

What They Forgot to Teach You About R



rstudio::conf

SAN FRANCISCO // JANUARY 27 - 30, 2020

from  R Studio

R Startup / configuration

Kara Woo



@karawoo



@kara_woo

Slides:

Jim Hester



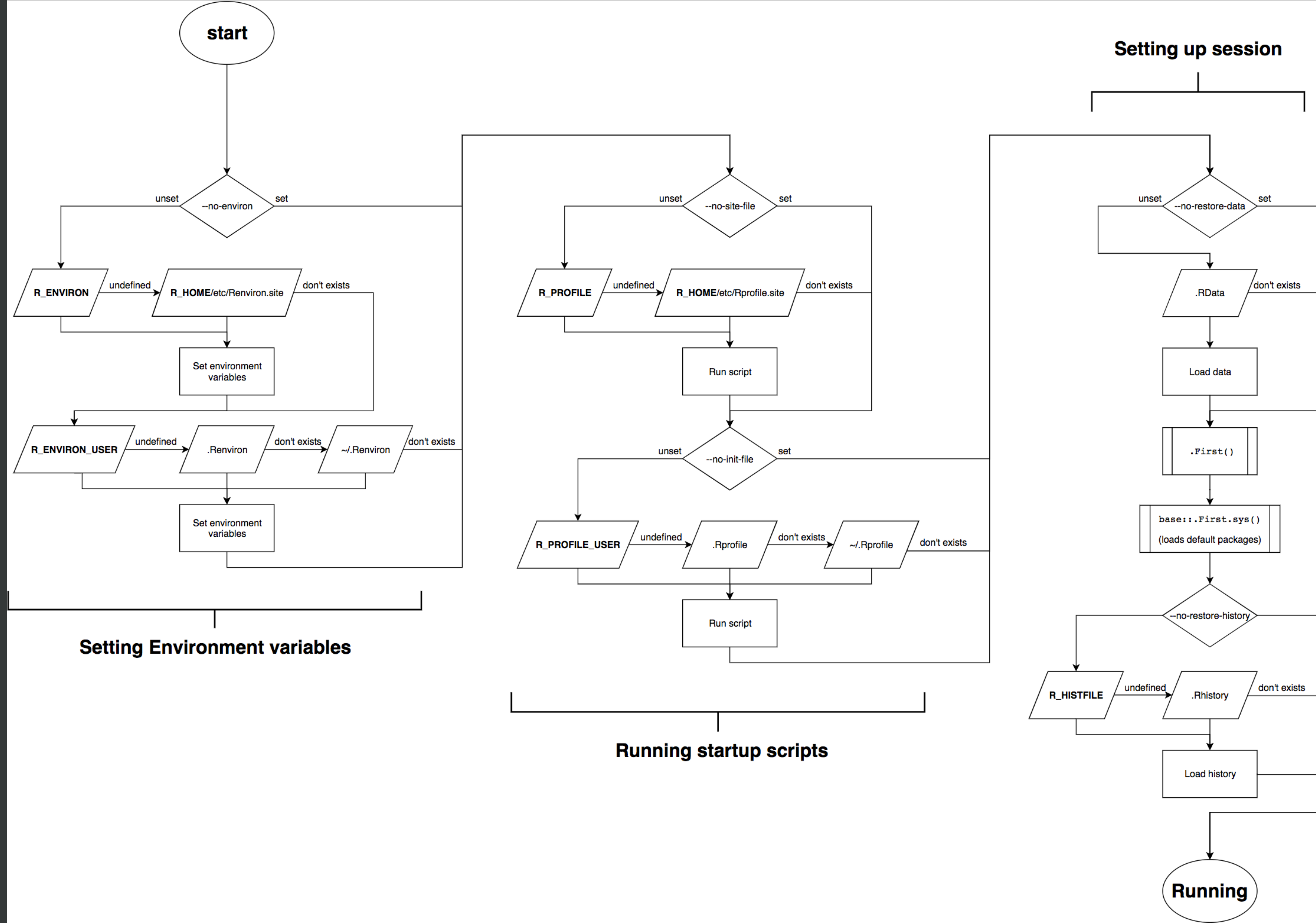
@jimhester

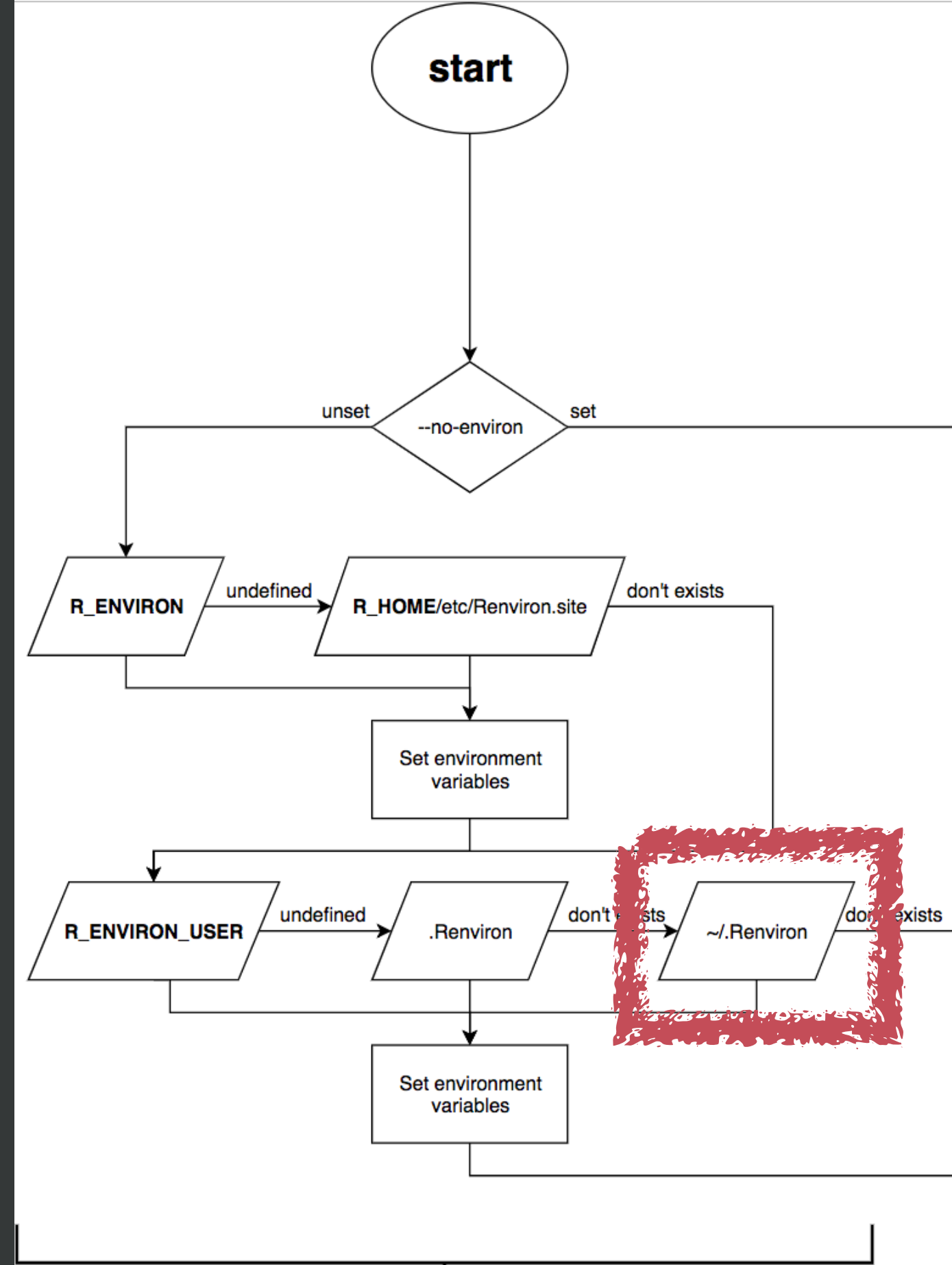
RStudio



