Supplement to Shiny in Production

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Contents

Chapter 1

RStudio Conf 2019

This document is full of supplemental resources and content from the Shiny in Production Workshop delievered at rstudio::conf 2019.

The **bookdown** package can be installed from CRAN or Github:

```
install.packages("bookdown")
# or the development version
# devtools::install_github("rstudio/bookdown")
```

Chapter 2

Introduction to Shiny in Production

2.1 Why are we here?

> When developers begin to think of infrastructure as part of their application, stability and performance become normative. - Jeff Geerling "Ansible for DevOps"

- Getting Shiny apps into production
- Maintaining Shiny apps in production

Chapter 3

Introduction to the Application

3.1 Every Application has an Origin Story

Data Scientists at RStudio University have discovered that there are trackable traits and behaviors students engage in that have been predictive of the desired 4-year graduation track.

They have built a shiny application that can be used by the very data-savvy advisors at this illustrious institution to identify students in need of guidance and show them the top behavioral factors driving individual predictions coming out of the model.

The POC was a smashing success - but now *the advisors actually want to use this thing for real.*

3.1.1 Activity: Explore the Application

Open the POC Application Run the Application Explore the Application code

1. Are there any parts of the application code that don't make sense?
2. Brainstorm: what qualifies as production?
3. Brainstorm: 5 things to consider when bringing this application into production.

Discussion

- Is this app ready for production?
- What insights would be useful to have before taking this app into production?
- What tools currently exist that would help us run tests to gain these insights?

Create a checklist for taking this (any?) application into production

- What is your current process for taking applications into production?

Chapter 4

Understanding the App: `reactlog`

```
library(shinyreactlog)
options(shiny.reactlog = True)
runApp()
```

React Log Visualizer Reference

> For security and performance reasons, do not enable shiny.reactlog in production environments. When the option is enabled, it's possible for any user of your app to see at least some of the source code of your reactive expressions and observers.

Chapter 5

Application Testing: `shinytest`

[From the Webinar] - You've developed a nice app - You've put it in production - You want to be confident that it will keep running in the future

Things that can change/break a Shiny application - Modifying code - Upgrading the `shiny` package - Upgrading other packages - Upgrading R - External data source changes or fails

5.0.1 Testing Options

- Manual testing
  - time intensive
  - inconsistent
- Automated testing (hard)
  - web browser
  - simulated user interactions
  - tests for graphical elements

Shinytest: https://github.com/rstudio/webinars/blob/master/48-shinytest/shinytest.pdf

[demo on the Geyser app]

Chapter 6

Final Words

We have finished a nice book.