



Delivering materials with little friction

teach-shiny.rbind.io

CC BY-SA RStudio

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Goal

Set up an RStudio Cloud workspace

Two challenges

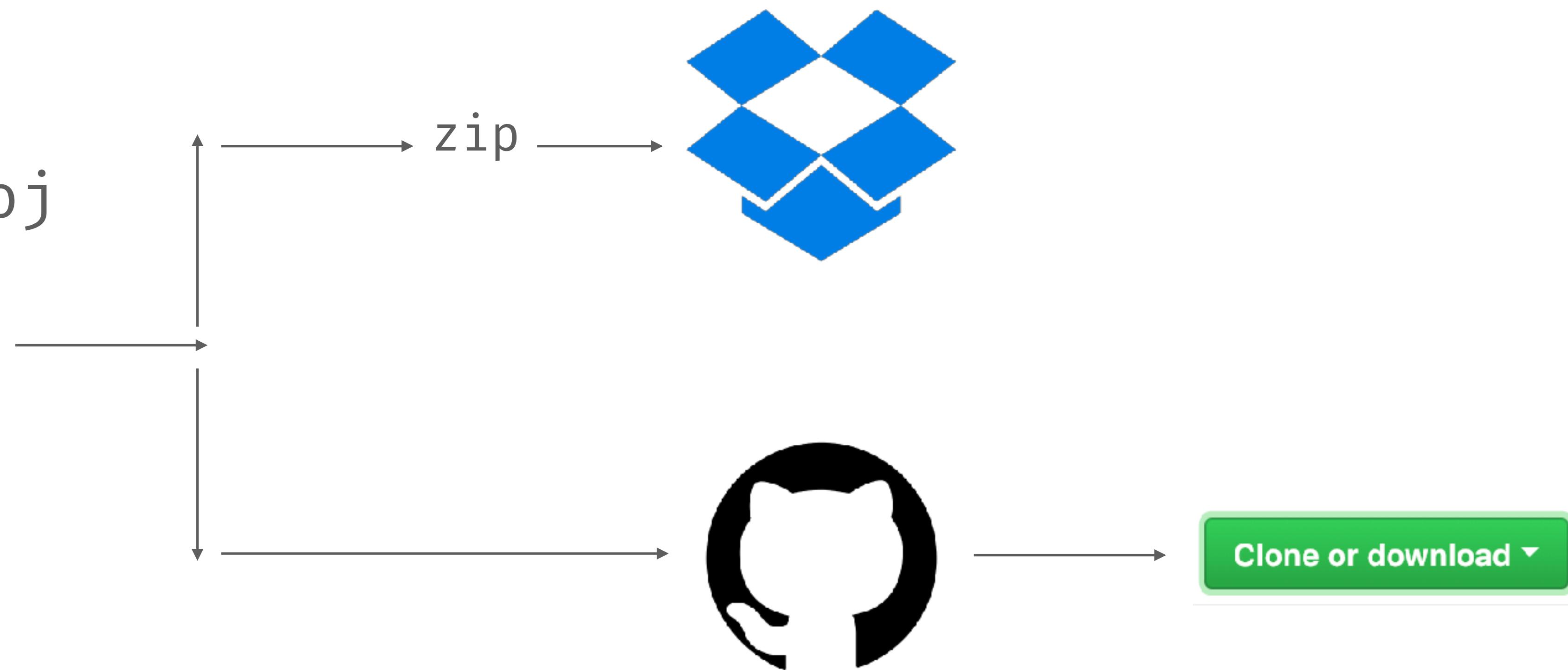
- ▶ Files (workshop materials) in a particular folder structure
- ▶ Computing environment

