MSCS 264 – Project:
Hints for publishing a Shiny app

Publishing with St. Olaf's RStudio Connect (rconnect.stolaf.edu)

Connecting for the first time
- In RStudio, go to Tools > Global Options > Publishing > Connect
- Choose RStudio Connect and enter: rconnect.stolaf.edu. Hit Next
- Should get a login window. Click Connect to link your RStudio Connect account to the rsconnect R package. Should say "successfully activated token"
- Back in RStudio hit Connect Account. Your account should be listed under Publishing Accounts.
- Hit Apply and then OK
- [Note: you might also just hit Publish and, if it's your first time, when prompted for a URL for Connect enter: https://rconnect.stolaf.edu]

Basic option or Advanced Basic option with flexdashboard
- create an Rmd file to produce a shiny app, with runtime: shiny and output: html_document or output: flex_dashboard (e.g. Class > Code > Ames example > ProfR_Shiny.Rmd or ProfR_Shiny_flexdashboard.Rmd)
- just use the data filename when reading in, assuming the data is stored in the same folder as the Rmd file (e.g. `ames <- read_csv("AmesHousing.csv")`)
- hit Run Document
- hit the Publish icon in the upper right of the html viewer window
- select Publish just this document. Be sure all relevant files are checked (Rmd, csv, jpg) and the selected account is rconnect.stolaf.edu
- check Publish. Note that the first time you publish to this server, it can take a while to install and load packages.
- under Sharing Settings, can upgrade to "All users – login required" (St. Olaf users) or "Anyone – no login required" (if you want the world to see)
- Copy the Content URL and share with those you want (e.g. https://rconnect.stolaf.edu/content/bcb2f4bc-87d0-436a-aee1-ff702d8e75ff)!

Compared to the Deluxe option below, this is super easy. The primary con is that you have fewer formatting options at your disposal, although you can get pretty creative with flexdashboard…

Deluxe option with app.R
- create a folder with app.R and any pictures and a data folder (e.g. Class > Code > Ames example > ProfR_app)
- just use the data folder name and filename when reading in (e.g. `ames <- read_csv("data/AmesHousing.csv")`)
- open app.R and hit Run App
- hit the Publish icon in the upper right of the html viewer window. Be sure all relevant files are checked (Rmd, csv, jpg) and the selected account is rconnect.stolaf.edu
- check Publish. Note that the first time you publish to this server, it can take a while to install and load packages.
- under Sharing Settings, can upgrade to "All users – login required" (St. Olaf users) or "Anyone – no login required" (if you want the world to see)
- Copy the Content URL and share with those you want (e.g. https://rconnect.stolaf.edu/content/52309483-2c04-48e2-8a30-4b8bbfdfed71)!

For more detail (way more!), see https://rconnect.stolaf.edu/__docs__/user/

Publishing at www.shinyapps.io

Here's another way to find a server to host your shiny apps:
- Sign up for an account at www.shinyapps.io. You can host up to 5 shiny apps for free here.
- Go into your account at www.shinyapps.io. Most likely, you see the "Getting Started" page. Under Step 2, Hit Show Secret, Copy to Clipboard, and Ctrl-C. If you were not on "Getting Started" you can find your authorization information, in the left panel, go to Account > Tokens.
- Return to R Studio, and in the console:
  - type: `library(rsconnect)`
  - use Ctrl-V to paste the `setAccountInfo()` command into R
- Now you're ready to go!

Basic option or Advanced Basic option with flexdashboard
- create an Rmd file to produce a shiny app, with runtime: shiny and output: html_document or output: flex_dashboard (e.g. Class > Code > Ames example > ProfR_Shiny.Rmd or ProfR_Shiny_flexdashboard.Rmd)
- just use the data filename when reading in, assuming the data is stored in the same folder as the Rmd file (e.g. `ames <- read_csv("AmesHousing.csv")`)
- hit Run Document
- hit the Publish icon in the upper right of the html viewer window, and select Publish just this document (Note: If you get an error that says "Try again", follow the instructions in the message).
- under "Publish from account" choose your shinyapps.io account (making sure you've run setAccountInfo() by pasting in token information as above)
- be sure in the files on the left side, both the Rmd and the associated data file(s) are checked. Give your shiny app a specific name if you wish.
- hit Publish, and you'll get a url you can share with anyone (e.g. https://proback.shinyapps.io/CoolAmesHousing/ or https://boehmvock.shinyapps.io/amesLBV/) Note: This may take awhile!

Deluxe option
- create a folder with app.R and any pictures and a data folder (e.g. Class > Code > Ames example > ProfR_app)
- just use the data folder name and filename when reading in (e.g. `ames <- read_csv("data/AmesHousing.csv")`)
- open app.R and hit Run App
- hit the Publish icon in the upper right of the html viewer window, and select Publish just this document (Note: If you get an error that says "Try again", follow the instructions in the message).
- under "Publish from account" choose your shinyapps.io account (making sure you've run setAccountInfo() by pasting in token information as above)
- be sure in the files on the left side, both the Rmd and the associated data file(s) are checked. Give your shiny app a specific name if you wish.
- hit Publish, and you'll get a url you can share with anyone (e.g. https://proback.shinyapps.io/profr_app/). Note: This may take awhile!

Alternatively
- Assuming you've run setAccountInfo(), you can now type the following into the console (or you may have to call a file from the Project or Submit folders): `deployApp("~/Mscs 264 F22/Class/Code/Ames example/ProfR_app")`, although I usually recommend the processes above

Examples:

(Note: these won't actually run since many of the supporting files and data sets are missing, but they should give you a sense for coding format and details.)

Advanced Basic – Rmd file with flexdashboard

- see Project > Sample code > Olaf_schedule.Rmd
- https://nfjohnson.shinyapps.io/olaf-schedule-analysis/

- see Project > Sample code > Iditarod.Rmd
- https://datascience264project.shinyapps.io/2017Iditarod/

- see Project > Sample code > Volleyball.Rmd
- https://rconnect.stolaf.edu/content/1969d2ec-f903-4863-883e-81796be22cd2/

- see Project > Sample code > Orchestras.Rmd
- https://rconnect.stolaf.edu/content/1acadaa4-f685-4a68-b7a5-4d4010464566

Deluxe – app.R file within another folder

- see Project > Sample code > Taylor_Swift > app.R
- https://mwainwright.shinyapps.io/final_project/?_ga=2.237384384.1354278898.1621437205-1446249394.1620745126

- see Project > Sample code > US_demographics > app.R
- https://rayfleming.shinyapps.io/raymond__caroline/

- see Project > Sample code > Billie_Eilish > app.R
- https://rconnect.stolaf.edu/content/e4bdabdf-b84a-49f5-b4fc-214987edd868

- no source code available
- https://grace-madeline-juliana-mystery-analysis.shinyapps.io/gender_and_mystery_novels/?_ga=2.77749917.889514434.1621448739-77872072...