

- 1) Console, install several packages to help create own package

```
install.packages(c("devtools", "roxygen2", "testthat", "knitr", "usethis"))
```

- 2) Check R Studio API Package & have the latest version

```
install.packages("rstudioapi")  
rstudioapi::isAvailable("1.4.1103")
```

- 3) Access the newest devtools functions

```
devtools::install_github("r-lib/devtools")
```

- 4) Macbook (Xcode or Command line tools for X code)

- 5) Standard File Structure

- R/ directory with R code
- Basic DESCRIPTION file with package metadata
- Basic NAMESPACE file

- 6) Pick a name for package

Name only consists of letters, numbers, periods

Must start with letter, cannot end with period

Do not use hyphens, underscores

Unique

Avoid both upper & lower case letters

-> Check if a name exists on CRAN

- [http://cran.r-project.org/web/packages/\[mypackagename\]](http://cran.r-project.org/web/packages/[mypackagename]).

OR check it using the {available} package to check if the name is used elsewhere

```
library(available)
```

```
available("ggplot2")
```

- 7) Create a NEW "Bare-Bones" Package

Pick a folder location for new package that is NOT in an existing RStudio Project or Git Repository

Create packages using the console

{usethis} package has functions designed to ease the process

`create_package(path)` to create a “bare-bones” -> invoke a new R studio session

```
#create_package("../..../R_packages/testpackage")
```

Test the Initial Bare-Bones Package

-> test the bare-bones package to see if it will build/compile and install properly

8) Choose a License for the Package

MIT License

GNU GPLv3

```
#use_mit_license("copyright holder name")
```

```
#use_gpl3_license()
```

```
#use_apl2_license()
```

```
#use_cc0_license()
```

9) Write Code and Document Functions

Writing code for a package

10) Restart R session

11) Build and Reload

12) Test Package

13) Check Package

14) Document Package