use
▶ RStudio
projects

Packaging things up



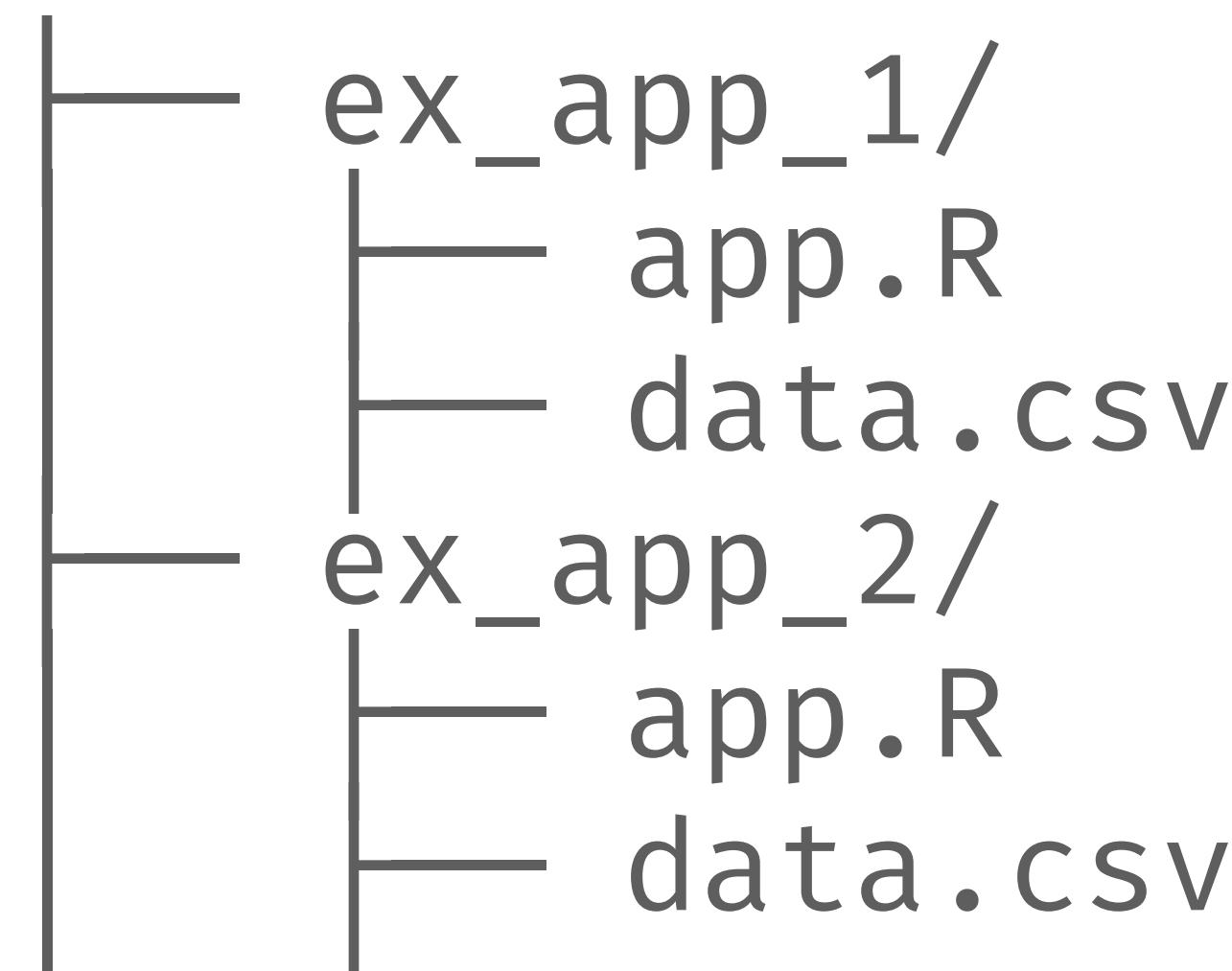
```
└── workshop.Rproj  
└── ex_app_1/  
    └── app.R  
└── ex_app_2/  
    └── app.R
```



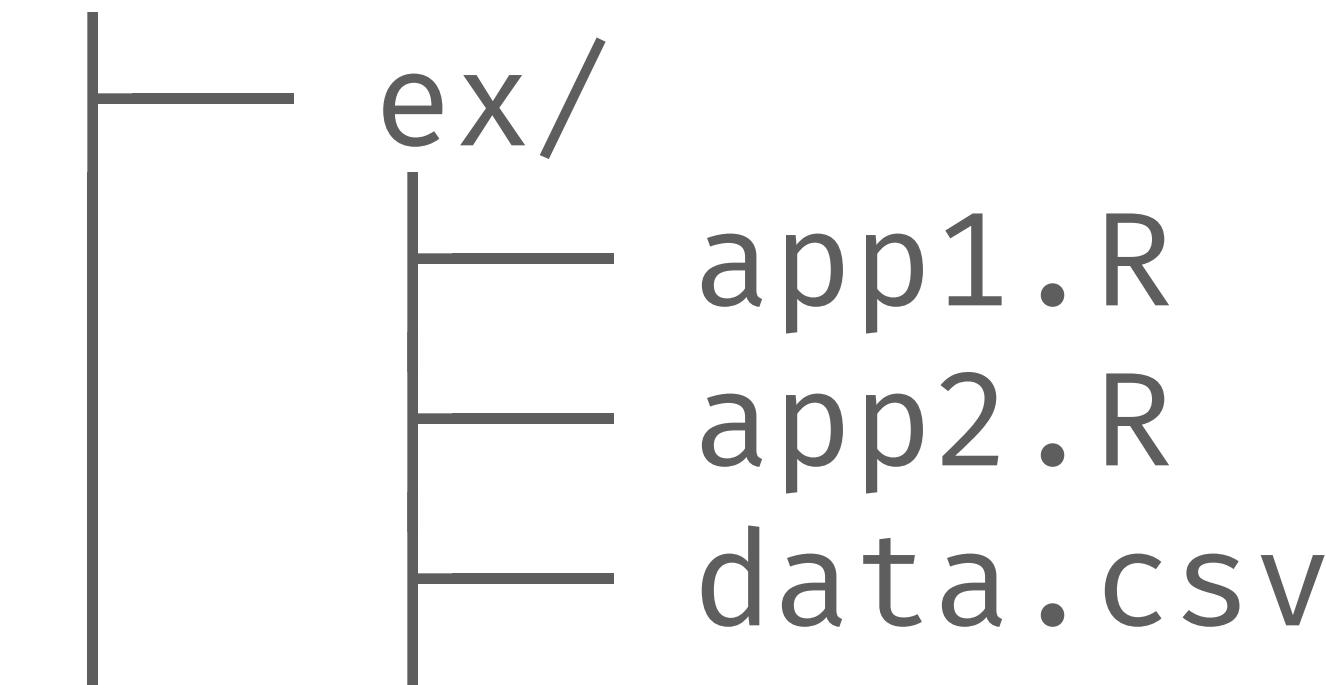
Getting materials off of GitHub

- ▶ Fork + Clone (if you know what that means)
- ▶ Download zip + click on .Rproj to launch
- ▶ `usethis::use_course()`

