



Building R-Shiny Applications

FAS6932 - Special Topics

Summer C 2025

Icebreaker

- ▶ As the inaugural class, I'd like to get some feedback on this phase:
 - ▶ What was the most interesting section to you and why?
 - ▶ What was the most challenging section to you and why?
 - ▶ Was there content you wished we covered?
 - ▶ Using the QR code >>, answer the poll



<https://fast-poll.com/poll/899b417e>

Hosting

shinyapps.io or Posit Connect

FREE	STARTER	BASIC	STANDARD	PROFESSIONAL
\$0 /month	\$13 /month (or \$145/year)	\$49 /month (or \$550/year)	\$119 /month (or \$1,330/year)	\$349 /month (or \$3,860/year)
New to Shiny? Deploy your applications for FREE.	More applications. More active hours!	Take your users to the next level!	Password protection? Authenticate your users!	Professional has it all! Personalize your domains.
5 Applications	25 Applications	Unlimited Applications	Unlimited Applications	Unlimited Applications
25 Active Hours	100 Active Hours	500 Active Hours	2,000 Active Hours	10,000 Active Hours
✓ Community Support	✓ Premium Email Support	✓ Performance Boost ✓ Premium Email Support	✓ Authentication ✓ Performance Boost ✓ Premium Email Support	✓ Authentication ✓ Account Sharing ✓ Performance Boost

Hosting preparation

- ▶ Copy a version of your app! I usually name this `[[APP]]_deploy.R`
- ▶ In `[[APP]]_deploy.R`:
 - ▶ Delete any path dependencies, your web app will self-reference the folder items in your directory your app lives in when it gets loaded to the web server

```
path <- '/Users/zach/Dropbox/Teaching/2025 - FAS 6932 - RShiny/BuildingRShinyCourse/Day 4 - Advanced UI/renderingUI_ex'
```

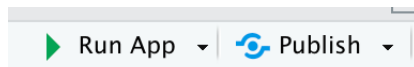
`setwd(path)`
 - ▶ And change `spp_list <- read.csv('./rockfish.csv')` to `spp_list <- read.csv('rockfish.csv')`
 - ▶ Replace any `file = "./www/[[IMAGE FILENAME]].png"` with `src = "[[IMAGE FILENAME]].png"`
- ▶ End app with `shinyApp(ui = ui, server = server)` NOT `runApp(app)`
- ▶ Also think about storing and loading your preparatory code as `.Rdata`
 - ▶ In `renderingUI_ex.R` this could be the `spp_list`, `spp_cards_list`, and `spp_tabs_list`

Hosting Workflow

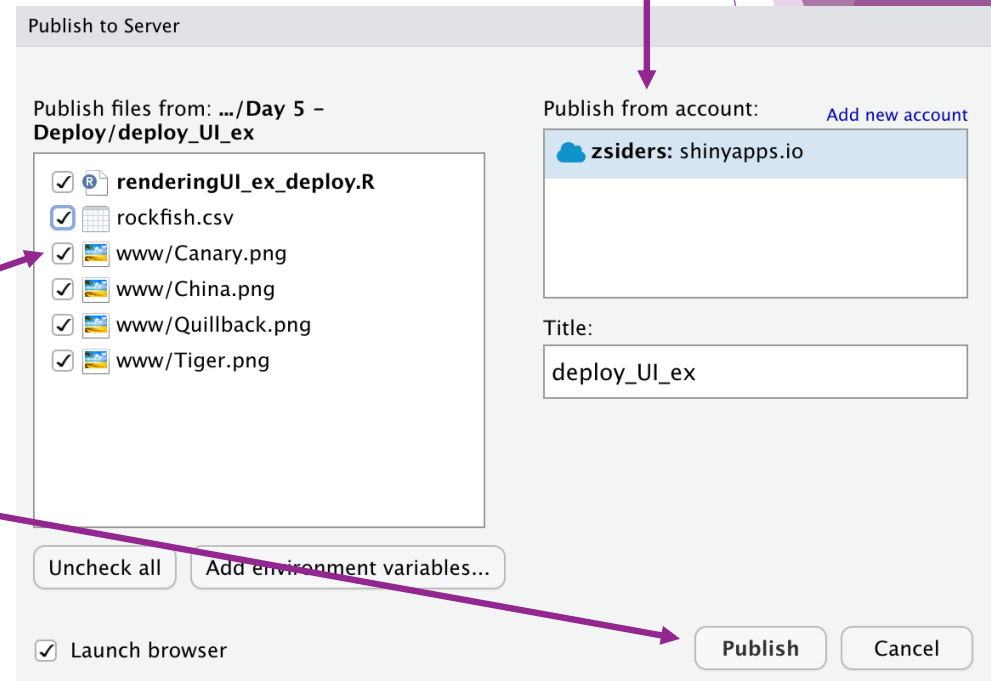
- ▶ <https://shiny.posit.co/r/articles/share/deployment-web/>
- ▶ Open your `[[APP]]_deploy.R` in Rstudio
- ▶ Set up `rsconnect`
 - ▶ `install.packages('rsconnect')`
 - ▶ Run `library(rsconnect)`
 - ▶ Then get token from shinyapps.io
 - ▶ Copy + paste `rsconnect::setAccountInfo(name='zsiders', token='<TOKEN>', secret='<SECRET>')`
 - ▶ Check it worked with `accounts()`
 - ▶ You can later delete accounts with `removeAccount(name = 'zsiders')`

