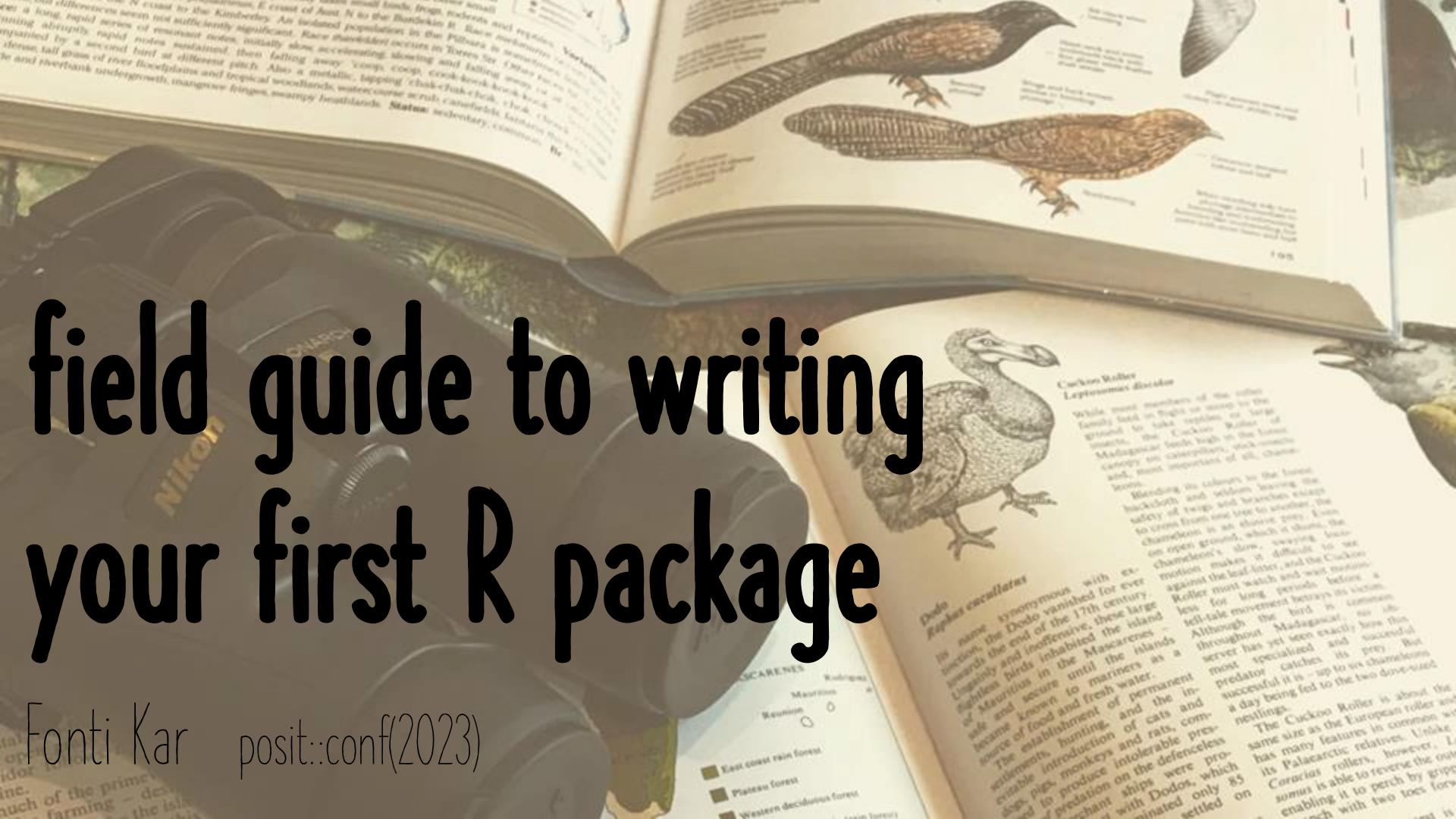


# field guide to writing your first R package

Fonti Kar posit::conf(2023)







A photograph of a dense, green forest. In the foreground, a rocky stream flows from the bottom right towards the center. The banks of the stream are covered in lush green vegetation, including various ferns and small trees. The background is filled with more dense foliage and trees, creating a sense of depth.