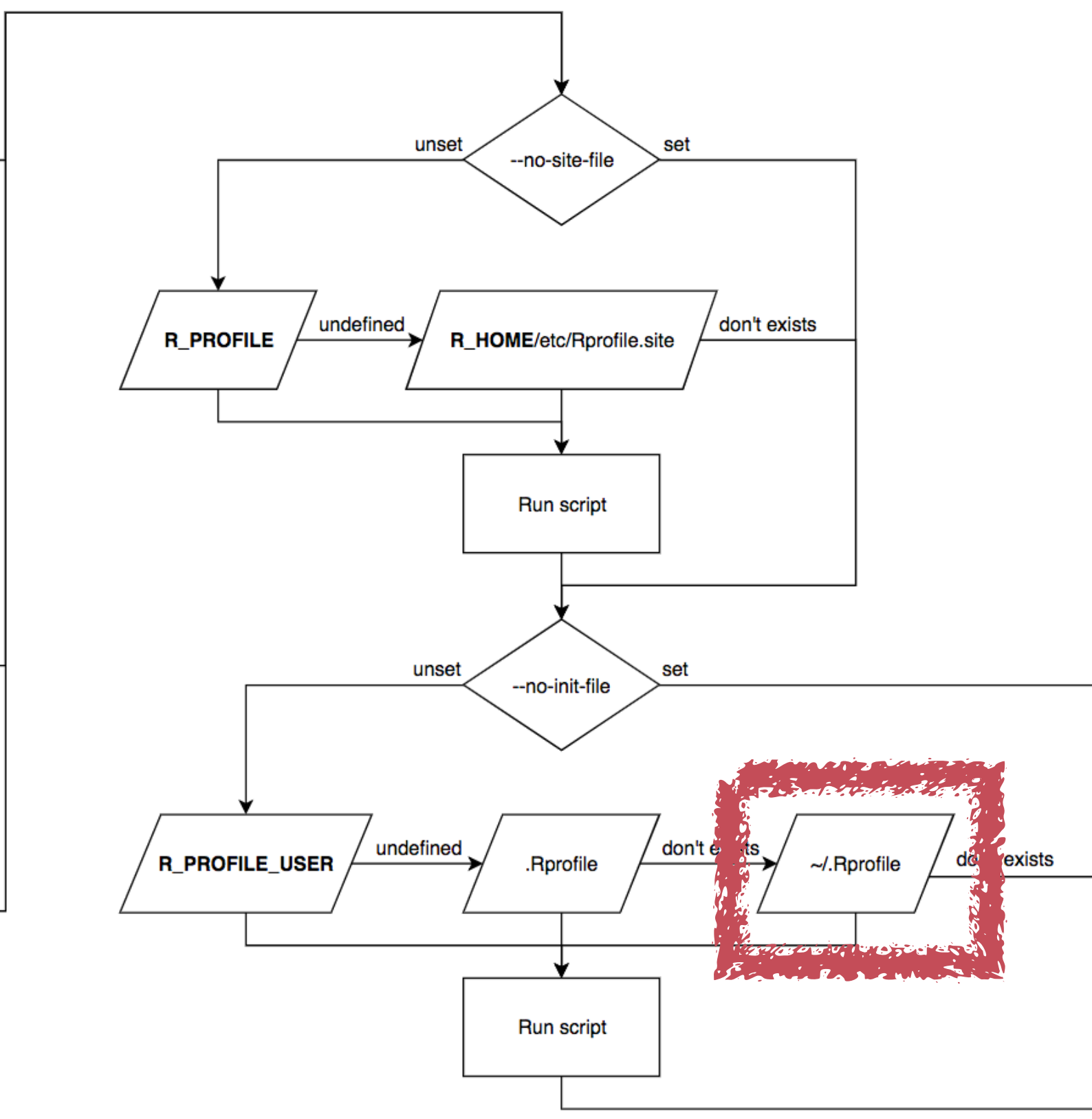
@jimhester_

<https://whattheyforgot.org/r-startup.html>

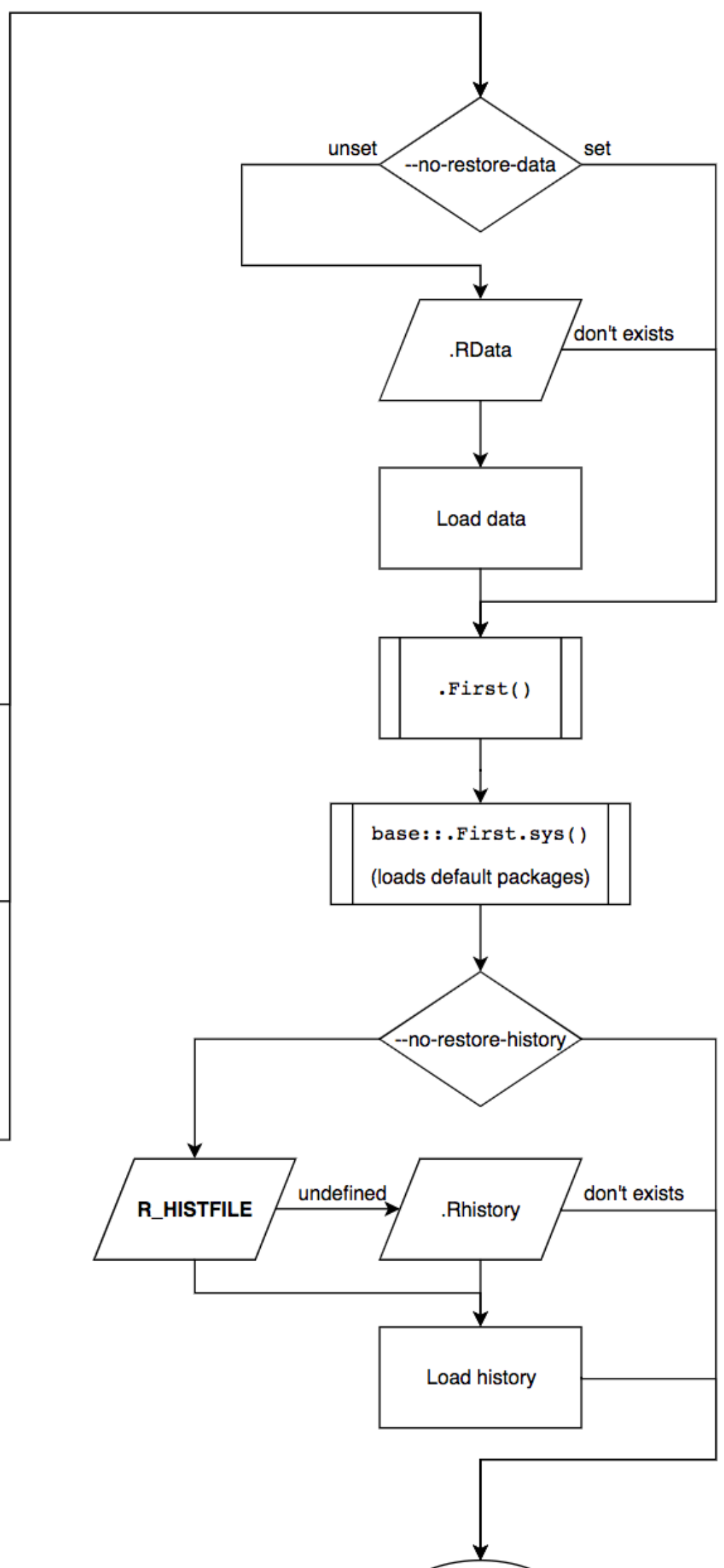




Setting Environment variables



Running startup scripts



Running

Dotfiles

<https://dotfiles.github.io/>

`.Renvirom`

`.Rprofile`

GitHub search for filename: `.Rprofile`.

