Stat 8054 Lecture Notes: R Packages

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1 License

2 R

- The version of R used to make this document is 4.3.2.
- The version of the `rmarkdown` package used to make this document is 2.25.

3 Reading

- The book *Writing R Extensions*. The whole book is relevant. Every word is needed for some R package somewhere.
- Some example packages on my GitHub account.
  - R packages `foo` and `fooRegister` both in repository `foo`.
  - R package `bar` in the repo of the same name, which is also accompanied by a gist about regression packages.
  - R package `baz` in repository `mat`.
  - R package `qux` in the repo of the same name.
  - R package `linkingTo` in the repo of the same name.

4 Doing

None of this actually works in Rmarkdown because it is done from the command line, not from within R.

Getting a package from a Git repository

```
git clone git@github.com:cjgeyer/foo.git
```

(you may want to use a different URL `https://github.com/cjgeyer/foo.git`).

Checking the package, any of

```
cd foo/package
R CMD build foo
R CMD check foo_*.tar.gz
R CMD check foo_*.tar.gz --as-cran # should be done with R-devel
R CMD check foo_*.tar.gz --use-valgrind
```

`R CMD check foo_*.tar.gz --use-gct`

On my laptop `R CMD check --as-cran` reports a "note"

> Found no calls to: 'R_registerRoutines', 'R_useDynamicSymbols'
>
> It is good practice to register native routines and to disable symbol search.
>
> See 'Writing portable packages' in the 'Writing R Extensions' manual.

This is why the package `fooRegister` exists. It does call these routines as *Writing R Extensions* suggests.

Nevertheless, it seems (to the extent that the tests in the package actually *test* the package) that the package does work.

When you check a package you should also read the output of examples

`less foo.Rcheck/foo-Ex.Rout`

and the manual

`evince foo.Rcheck/foo-manual.pdf`