social learning

fitness

phenotypic plasticity

environmental trait gradients

contest competition

adaptations

behavioural ecology

animal personality

ecophysiology

reverse dependencies

vignettes

continuous integration

NAMESPACE

CRAN

object oriented programming

roxygen tags

non-standard evaluation

unit tests

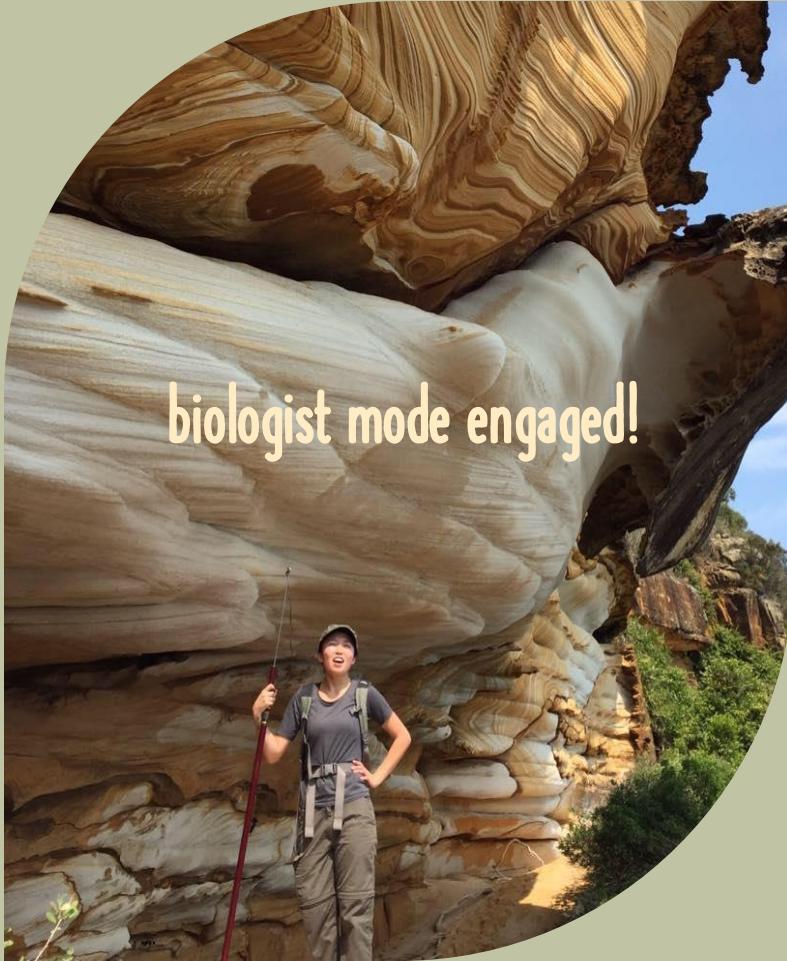
code coverage

continuous deployment