.Renviron

R specific environment vars


API keys

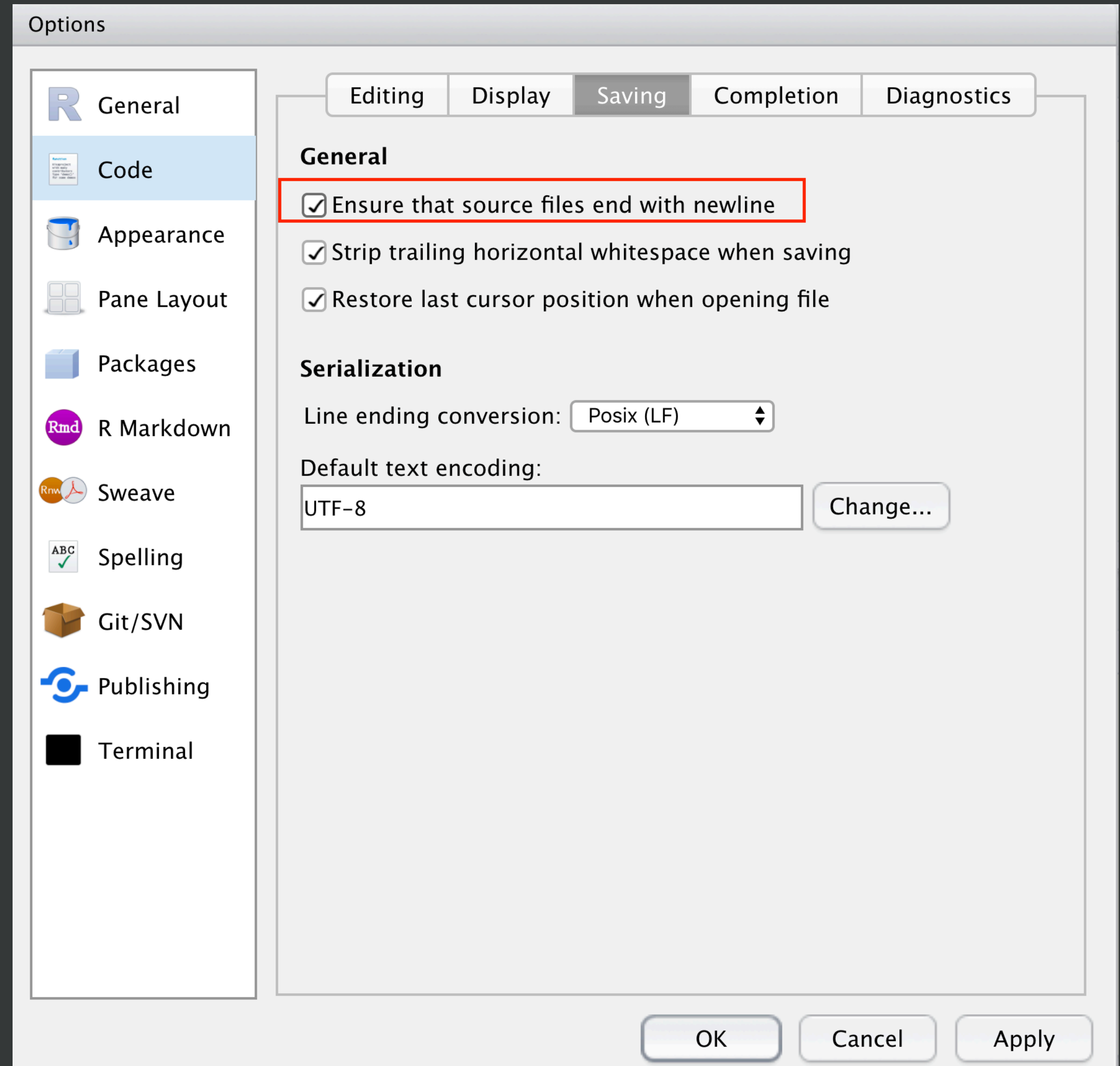
not R code

R_HISTSIZE=100000

GITHUB_PAT=abc123

R_LIBS_USER=~ /R/%p/%v

 .Renviron
and .Rprofile
must end in a
newline!



```
usethis::use_course("rstd.io/wtf-startup")
```