File structure for example apps



For teaching deployment



For avoiding redundancy

standardize
▶ computing
environment

don't start like this

- Install R
- Install RStudio
- Install the following packages:
 - shiny
 - tidyverse
 - ...
- Load these packages
- Install git

start like this

- Go to rstudio.cloud
 - Log in
- > hello R!

RStudio

Project: (None)

Console Terminal ×

Go to file/function Addins

```
R version 3.5.0 (2018-04-23) -- "Joy in Playing"
Copyright (C) 2018 The R Foundation for Statistical Computing
Platform: x86_64-apple-darwin15.6.0 (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 Plots Connections Packages Help Jobs Viewer

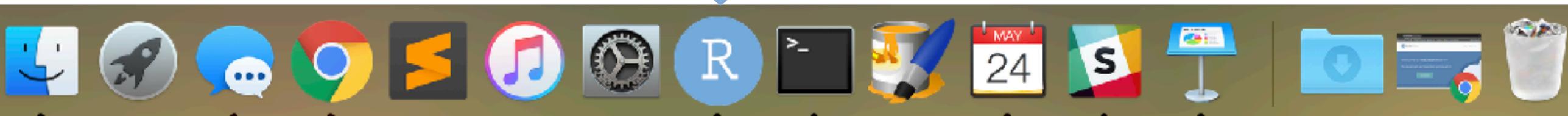
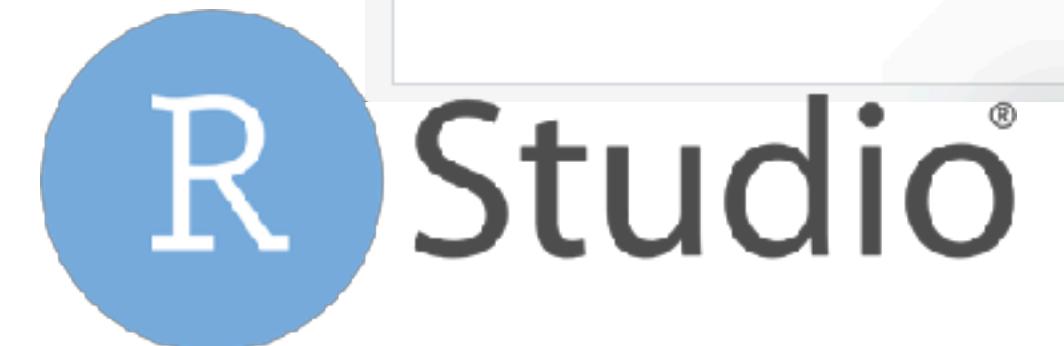
Import Dataset

Global Environment

Environment is empty

History Files

To Console To Source



Chrome File Edit View History Bookmarks People Window Help

24 78% Thu 12:44 AM

RStudio Cloud

Secure | https://rstudio.cloud/project/38096

Your Workspace / Untitled Project Click to name your project

File Edit Code View Plots Session Build Debug Profile Tools Help

Addins Go to file/function R 3.4.4

Console Terminal /cloud/project/

```
R version 3.4.4 (2018-03-15) -- "Someone to Lean On"
Copyright (C) 2018 The R Foundation for Statistical Computing
Platform: x86_64-pc-linux-gnu (64-bit)

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Environment History Connections

