




Checklist Improves Collaboration, Quality and Visibility of Your Code

useR!2024, Salzburg 2024-07-11

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Importance of code quality tools

- ▶ consistency
- ▶ collaboration
- ▶ maintainability
- ▶ error reduction
- ▶ efficiency



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checklist philosophy



- ▶ integrate available tools
 - ▶ `rcmdcheck`, `lintr`, `hunspell`
 - ▶ `devtools`, `desc`, `pkgdown`, ...
- ▶ hard coded rules
- ▶ make it easy to set-up
- ▶ run checks automatically by default
- ▶ store author and organisation information for later re-use
- ▶ promote open science via open licenses and citable code



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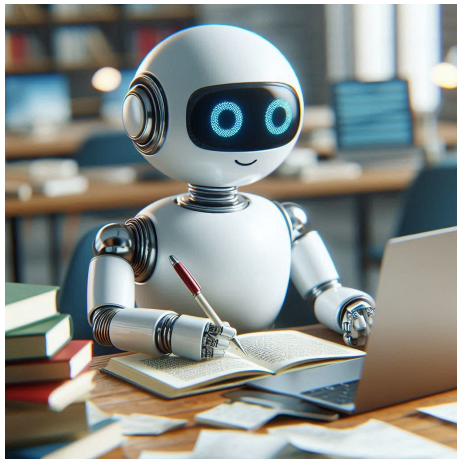
checklist package overview

Topic	Package	Project
start from scratch	<code>create_package()</code>	<code>create_project()</code>
apply to existing code	<code>setup_package()</code>	<code>setup_project()</code>
run checks	<code>check_package()</code>	<code>check_project()</code>

More details: `vignette("getting_started", package = "checklist")`



Mandatory checks for packages



Run by `check_package()`

- ▶ `check_cran()`
- ▶ `check_lintr()`
- ▶ `check_spelling()`
- ▶ `check_documentation()`
- ▶ `check_description()`
- ▶ `check_filename()`
- ▶ `check_folder()`
- ▶ build pkgdown website



Optional checks for projects

Run by `check_project()`

- ▶ `check_lintr()`
- ▶ `check_spelling()`
- ▶ `check_filename()`
- ▶ `check_folder()`
- ▶ `check_license()`



Extensive report on checks

```
#####
Checklist summary for the package located at:
/home/thierry/working/github/n2kanalysis/abvanalysis
#####
1 allowed warning

-----
checking CRAN incoming feasibility ... WARNING
Maintainer: 'Thierry Onkelinx <thierry.onkelinx@inbo.be>'

New submission

Strong dependencies not in mainstream repositories:
  n2kanalysis
Suggests or Enhances not in mainstream repositories:
  effectclass, INBOmd, INBOtheme
Availability using Additional_repositories specification:
  n2kanalysis  yes  https://inbo.r-universe.dev
  effectclass  yes  https://inbo.r-universe.dev
  INBOmd       yes  https://inbo.r-universe.dev
  INBOtheme    yes  https://inbo.r-universe.dev
motivation: require other INBO packages
#####
2 linters found.
'styler::style_file()' can fix some problems automatically.

-----
2 times "Do not use absolute paths."

#####

Don't forget to store changes with 'write_checklist()'
```

- ▶ output of individual checks
- ▶ `sessioninfo::session_info()`
- ▶ `git diff` with the main branch
- ▶ summary of errors, warnings and notes



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New, allowed and missing

- ▶ applies to warnings and notes
- ▶ checks fail with new or missing warnings/notes
- ▶ use `write_checklist()` to update the allowed warnings and notes

Checking the package revealed some problems.

```
> checklist::write_checklist(x)
checking CRAN incoming feasibility ... NOTE
Maintainer: 'Thierry Onkelinx <thierry.onkelinx@inbo.be>'
```

New submission

Motivation: Package not intended for CRAN

Keep this motivation?

1: No way

2: Yup

3: Uhhhh... Maybe?

Selection: 2

>



Spell checking with checklist

- ▶ roxygen2 comments in scripts
- ▶ Rd help files
- ▶ Markdown files (.md, .Rmd, .qmd)
- ▶ multi language support
 - ▶ default language per project
 - ▶ override by file



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False positives in spelling

- ▶ ignore files
- ▶ ignores verbatim text
- ▶ ignore line or block with `<!-- spell-check: ignore -->`
- ▶ `custom_dictionary()` stores false positives

More details: `vignette("spelling", package = "checklist")`



GitHub Actions

- ▶ set by `create_*`() and `setup_*`()
- ▶ run `check_*`() on every push
- ▶ push code coverage to <https://about.codecov.io/>
- ▶ on push to *main* branch
 - ▶ update GitHub pages with pkgdown website
 - ▶ create release based on NEWS.md



update_citation() ensures the code is citable

- ▶ extracts metadata for the DESCRIPTION (package) or README.md (project)
- ▶ validate the content
 - ▶ authors, organisations, title, keywords, URL, Zenodo community, ...
- ▶ writes inst/CITATION, CITATION.cff and .zenodo.json



organisation standards

- ▶ default copyright holder and funder
- ▶ default GitHub organisation
- ▶ Zenodo community
- ▶ based on e-mail domain
 - ▶ required affiliation and ORCID

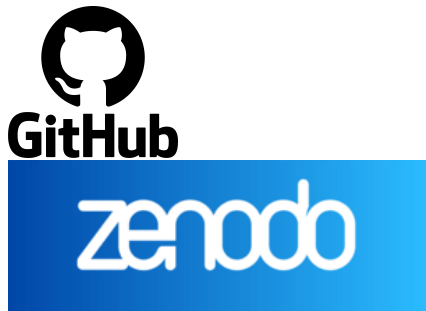
More details:

```
vignette("organisation",  
package = "checklist")
```



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Integrations with Zenodo, ORCID and GitHub



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Helping git newbies

- ▶ `clean_git()` keep the local repo in sync
- ▶ `new_branch()` branches from an up-to-date main branch