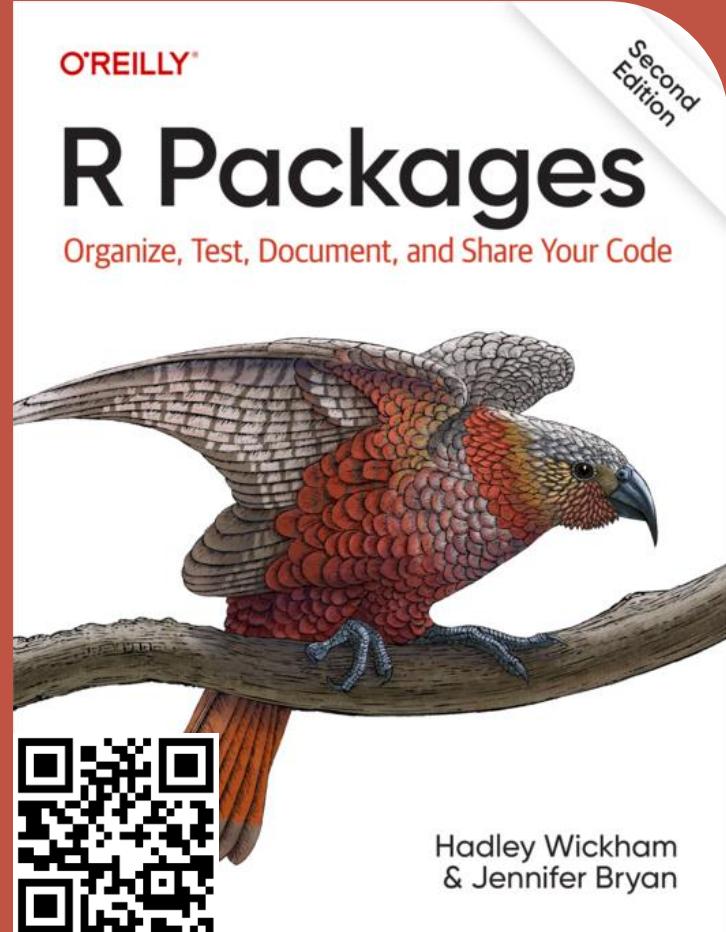


# field guide to writing your first R package



# this field guide is not

- a step-by-guide
- about the technical stuff



this field guide is

- an encouragement
- a gentle stroll
- a biologist's perspective

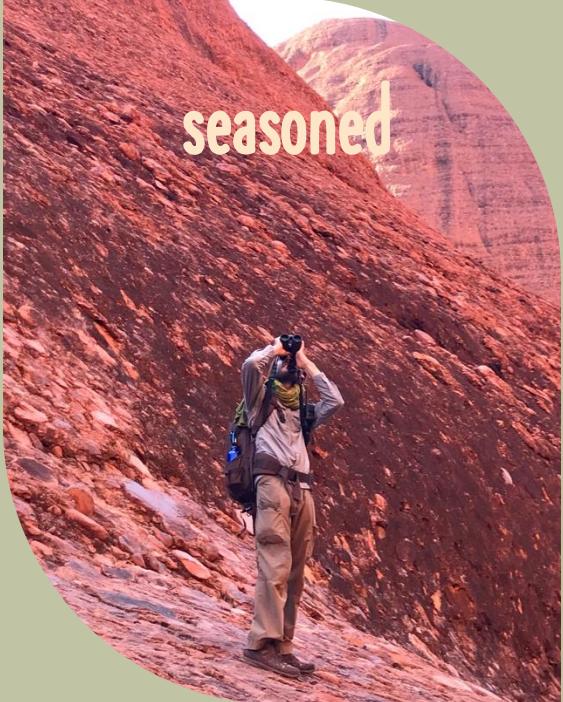




overwhelmed



overwhelmed



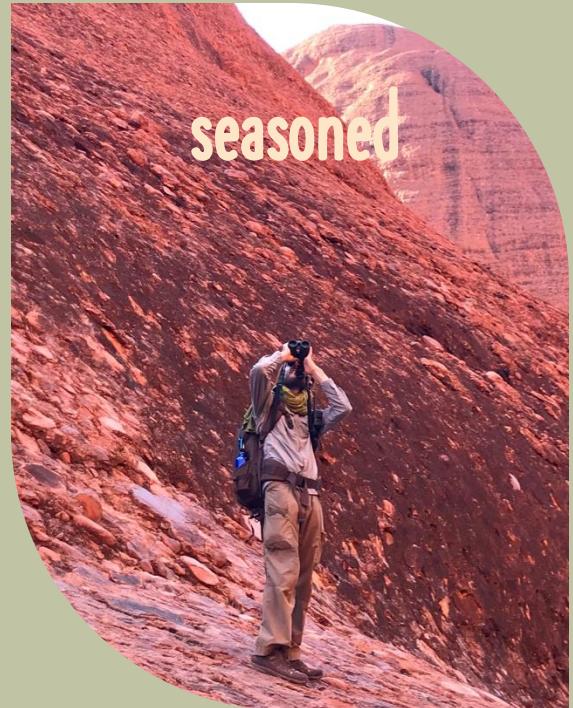
seasoned



overwhelmed



seasoned





why build an  
R package?