Import Dataset Global Environment

Environment is empty

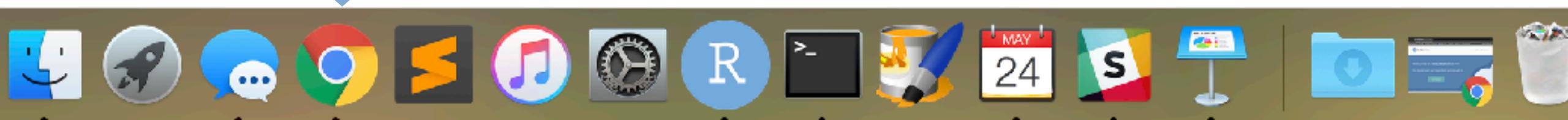
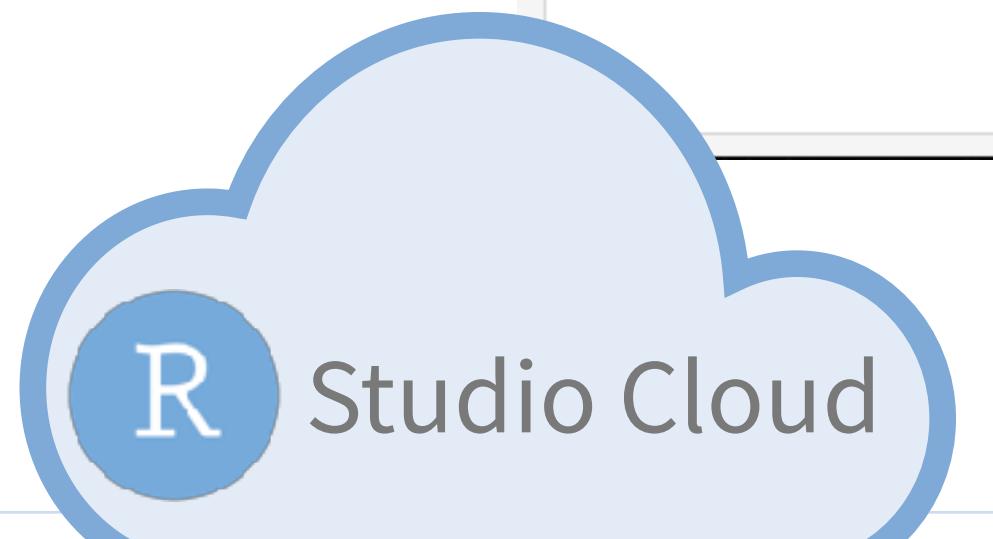
Files Plots Packages Help Viewer

New Folder Upload Delete Rename More

/ cloud > project

	Name	Size	Modified
	..		
	.Rhistory	0 B	May 24, 2018, 12:40 AM
	project.Rproj	205 B	May 24, 2018, 12:40 AM

A screenshot of the RStudio Cloud interface. The top navigation bar shows 'Chrome' and other system status icons. The main title is 'RStudio Cloud'. The URL bar is highlighted with a red oval and shows 'Secure | https://rstudio.cloud/project/38096'. Below the URL bar, the page title is 'Your Workspace / Untitled Project Click to name your project'. The interface includes a standard menu bar (File, Edit, etc.) and a toolbar with various icons. The 'Console' tab is active in the left pane, displaying the R startup message. The 'Files' pane on the right shows a directory structure with a single folder named 'project' containing '.Rhistory' and 'project.Rproj' files. The 'Environment' pane shows an empty global environment. The bottom of the screen features a dock with various application icons.



why cloud?

Why not local IDE?

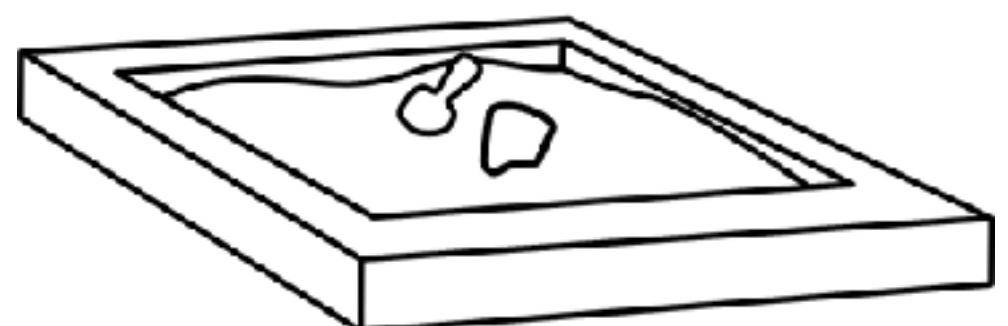
- ▶ Reduce friction at the beginning of a workshop
- ▶ Avoid local installation
- ▶ Standardize computing environment for all participants

Why RStudio Cloud?

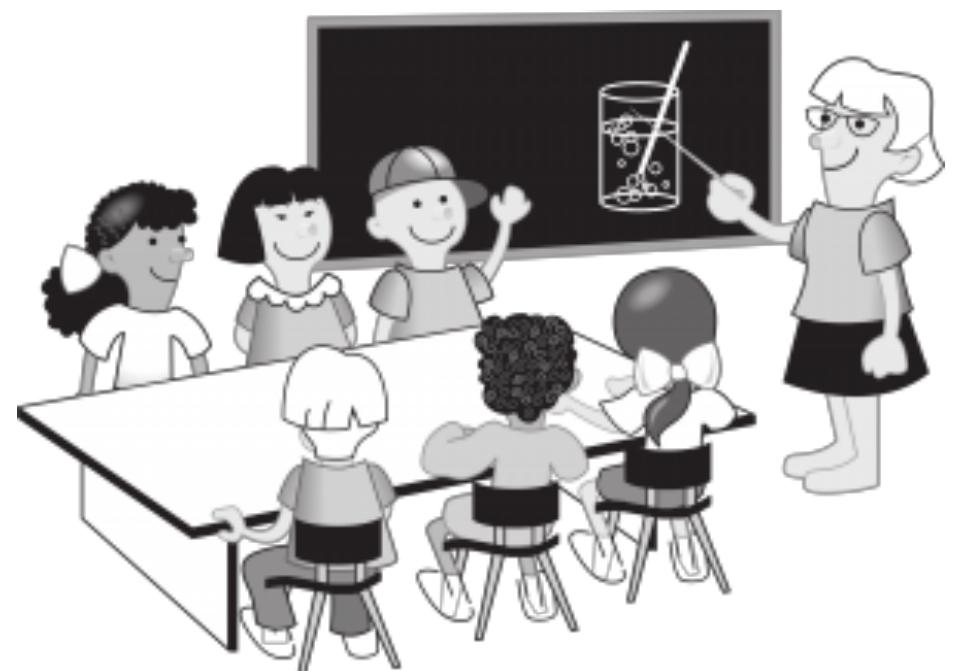
- ▶ Does not require server setup
- ▶ Features designed specifically for teaching



