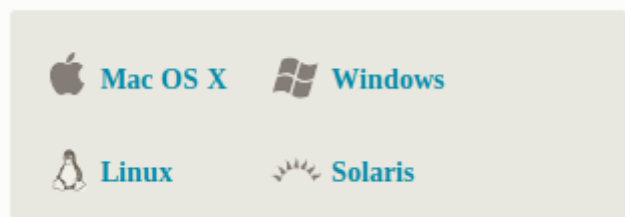
## RStudio Implementation

RStudio: Review Changes		
Changes	History	master (all commits)
Subject	Author	
HEAD -> refs/heads/master	Minor improvements	Jeroen
	Mention SVN as emailed with Christian B.	Jeroen
	Adding reindent code CTRL+I	Jeroen
	Slides with ! are live demons in rstudio	Jeroen
	minor impro	Jeroen
	Typo	Jeroen
	initial commit	Jeroen

# Configure Git

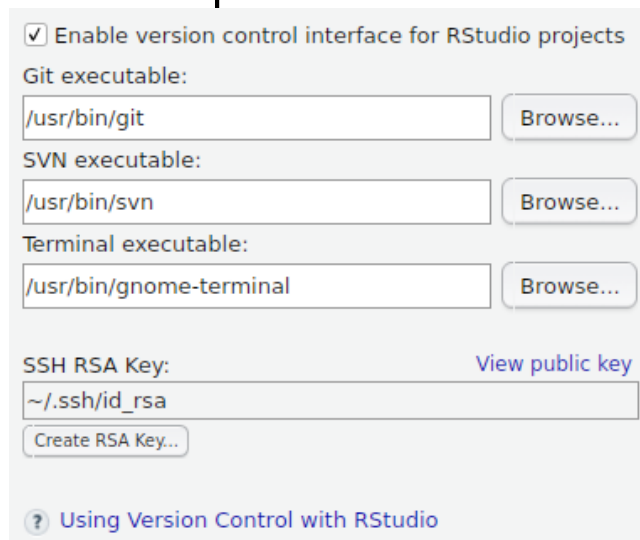
Install git on your computer

- Visit [git-scm.com](https://git-scm.com)

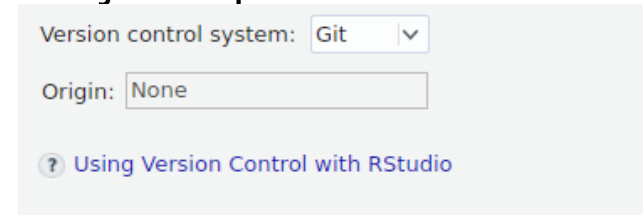


## RStudio

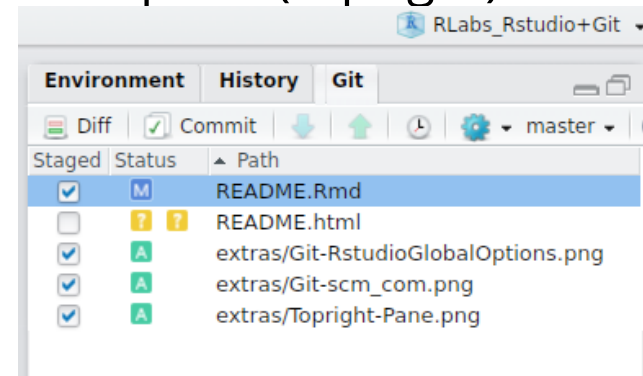
- Global options



- Project options



- New pane (topright)