Pick one to open and flesh out:

01_startup_spartan.R

01_startup_comfy.R*

* worst case, there's always jim

.Rprofile

use for helpers you use *interactively*

runs on *every* session

Things to put in .Rprofile

- Set a default CRAN mirror
- Write a welcome message
- Customize R prompt
- Selectively change (but be **careful**)
 - Options, screen width, numeric display
 - Load frequently used **interactive** packages
 - Aliases / shortcuts for frequently used functions

Common pitfalls

```
options(stringsAsFactors = FALSE)
library(tidyverse)
library(ggplot2)
f <- dplyr::filter
theme_set(theme_bw())
```

If something appears in a script,
should *not* be in .Rprofile

Could go in .Rprofile

```
library(usethis)  
library(devtools)  
# Not if used in scripts!  
s <- summary  
h <- utils::head
```



```
options(repos = c(CRAN = "https://cran.rstudio.org"))  
  
if (interactive()) {  
  options(width = 120)  
}
```

```
usethis::use_course("rstd.io/wtf-startup")
```

Pick one to open and flesh out:

02_startup_spartan.R

02_startup_comfy.R*

* worst case, there's always jim

Kara's .Rprofile

```
options(  
  repos = c(  
    CRAN = "https://cloud.r-project.org",  
    Sage = "http://ran.synapse.org"  
  ),  
  browserNLdisabled = TRUE,  
  warnPartialMatchArgs = TRUE,  
  warnPartialMatchDollar = TRUE,  
  warnPartialMatchAttr = TRUE,  
  useFancyQuotes = FALSE,  
  usethis.full_name = "Kara Woo",  
  menu.graphics = FALSE  
)
```

```
if (interactive()) {  
  suppressMessages(require(devtools))  
  suppressMessages(require(usethis))  
  suppressMessages(require(testthat))  
  suppressMessages(require(reprex))  
}
```



```
stop("Meow")
```

```
#> Error: meow
```



.Rprofile inspiration



Kara Woo

@kara_woo

Alright [#rstats](#) twitter, share with me the useful and/or fun stuff you have in your .Rprofile and .Renviron 🧐

8:36 AM · Jan 11, 2020 · [TweetDeck](#)

[See replies](#)

Customizing your Rprofile by Colin Gillespie

<https://www.jumpingrivers.com/blog/customising-your-rprofile/>

Maintaining R

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RStudio














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<https://whattheyforgot.org/maintaining-r.html>

RStudio: upgrading packages

Update Packages

	Package	Installed	Available	NEWS
<input type="checkbox"/>	ape	5.1	5.2	
<input type="checkbox"/>	BiocManager	1.30.1	1.30.2	
<input type="checkbox"/>	conflicted	0.1.0.9000	1.0.0	
<input checked="" type="checkbox"/>	doParallel	1.0.11	1.0.14	
<input type="checkbox"/>	ggridges	0.5.0	0.5.1	
<input checked="" type="checkbox"/>	igraph	1.1.0	1.2.2	
<input type="checkbox"/>	magic	1.5-8	1.5-9	
<input checked="" type="checkbox"/>	mockery	0.4.1	0.4.1.1	
<input type="checkbox"/>	pROC	1.12.1	1.13.0	
<input type="checkbox"/>	rematch2	2.0.0.9000	2.0.1	
<input type="checkbox"/>	sm	2.2-5.5	2.2-5.6	

