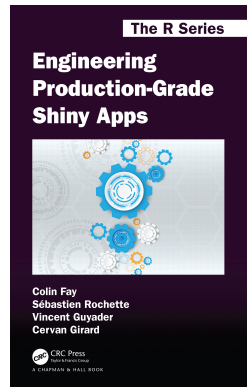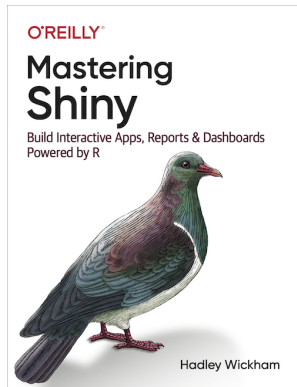# Shiny Resources

Books

Mastering Shiny by Hadley Wickham. I find this text clear, easy to follow, and interesting to read (in traditional Hadley Wickham fashion). Some of the activities and guidance provided in the NCME 2021 Shiny workshop were taken or inspired by parts of this book. It is highly recommended for Shiny users who want a firmer grasp on the basics (and some intermediate skills too). You can access the online bookdown version of the text by clicking the image or text name at the beginning of this paragraph, and you can soon order a print version of book from O'Reilly.

Engineering Production-Grade Shiny Apps by Colin Fay, Sébastien Rochette, Vincent Guyader, and Cervan Girard. This book is designed to help users "confidently work with `shiny` once you know the basics, and before you send [your app] to production." That is, the authors identified a gap in the literature between learning `shiny` basic and production-level `shiny` best practices. In this book the link between Shiny and CSS/JavaScript is discussed. The authors identify two groups that are the intended audience for the book:

- Team manager who want to help organizing work, and 'shiny' developers who want to learn about project management.

- Developers who want to cover medium to advanced 'shiny' topics that will be relevant to production.

Outstanding User Interfaces with Shiny by David Granjon. This book presents information on customizing the user interface (UI) portion of the shiny app - what the user / client sees when they are interacting with your `shiny` app. The author considers this book to be a good companion book to "Engineering Production-Grade Shiny Apps" because it offers guidance on fully customizing the UI, as may usually be necessary for some clients. The book discusses the link between `shiny` and HTML, CCS, and JavaScript. (The author suggests John Coene's Javascript for R book as an additional supplement to his work.)

R Studio Shiny Resources

One of the best and most comprehensive places to learn more about `Shiny` is from R Studio; https://shiny.rstudio.com/tutorial/. The complete tutorial video is 2 hours and 25 minutes long, but there is an chapter list so you can jump directly to learning about a specific topic.

The RStudio also offers a Interactive Web Apps with shiny Cheat Sheet that we recommend.

There are also links to 5 additional talks on the R Studio `Shiny` Tutorial page that come highly recommended:

- Effective Reactive Programming Part 1

- Effective Reactive Programming Part 2

- Interactive Graphics with Shiny

- How to use Shiny Modules

- Debugging techniques

There are also short written lessons available on the main page, allowing you to go at your own pace and copy-paste code to help you learn. Do note that there are also several additional articles aimed at helping intermediate `Shiny` users continue to improve.

Other Video Tutorials

There is a coursera course on Developing Data Products that might be of interest. `Shiny` is only a small part of that course, but the course also covers related topics such as Plotly, R Markdown, and creating R Packages. I'm not familiar with the main instructor of the course, Brian Caffo , but I'm familiar with and really like the work / teachings of one of the co-instructors, Roger Peng.

Mike Garcia's R in Pharma: Intro to Shiny seems to be another nice introduction to `Shiny`. It is posted by the official RStudio YouTube account; we recommend giving that account a follow.

Golem

Golem is an "opinionated framework for building production-grade shiny applications," and it has its own Cheat Sheet as well. Golem is a framework for creating production-grade shiny apps, such that the instructions / steps in building your app have some of the best practices / large-scale app deployment considerations baked in; you don't make a shiny app and then retroactively figure out how to make the necessary improvements to get it to production-grade. The Engineering Production-Grade Shiny Apps book we mention above has an entire chapter dedicated to Golem. The golem github page has extensive resources for those interested in learning more.

Aggregated Shiny Package Lists

There are some *fantastic* curated lists of `Shiny` resources that are really helpful for app development.

Awesome Shiny Extensions by Nan Xiao is one of the most helpful and comprehensive lists of R packages that significantly extend the functionality of `Shiny`. The list is broken down into major aspects of `Shiny`: Theming, UI Components, Visualization, Backend, Deploy, Developer Tools, and Miscellaneous. And each of *those* broad categories have several sub-categories (e.g., Theming - Generic Theming, Dashboard Theming, Mobile Theming, and Theme Customization). And each of *those* sub-categories have several recommended R packages listed (e.g., Generic Theming - shinythemes, shiny.semantic, shinymaterial, shinyUIkit, fullpage, shinybulma, shinyMetroUI, and yonder). We will be covering some of the packages on the Awesome Shiny Extensions list on Day 2, and encourage you take your own deep dive once you become more familiar with `Shiny`.

Awesome Shiny by Rob Gilmore is a very useful curated list of resources for learning all aspects of Shiny - much more than we provide here. The extensive topic list includes general resources, learning materials, people, books, galleries, app examples - and more! **We strongly encourage you to check out this list of resources to continue you 'Shiny' learning journey.** We would love to have the time to cover all of these great resources, but there's no way it's possible given the time constraints of the workshop.

Awesome React Components by Romuald Brillout has a plethora of resources for reactive components, but also contains other useful information (UI utilities, Code Design considerations, ways to improve app performance, etc.).

Dean Attali, the creator of the extremely useful `shinyjs` package, has a nice list of advanced Shiny topics.

And, while not specific to `Shiny`, the R Studio group has a nice list of some of the most useful R packages that follows their data science workflow model.