Workspaces



when you create an account on RStudio Cloud
you get a workspace of your own - projects you
create here are public



you can add a new workspace and control its
permissions - projects you create here can be
public or private

Getting students in

Access

- Invitation required

Add specific members to the space by sending invitations.

- Shared

Anyone with the sharing link can access the space.

Initial Role

(i)

Contributor



Copy Sharing Link

take this link
(and optionally make it into a short link)

Permissions

Contributors can see the members list

Contributors can make their projects visible to all members

Viewers can see the members list

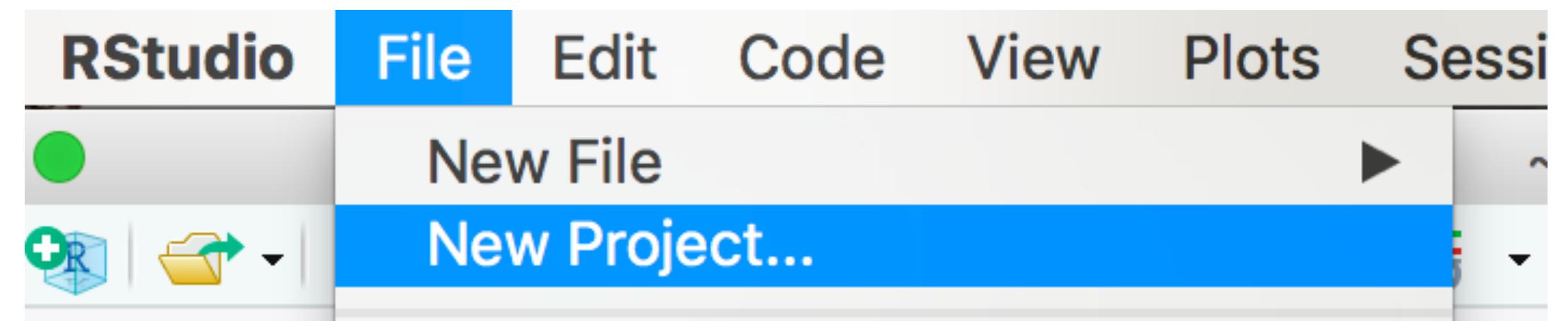
evaluate whether students should be able to see each others' names or not