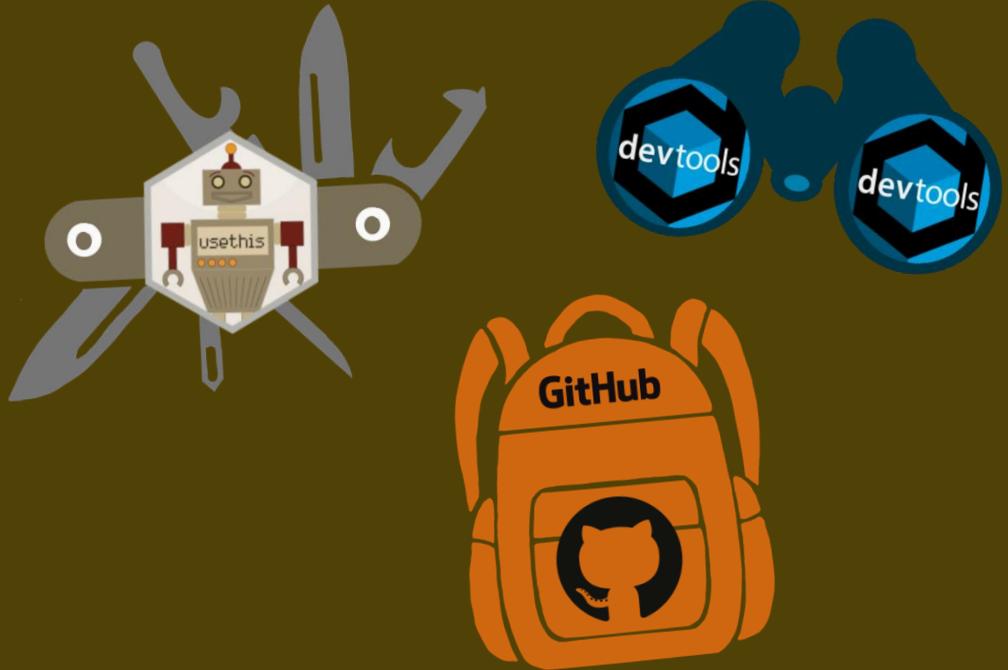
A hand-drawn illustration of a bee flying towards a cluster of flowers. The bee is yellow and black striped, with transparent wings showing veins. It is positioned to the left of a pink flower. To the right are a red flower and a purple flower. The background is plain white.

your code

problems



# gear list

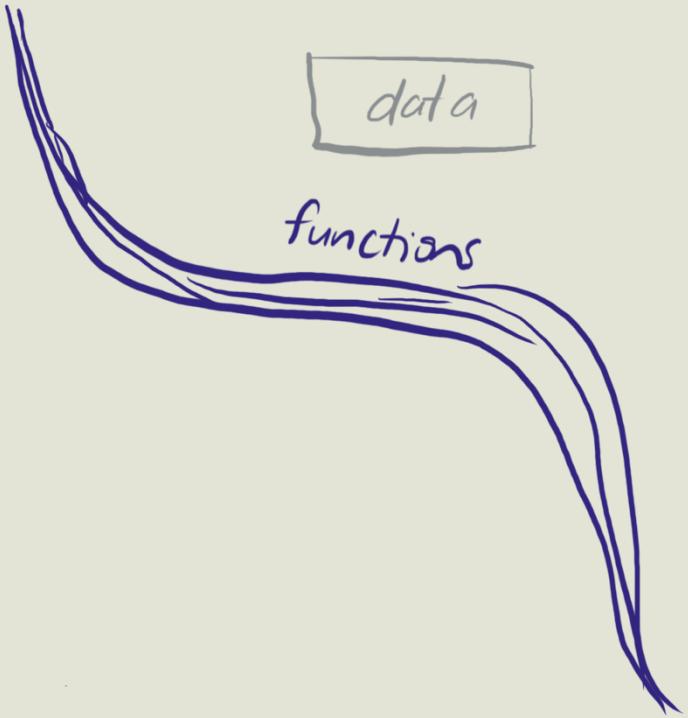


A black and white photograph of a rocky stream bed. Water is flowing over several large, light-colored rocks. In the background, there are dense, dark evergreen trees. The overall scene is slightly blurred, giving it a dreamlike or contemplative feel.

where to start?

