



And you thought CRAN was harsh

Colin Gillespie (@csgillespie)

O'REILLY®



Efficient R Programming

A PRACTICAL GUIDE TO SMARTER PROGRAMMING

Colin Gillespie & Robin Lovelace

About Me

Co-Founder: Jumping Rivers

jumpingrivers.com



The problem

Lack of standards



The problem

Lack of standards

We have the nine rings

For no good reason
I've decided to shoehorn in movie references



The problem

Lack of standards

We have the nine rings

But not “one ring to rule them all”

For no good reason
I've decided to shoehorn in movie references
Add in chat when you spot one



But what about CRAN!

I hear you say



But what about CRAN!

I hear you say

Those aren't standards



But what about CRAN!

I hear you say

Those aren't standards

These are standards

Guardian & Observer Style Guide

a-ha

band from Norway; **A-ha!** Alan Partridge catchphrase, quoting Abba's Knowing Me, Knowing You



Guardian & Observer Style Guide

a-ha

band from Norway; **A-ha!** Alan Partridge catchphrase, quoting Abba's Knowing Me, Knowing You

Dalek

takes initial cap, whether used literally (as in referring to Doctor Who), or figuratively (as in describing, say, your boss)



Guardian & Observer Style Guide

a-ha

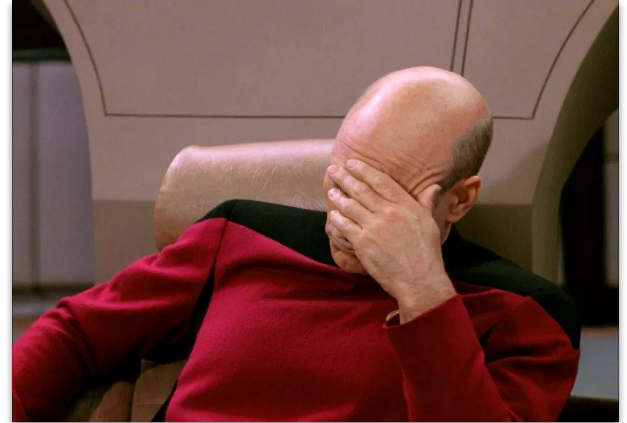
band from Norway; **A-ha!** Alan Partridge catchphrase, quoting Abba's Knowing Me, Knowing You

Dalek

takes initial cap, whether used literally (as in referring to Doctor Who), or figuratively (as in describing, say, your boss)

data

takes a singular verb (like agenda), though strictly a plural; you come across datum, the singular of data, about as often as you hear about an agendum





CRAN: Standards

R CMD check --as-cran



YOU SHALL NOT PASS!


If this is CRAN, that means we're...



YOU SHALL NOT PASS!



R CMD check

Fun fact:
with probability 1, someone is moaning about CRAN on 




R CMD check

Examples

Imports

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R CMD check

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NAMESPACE

Fun fact:

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R CMD check


Examples

Imports

NAMESPACE

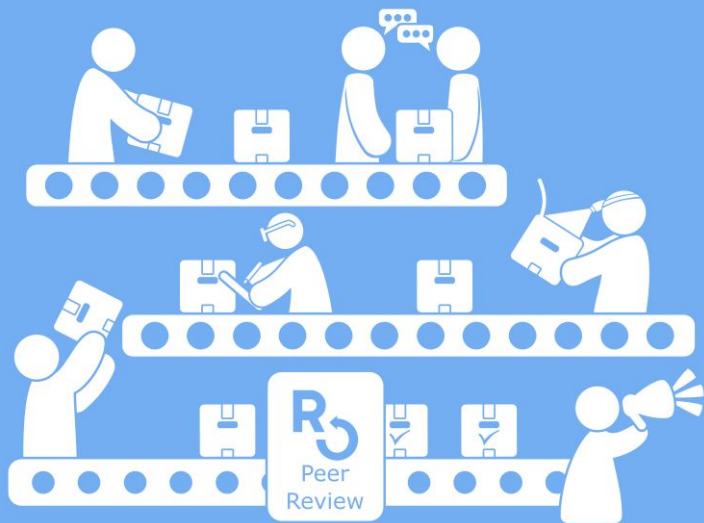
Capital letters for the package title

Fun fact:

with probability 1, someone is moaning about CRAN on 

rOpenSci Packages

*Development, Maintenance,
and Peer Review*

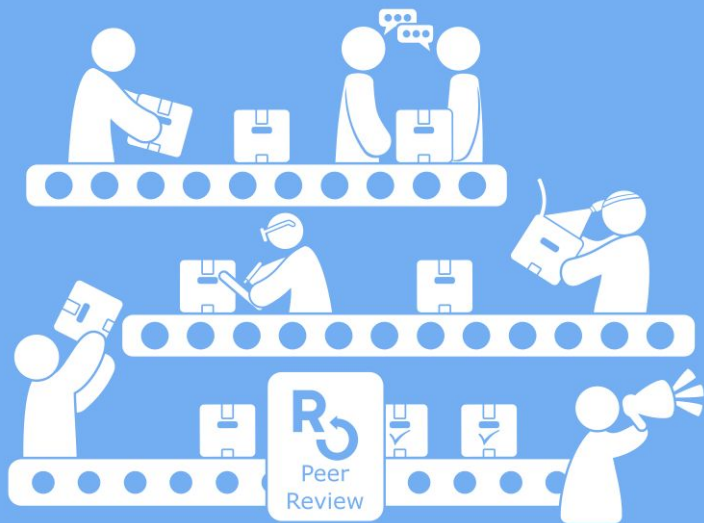


ropenSci: Standards

As CRAN

rOpenSci Packages

*Development, Maintenance,
and Peer Review*



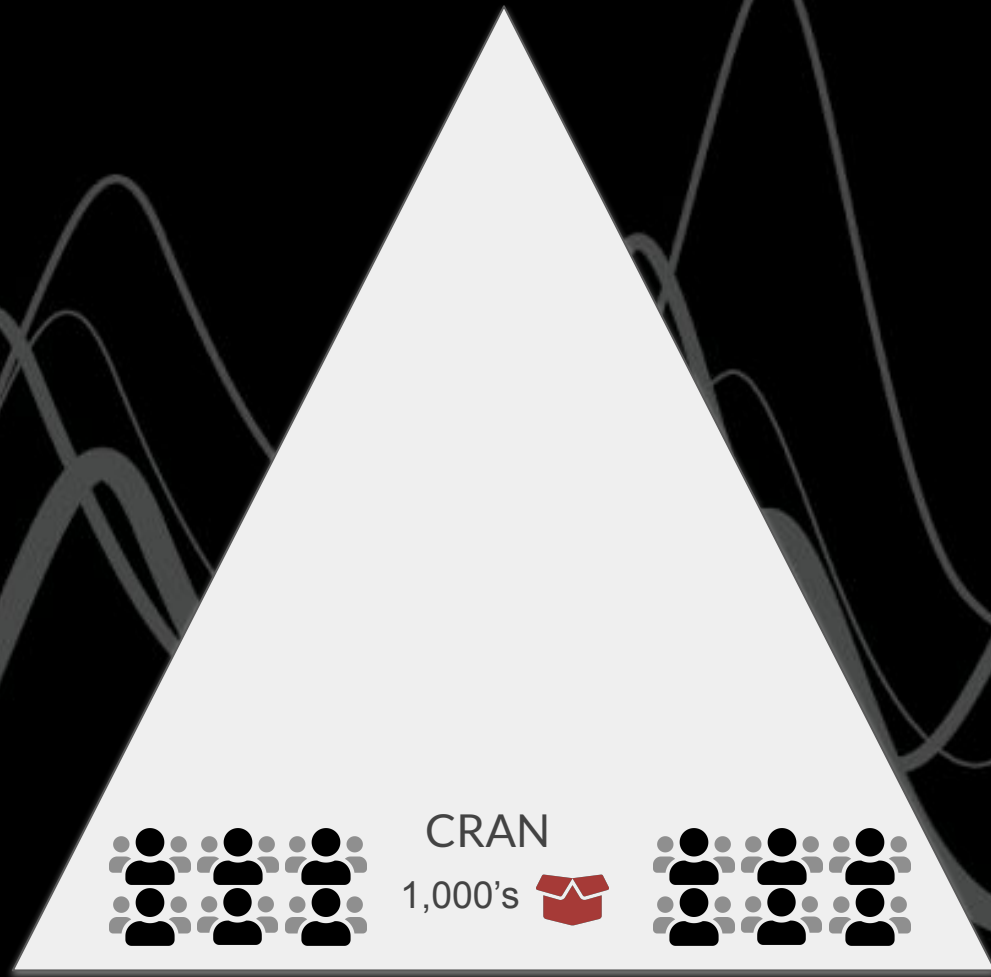
ropenSci: Standards

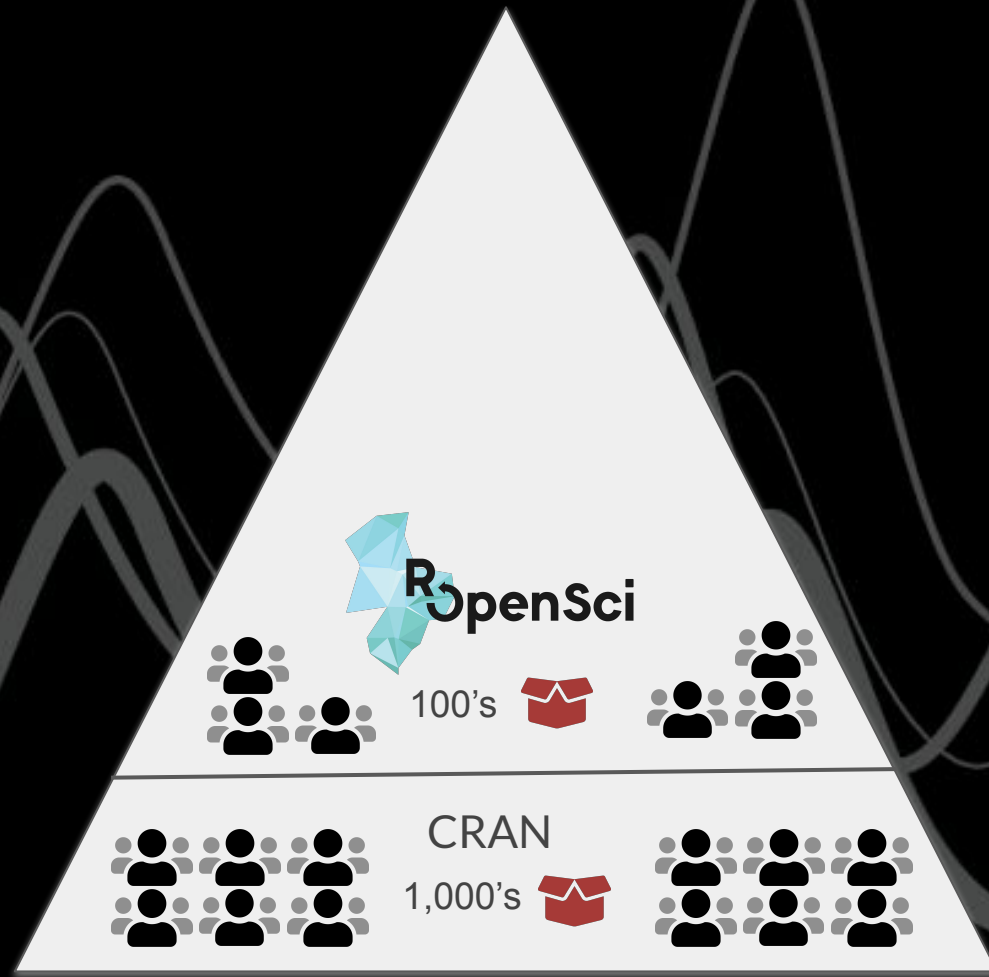
As CRAN

Improved documentation

Style

Testing





Your Org

10's



OpenSci

100's



CRAN

1,000's





My thoughts on checks

If they exist, they should be followed

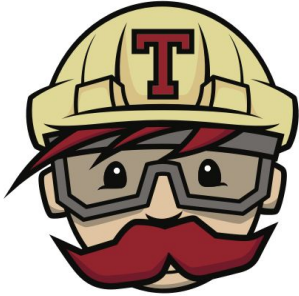
This needs to be enforced

“We” are hopeless

Get a computer to check everything



Continuous Integration



GitHub Actions







Continuous Integration

A series of tests
you have to pass

986 commit results GitHub Search: I hate travis

Sort: Best match ▾

DrewBritt/FlexCave.Web

[\[Travis\] I hate CI](#)