Hosting workflow

- ▶ With rsconnect setup, the Publish button will pop up if your app is formatted correctly:

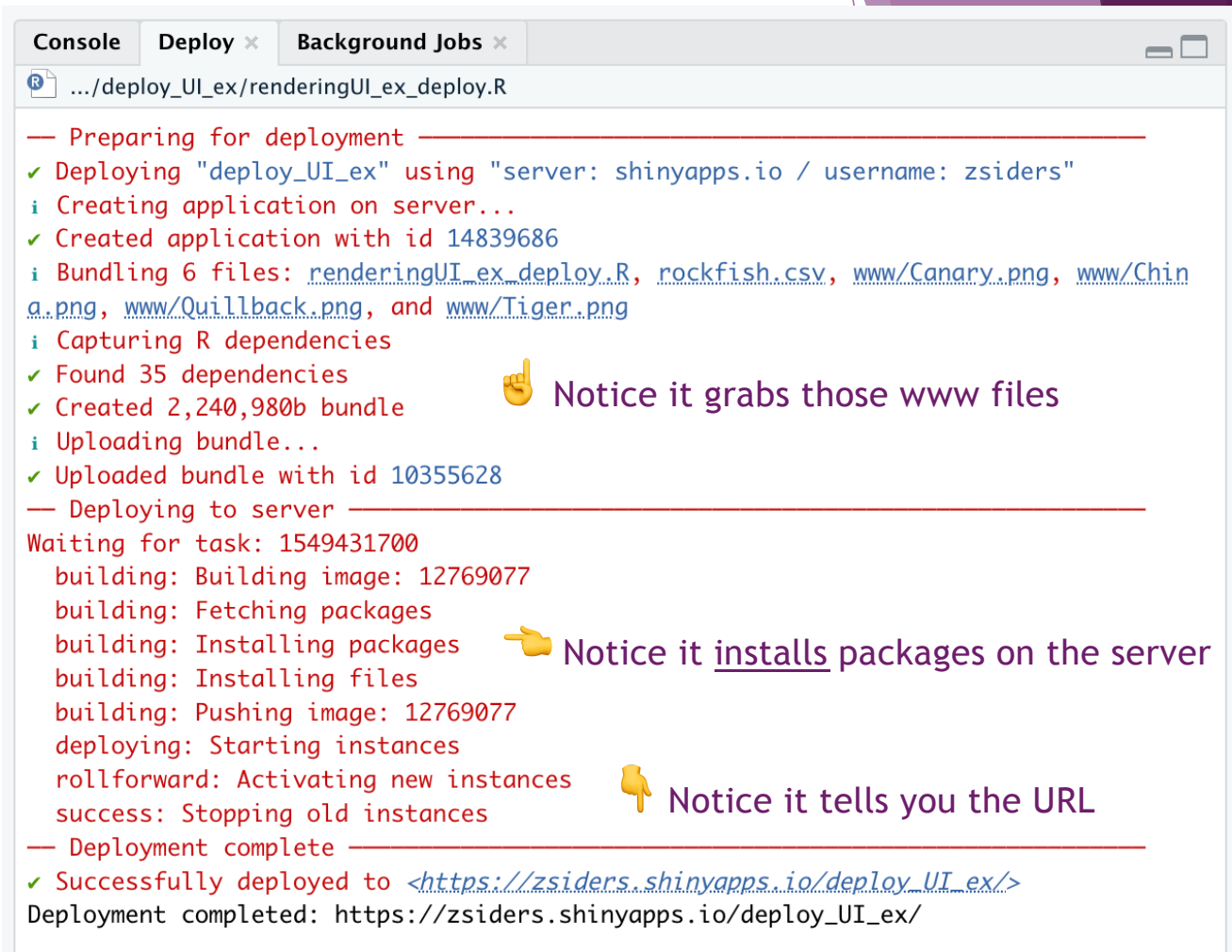


- ▶ Click Publish to see >>>>
 - ▶ You'll see available accounts
 - ▶ You should probably only have zsidors at this point
 - ▶ Double check that your www folder and data files are loaded and checked.
 - ▶ You can also have other items in this folder and uncheck them here.
 - ▶ Then click Publish again.