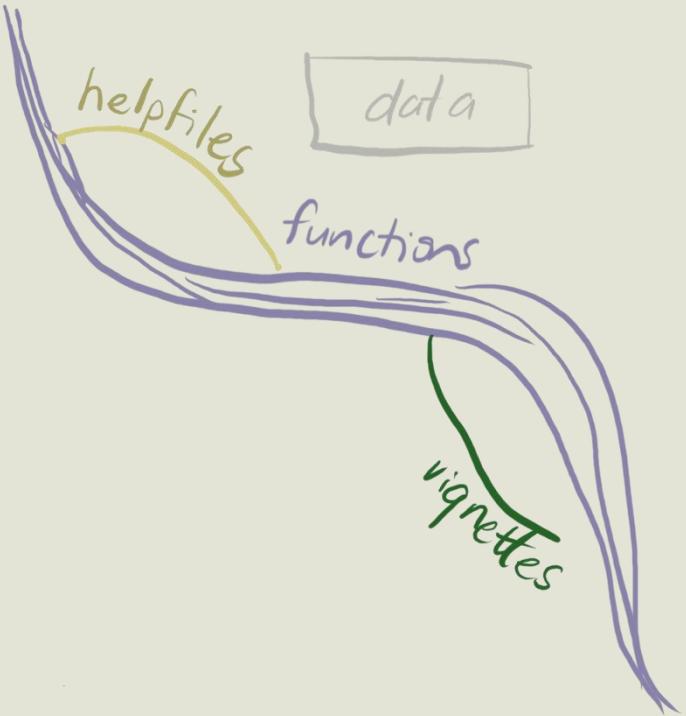


get the  
lay of the  
land

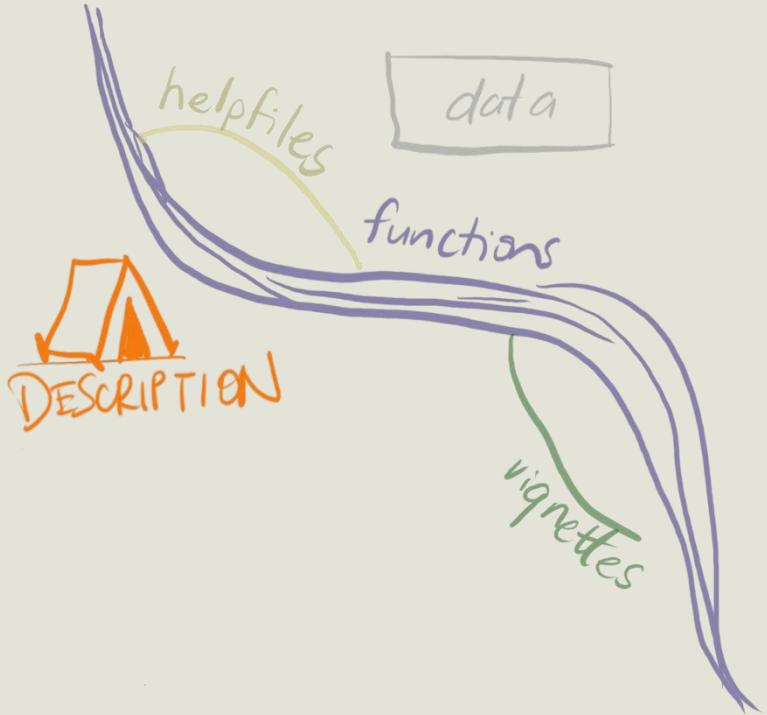


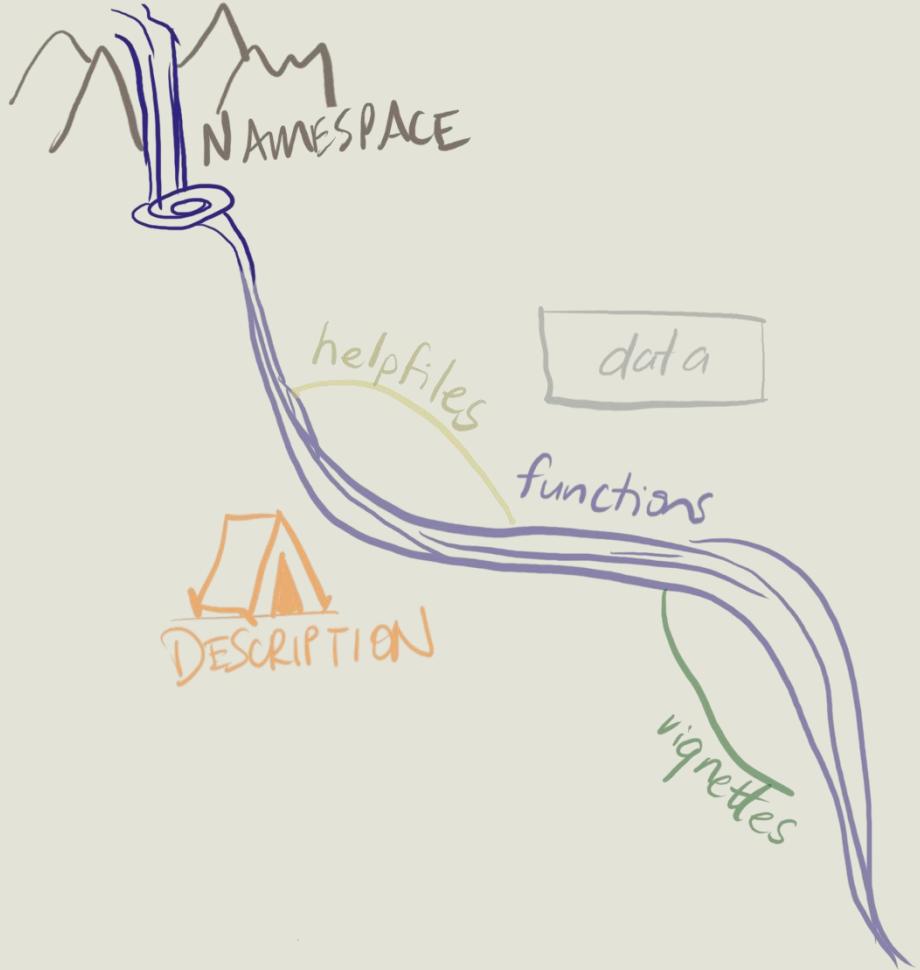
your  
ideas

your  
pointers

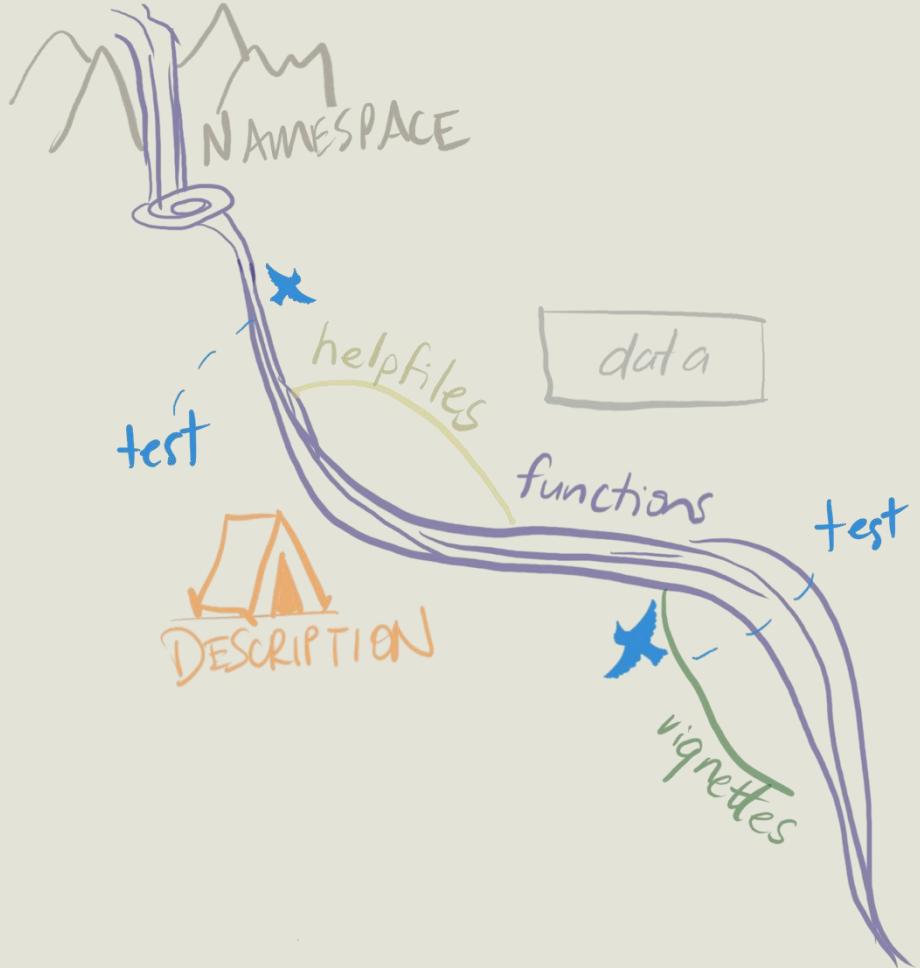


who  
what  
where

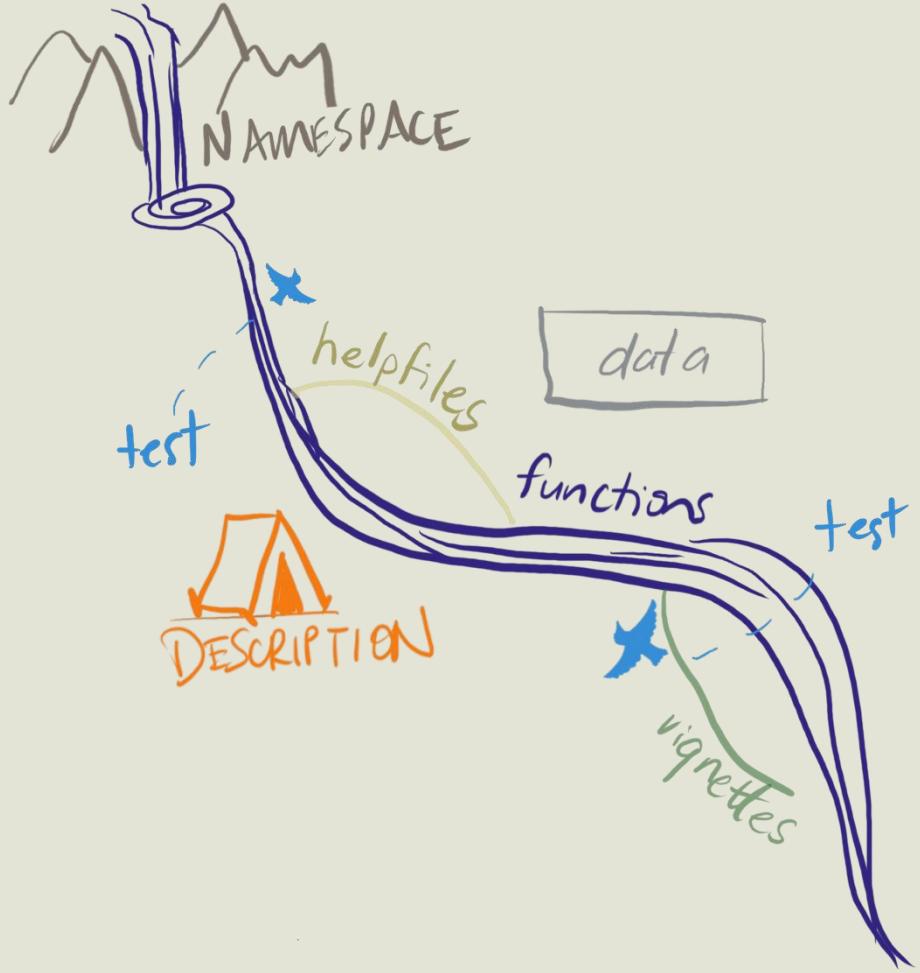