DrewBritt committed on 30 Apr ❌



ed9bd65



SeeShell/whats-up-there

[TRAVIS I HATE YOU](#)

charrmountain committed on 24 Apr ✅



99c382f



DrewBritt/FlexCave.Web

[\[Travis\] I hate it here.](#)

DrewBritt committed on 30 Apr ❌



cb8be00



DrewBritt/FlexCave.Web

[\[Travis\] I definitely HATE CI](#)

DrewBritt committed on 30 Apr ❌



99c6985



fp-in-bojms4s

[I hate travis](#)

AL333Z committed on 21 Apr ✅



eb4adf6



BoHBranch/BoH-Bay

[Once more. Travis, I hate you.](#)

ProbablyCarl committed on 28 Apr ❌



377ff3c



mweston6288/GameGuru

[I hate you travis](#)

Marc Maldonado committed on 29 Mar ❌



63e6983



Continuous Integration

A series of tests
you have to pass

On failing, users scream
Traaaaaaaaaaavisssssssss*

*This counts as a movie reference

@ Jumping Rivers

~30 teaching packages: tidyverse, shiny, git, docker, ...

~10 infrastructure packages: VMs, questionnaires, ...

~30 client packages



@ Jumping Rivers

Multiple authors

Different levels of experience

Standards @ Jumping Rivers

- R CMD check should give 0 NOTES & WARNINGS
 - Unless explicitly stated

Standards @ Jumping Rivers

- R CMD check should give **0 NOTES & WARNINGS**
 - Unless explicitly stated

```
# travis.yml
```

```
env:
```

```
  global:
```

- ALLOWED_WARNINGS=0
- ALLOWED_NOTES=0

Standards @ Jumping Rivers

- Imports should use **importFrom**, not **import**
 - Unless explicitly stated

```
# travis.yml
```

```
env:
```

```
  global:
```

```
    - NO_IMPORTS=0
```



Standards @ Jumping Rivers

Lint checks on code & filenames



Standards @ Jumping Rivers

Lint checks on code & filenames

DESCRIPTION file - use_tidy_description

Standards @ Jumping Rivers

Lint checks on code & filenames

DESCRIPTION file - use_tidy_description

Version must be always updated

Standards @ Jumping Rivers

Version must be of a form: X.Y.Z or X.Y.Z.900W

Standards @ Jumping Rivers

Version must be of a form: X.Y.Z or X.Y.Z.900W

Minimum standards in .gitignore

Standards @ Jumping Rivers

Version must be of a form: X.Y.Z or X.Y.Z.900W

Minimum standards in .gitignore

All files must end with a line break


```
934 — Checking lint...check_lintr()
935 ✓ Lint looks good
936
937 — Checking namespace for imports()...check_namespace()
938 ✓ Imports look good - 4 found, 4 allowed
939
940 — Checking file extensions...check_r_filenames()
941 ✓ Extensions look good
942 ✓ Filenames look good
943
944 — Checking version...check_version()
945 ✓ Version looks good
946
947 — Checking .gitignore...check_gitignore()
948 ✓ .gitignore looks good
949
950 — Checking tidy descriptions...check_tidy_descriptions()
951 ✓ Setting active project to '/home/travis/build/jr-packages/jrNotes'
952 ✓ Your description is tidy!
953
954 — Checking file permissions...check_file_permissions()
955 ✓ File modes looks good
```

Automatic Tagging

```
1078 — Creating a tag...create_tag()  
1079 To https://github.com/jr-packages/jrTidyverse.git  
1080 * [new tag]          v0.1.11 -> v0.1.11  
1081 ✓ Tagging good
```



Summary

Standards are good

Standards should be strict



Summary

Standards are good

Standards should be strict

No-one reads standards



Jumping Rivers

RStudio certified partners

Training: R & Python

Infrastructure setup and maintenance

AI and machine learning!

Thank-you