Projects

a new project in RStudio Cloud



is a new project in RStudio



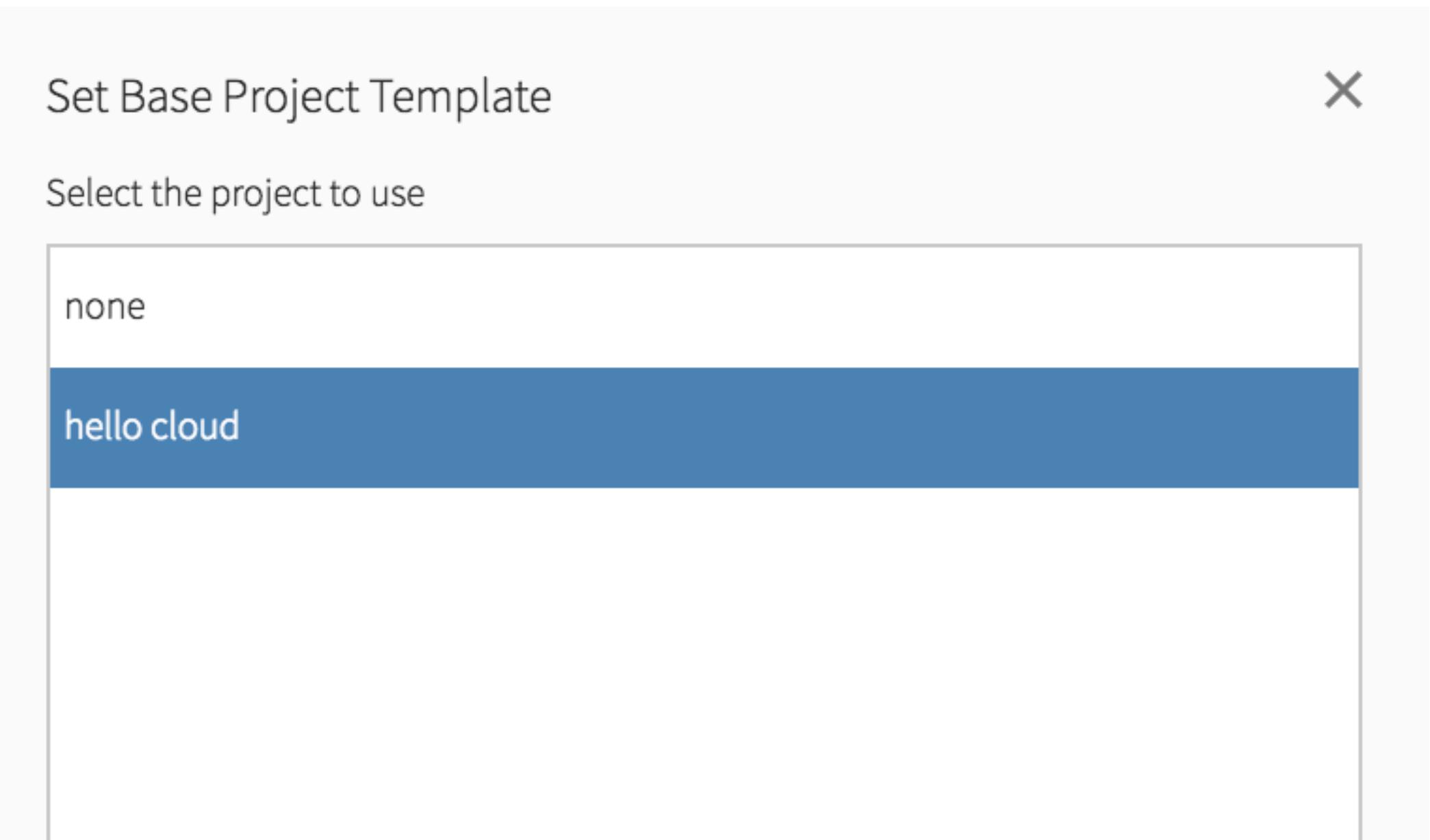
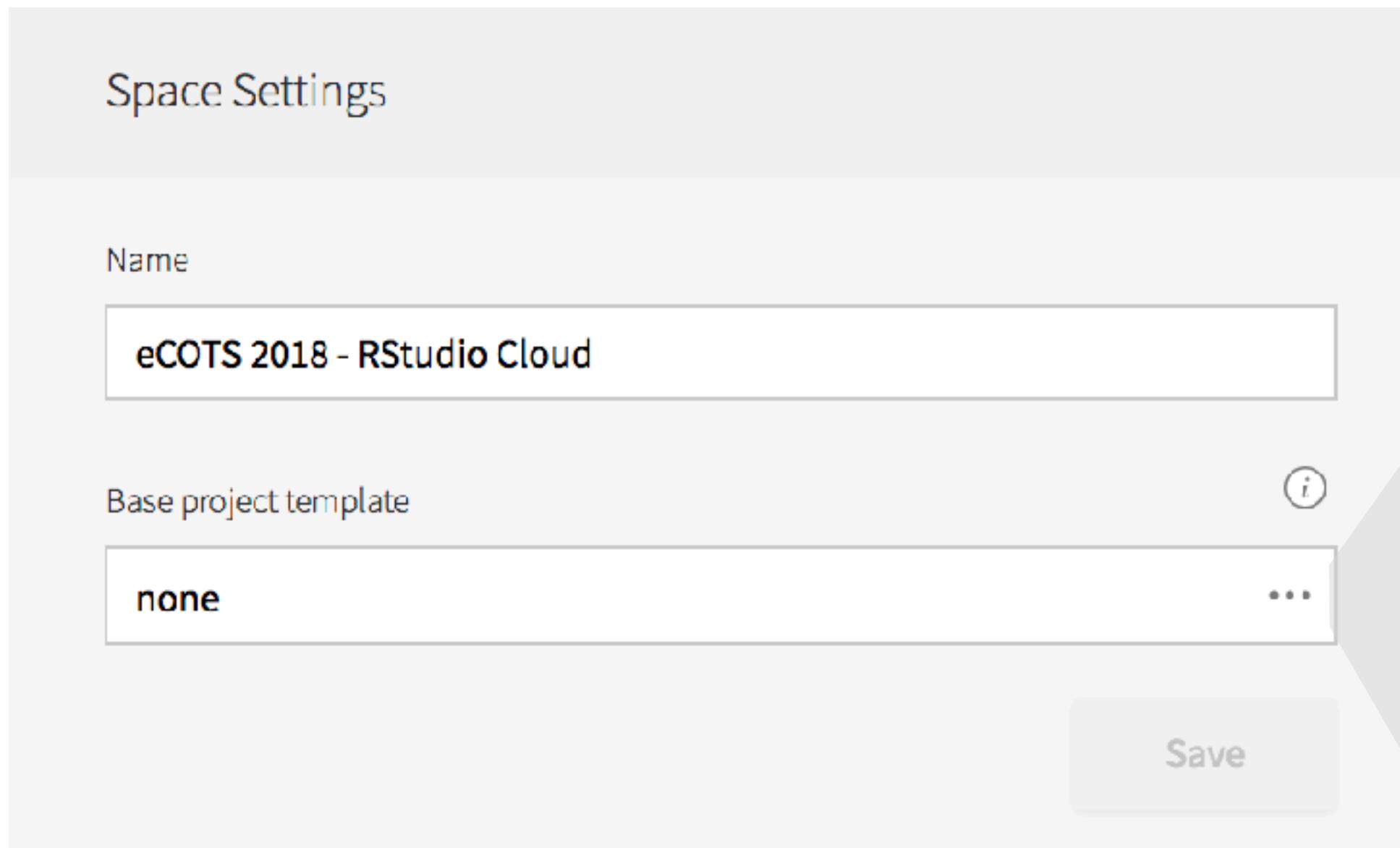
Sharing projects