Hosting workflow

- ▶ You'll then see a new tab called Deploy next to the console that shows the deployment log
- ▶ If successful, it should open a new tab (if Launch browser was checked in the popup)
- ▶ **COPY the URL!**



```
Console | Deploy x | Background Jobs x
.../deploy_UI_ex/renderingUI_ex_deploy.R

— Preparing for deployment —
✓ Deploying "deploy_UI_ex" using "server: shinyapps.io / username: zsidiers"
i Creating application on server...
✓ Created application with id 14839686
i Bundling 6 files: renderingUI_ex_deploy.R, rockfish.csv, www/Canary.png, www/China.png, www/Quillback.png, and www/Tiger.png
i Capturing R dependencies
✓ Found 35 dependencies
✓ Created 2,240,980b bundle
i Uploading bundle...
✓ Uploaded bundle with id 10355628

— Deploying to server —
Waiting for task: 1549431700
  building: Building image: 12769077
  building: Fetching packages
  building: Installing packages
  building: Installing files
  building: Pushing image: 12769077
  deploying: Starting instances
  rollforward: Activating new instances
  success: Stopping old instances

— Deployment complete —
✓ Successfully deployed to <https://zsidiers.shinyapps.io/deploy_UI_ex/>
Deployment completed: https://zsidiers.shinyapps.io/deploy_UI_ex/
```

Notice it grabs those www files

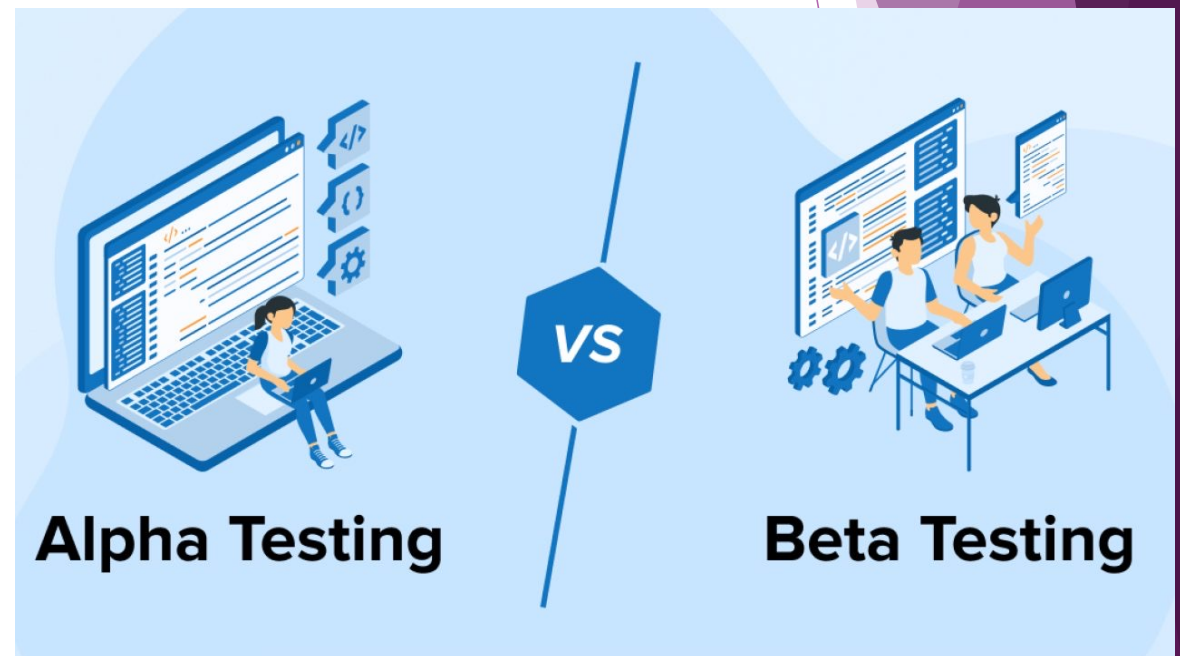
Notice it installs packages on the server

Notice it tells you the URL

You're hosted, now what?!

Need to test your app, again!
Go hunt those bugs! 🐛

- ▶ You should conduct some **alpha testing** with at least yourself but also find a trusted friend
- ▶ You should also conduct some **beta testing** with a wider audience and treat it like a focus group to get feedback
- ▶ This helps defeat bugs but also helps you design better apps in the future!



Design phase

- ▶ Goal: Either develop your test app or build out a new app for your design goals
- ▶ May 28th - July 14th
- ▶ Complete:
 - ▶ Design proposal - mid June, Date TBD; see syllabus for guidelines
 - ▶ **Draft version of app: July 14th**
- ▶ Office hours: Schedule with me over email, prefer in person
 - ▶ I will provide advice, tips, etc. but will not be debugging your apps
- ▶ Encourage you to have check-ins with classmates to help
 - ▶ Post in Canvas discussion board your app code with notes on cool features, especially if you figure out something cool!



Thanks for attending!

I'll now float around to get you the hosting token