

Café R: Test Coverage in R

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Testing R

- Stable packages
- Avoid future breaking
- Confidence

Package R **testthat**

- Score:
$$\text{line of code tested by tests} / (\text{line of code not tested} + \text{line of code tested})$$

Package R **covr**

- Continuous Integration: ensure package correctly build

Package R **usethis**

DEMO

Steps

1. Make functions/packages...
2. Make tests by using:
`usethis::testthat()`
3. Add .R file in the folder tests/testthat with your tests, the file should be named
“`test_NAMEOFTHEFUNCTIONYOUTEST`” and contains:
`testthat(“WHATAREYOUTESTING”, {
 expect_equal(...)
})`
4. Look at the coverage of your package:
`covr::package_coverage()`
`covr::report()`
5. If needed, improve the coverage of your package
6. Publish your package on Github
7. Add Travis, Appveyor and Coverage for continuous integration
 1. Make a README file: `usethis::use_readme_rmd()`
 2. Call and configure your profil if necessary:
`usethis::use_travis`
`usethis::use_coverage` (add paste covr code in Travis yaml script)
`usethis::use_appveyor`

Resources

- Rstudio covr webinar: <https://www.rstudio.com/resources/webinars/covr-bringing-test-coverage-to-r/>
- Testthat website: <https://testthat.r-lib.org/>
- Usethis website: <https://usethis.r-lib.org/>
- Covr website: <https://covr.r-lib.org/>