The screenshot shows a user interface for sharing a project. At the top, there are two buttons: 'Info' (with an info icon) and 'Access' (with a lock icon). The 'Access' button is highlighted with a blue background and white text. Below this, the section 'Who can view this project' contains a dropdown menu set to 'Everyone in Shiny TTT'. Further down, under 'Assignments', there is a checkbox labeled 'Make this project an assignment' which is checked. To the right of the 'Assignments' section is an info icon.

by default, projects in a workspace are visible to you (+ admins and moderators only)

use assignments to create projects that will make a copy for the student when they click on it

Base project



If you don't see the project you're looking for listed above, make sure that you have set its access to 'Everyone in eCOTS 2018 - RStudio Cloud'.

OK

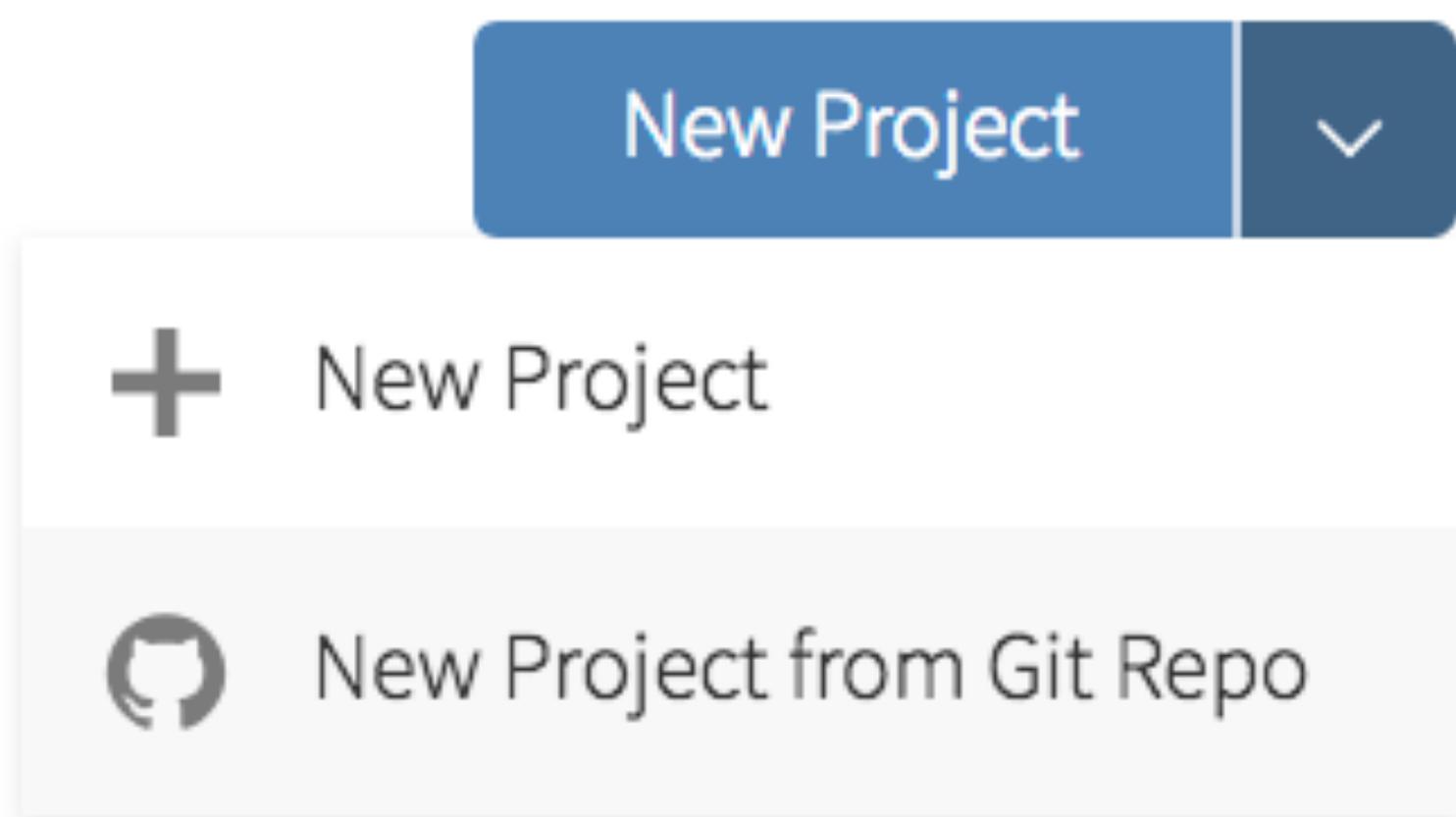
Your turn

Create an RStudio Cloud workspace, set a base project with any projects you need installed, add an app.