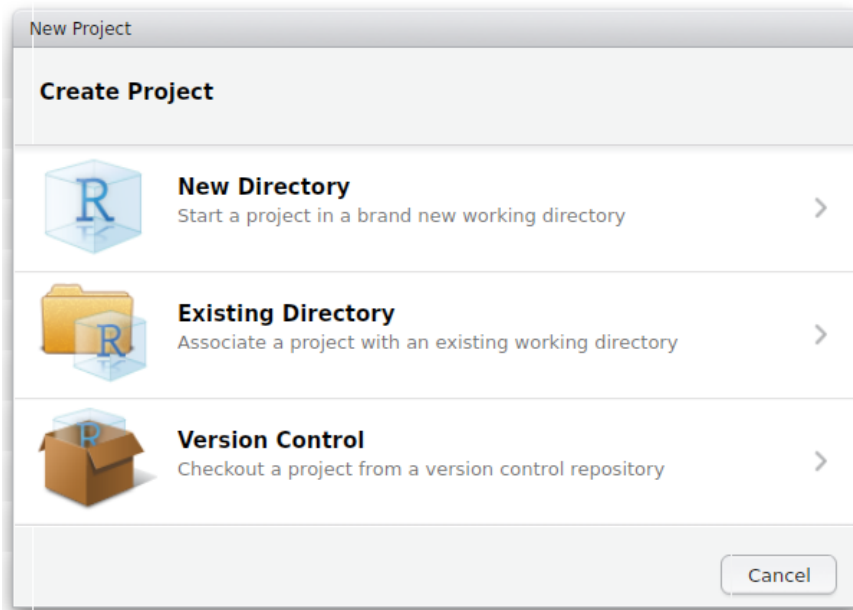


- Interact w. cloud (opt-in)  
e.g. Github / Bitbucket

# Getting Started...

... 1. Rstudio Project

Menu > File > New Project



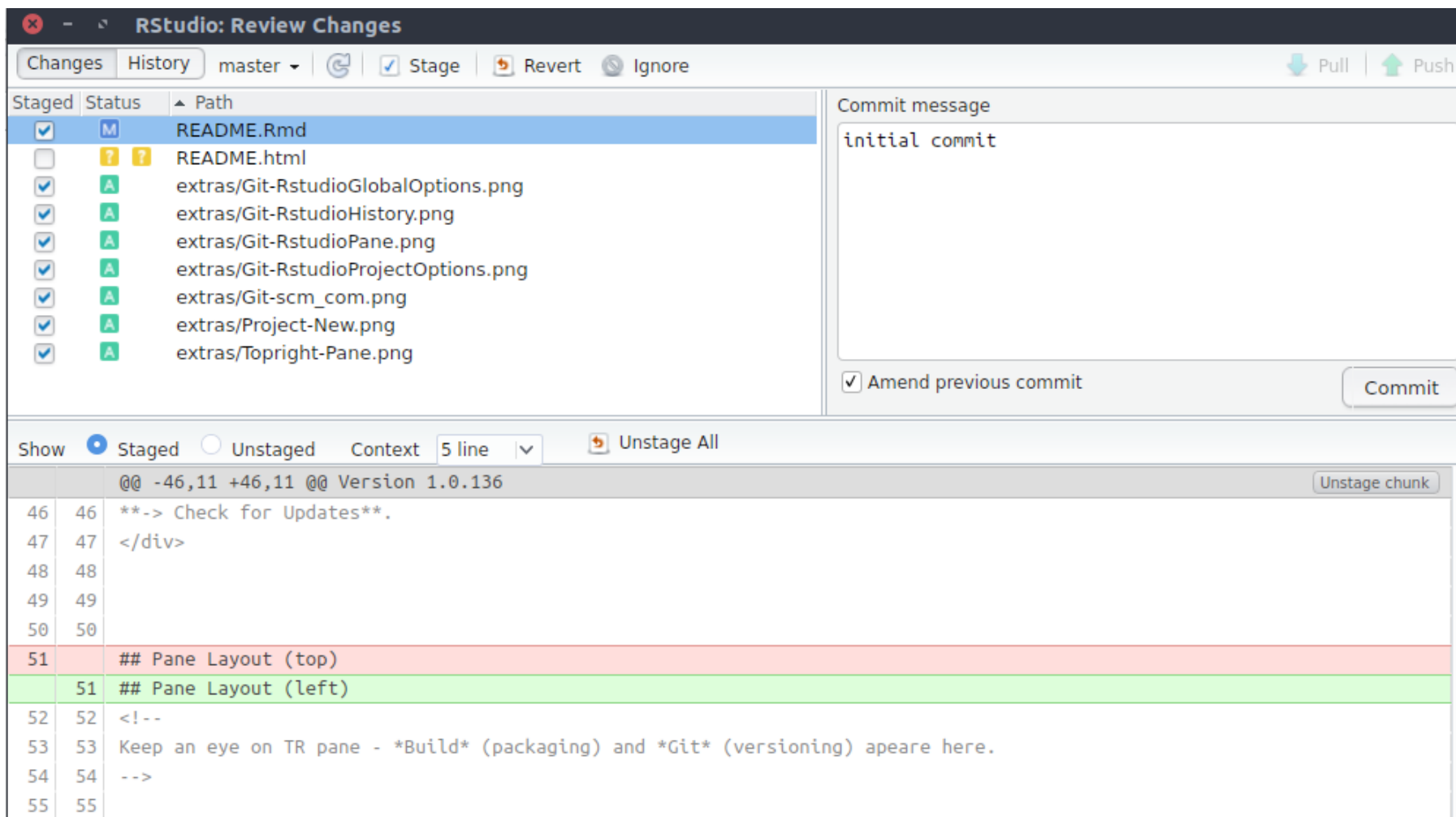
... 2. Git Repository

- Open directory in terminal.
- Type `git init`
- Restart RStudio.

Troubleshoot:  
Check project options.

# Workflow

- Stage: Select file for next commit. Freezes state.
- Commit: Create new node in time line. Add a message.
- Push & pull: Interact with remote repository.



# References

## Rstudio

- [Some RStudio Tipps](#)
- [R Notebooks](#)
- [Code Snippets](#)
- [Colour Picker Addin](#)

## Git and SVN

- [Version Control in RStudio](#)
- [Git Documentation](#)

## Presentation

- [Access on github](#)  
[github.com/georoen](https://github.com/georoen)