Select All Select None Install Updates Cancel












Upgrading packages

```
install.packages("pkgname")  
devtools::upgrade_packages("pkgname")
```

devtools will upgrade dev packages too

Upgrading all packages

Update Packages

	Package	Installed	Available	NEWS
<input checked="" type="checkbox"/>	ape	5.1	5.2	
<input checked="" type="checkbox"/>	BiocManager	1.30.1	1.30.2	
<input checked="" type="checkbox"/>	conflicted	0.1.0.9000	1.0.0	
<input checked="" type="checkbox"/>	doParallel	1.0.11	1.0.14	
<input checked="" type="checkbox"/>	ggridges	0.5.0	0.5.1	
<input checked="" type="checkbox"/>	igraph	1.1.0	1.2.2	
<input checked="" type="checkbox"/>	magic	1.5-8	1.5-9	
<input checked="" type="checkbox"/>	mockery	0.4.1	0.4.1.1	
<input checked="" type="checkbox"/>	pROC	1.12.1	1.13.0	
<input checked="" type="checkbox"/>	rematch2	2.0.0.9000	2.0.1	
<input checked="" type="checkbox"/>	sm	2.2-5.5	2.2-5.6	

```
devtools::upgrade_packages(TRUE)
```

Downgrading packages

devtools: Tools to Make Developing R Packages Easier

Collection of package development tools.

Version: 1.13.6
Depends: R (≥ 3.0.2)
Imports: [httr](#) (≥ 0.4), [utils](#), [tools](#), [methods](#), [memoise](#) (≥ 1.0.0), [whisker](#), [digest](#), [rsconnect](#)
Suggests: [curl](#) (≥ 0.9), [crayon](#), [testthat](#) (≥ 1.0.2), [BiocInstaller](#), [Rcpp](#) (≥ 0.10.0), [R6](#)
Published: 2018-06-27
Author: Hadley Wickham [aut], Jim Hester [aut, cre], Winston Chang [aut], RStudio [aut]
Maintainer: Jim Hester <james.hester@rstudio.com>
BugReports: <https://github.com/r-lib/devtools/issues>
License: [GPL-2](#) | [GPL-3](#) [expanded from: [GPL](#) (≥ 2)]
URL: <https://github.com/r-lib/devtools>
NeedsCompilation: no
Materials: [README](#) [NEWS](#)
CRAN checks: [devtools results](#)

Downloads:

Reference manual: [devtools.pdf](#)
Vignettes: [Devtools dependencies](#)
Package source: [devtools_1.13.6.tar.gz](#)
Windows binaries: r-devel: [devtools_1.13.6.zip](#), r-release: [devtools_1.13.6.zip](#), r-oldrel: [devtools_1.13.6.zip](#)
OS X binaries: r-release: [devtools_1.13.6.tgz](#), r-oldrel: [devtools_1.13.6.tgz](#)
Old sources: [devtools archive](#)

google: cran devtools

old sources: devtools archive

```
devtools::install_version("devtools", "1.13.3")
```

```
## Check current version
```

```
packageVersion("purrr")
```

```
#> [1] '0.3.3'
```

```
## Install old version
```

```
devtools::install_version("purrr", "0.3.2")
```

```
packageVersion("purrr")
```

```
## Check current version
```

```
packageVersion("purrr")
```

```
#> [1] '0.3.3'
```

```
## Install old version
```

```
devtools::install_version("purrr", "0.3.2")
```

```
packageVersion("purrr")
```

```
#> [1] '0.3.2'
```

```
## Reinstall current version
```

```
devtools::install_version("purrr", "0.3.3")
```

```
packageVersion("purrr")
```

```
#> [1] '0.3.3'
```

Transferring libraries across R versions

OK If patch: 3.5.0 -> 3.5.1

NOT OK If minor: 3.4.3 -> 3.5.0

Have R handle automatically

MacOS: `R_LIBS_USER=~/.Library/R/%v/library`

Win: `R_LIBS_USER=~/.R/win-library/x.y`

```
fs::dir_create(Sys.getenv("R_LIBS_USER"))
```

```
# Install new version of R (lets say 3.5.0 in this example)
# and install fs and tibble packages
install.packages(c("fs", "tibble"))

# Create a new directory for the version of R
fs::dir_create("~/Library/R/3.5/library")

# Re-start R so the .libPaths are updated

# Lookup what packages were in your old package library
pkgs <- installed.packages("~/Library/R/3.4/library") %>%
  tibble::as_tibble()

# Filter these packages as needed

# Install the packages in the new version
install.packages(pkgs$Package)
```