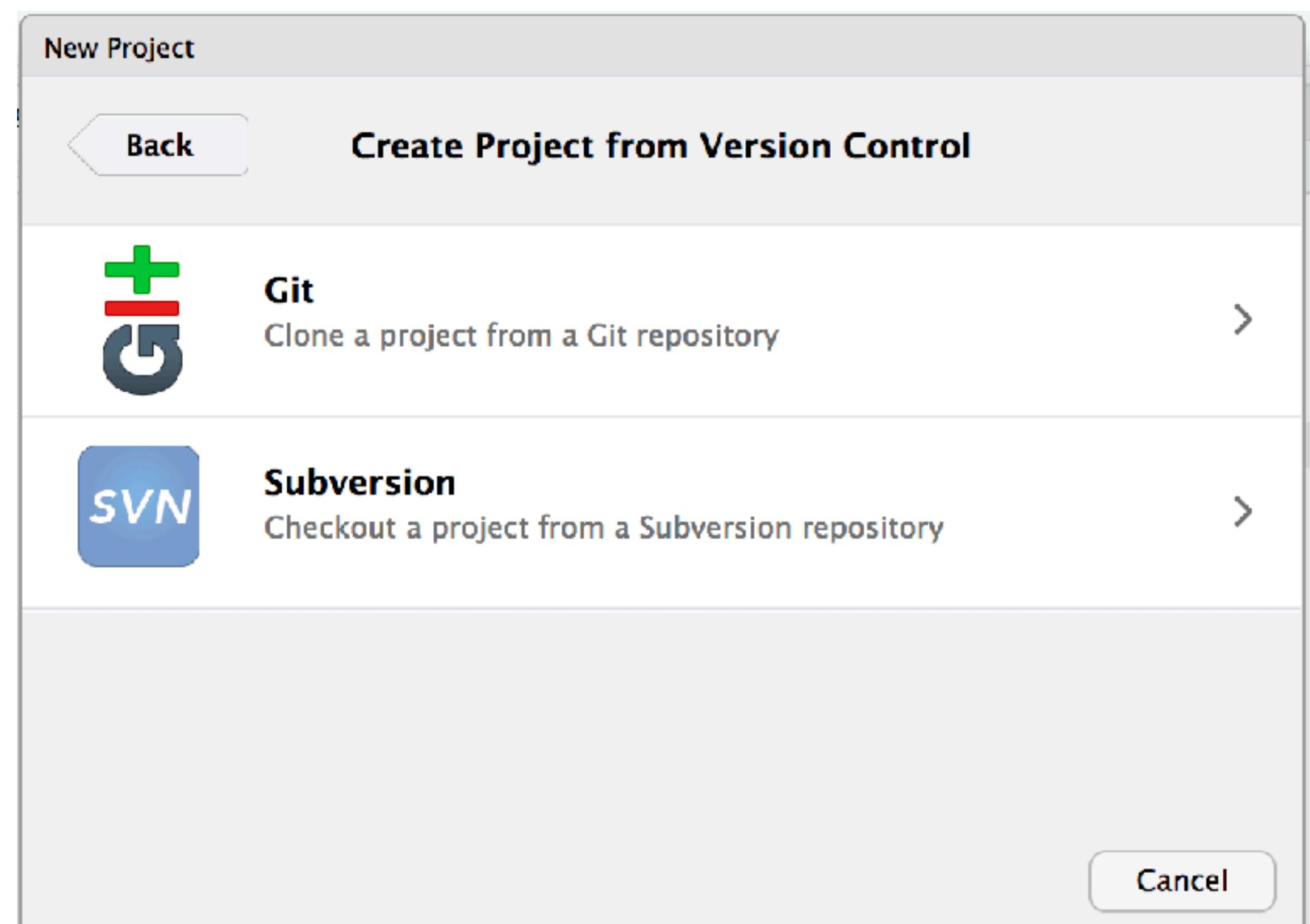
Then, invite a classmate like a student and confirm they can copy your project and edit it.

Git integration

a new project from Git Repo
in RStudio Cloud



- + base project template is used, so new project from git also has the right packages installed!



Teaching tip



Student Mine



make a
second account
for yourself and
add as contributor
(student) to see
what your
students see



**Mine's testing
agent**
minebotmine

- use RStudio projects
- standardize computing environment

Parting remark



WORK IN PROGRESS

We're in alpha and still adding important features and improving performance, reliability and availability. Please reach out with any questions or feedback at <https://community.rstudio.com/c/rstudio-cloud>.