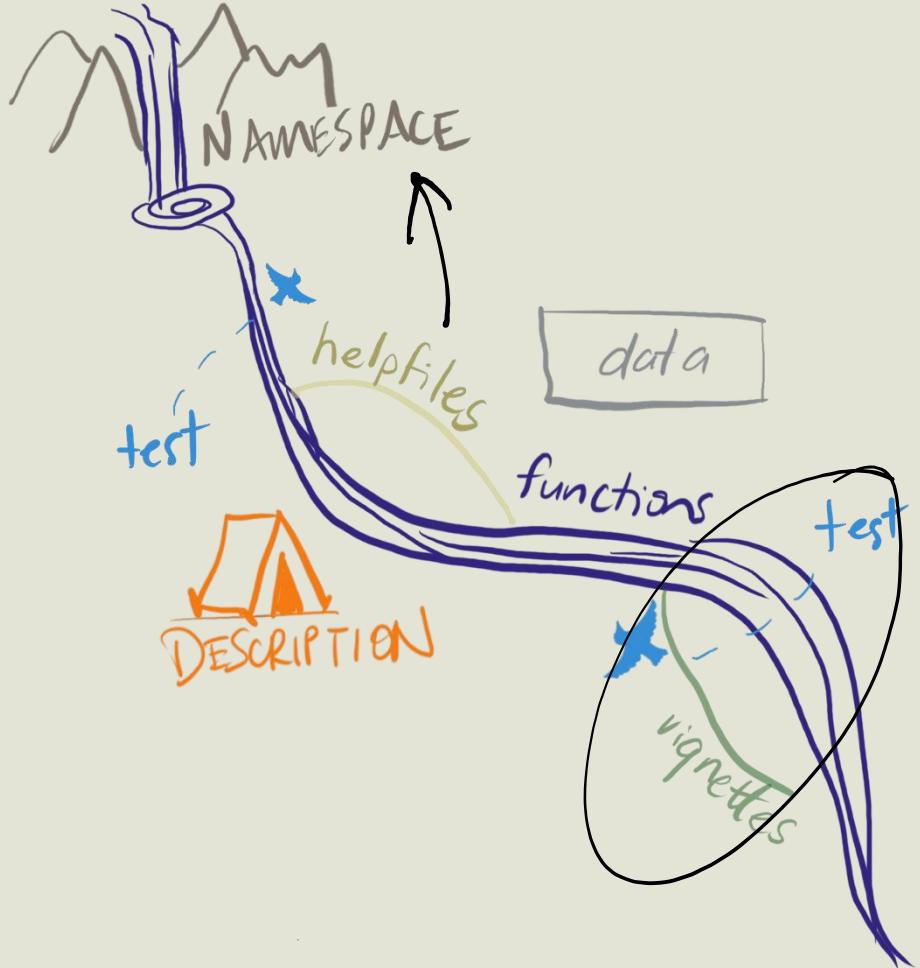
# the ins and outs



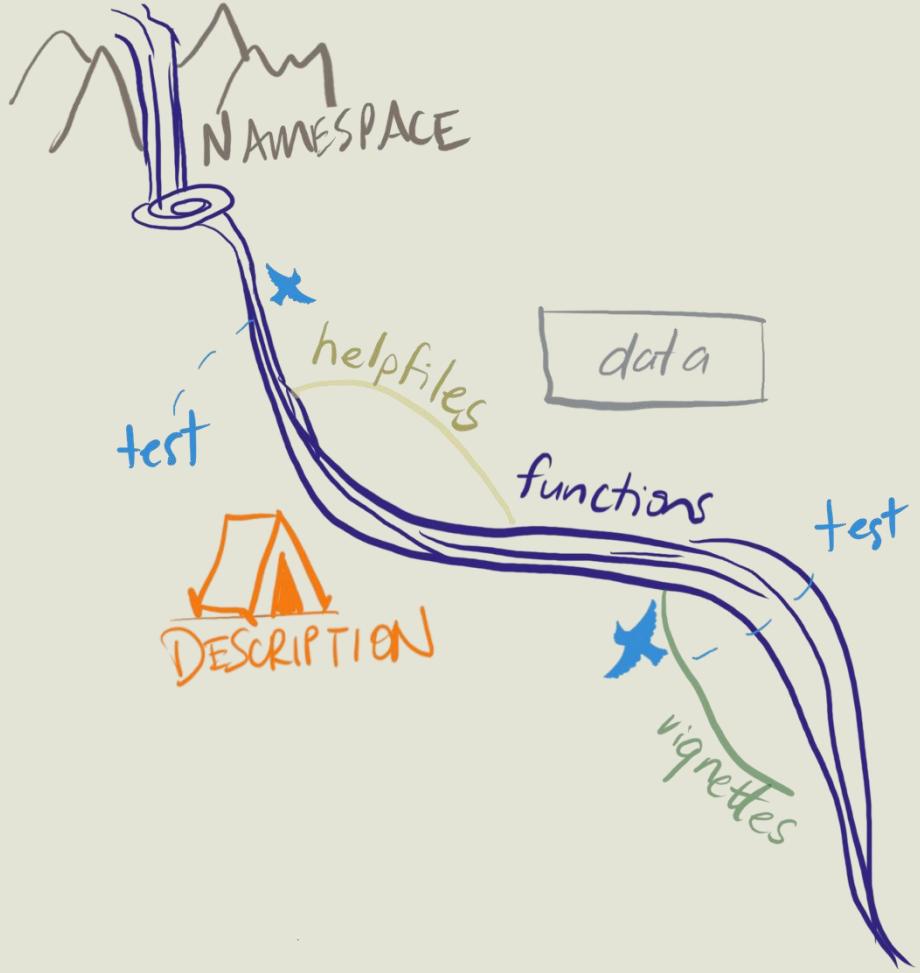
canary in the  
coal mine



breaks up  
complexity



breaks up  
complexity



usethis::  
create\_package()

usethis::  
use\_testthat()

what does this do?

how can I make this?

what is this error?

A vibrant underwater photograph featuring a dense cluster of purple, branching coral. Scattered throughout the scene are various sea shells, including several with distinct zebra stripes and others with smooth, rounded forms. The background is a dark, textured surface, likely rock or sand, with bright yellow-green highlights from sunlight filtering through the water.

be curious



# science poke!

(low-stakes investigating)



# ?dplyr

dplyr-package {dplyr} R Documentation

## dplyr: A Grammar of Data Manipulation

### Description

To learn more about dplyr, start with the vignettes: `browseVignettes(package = "dplyr")`

### Author(s)

**Maintainer:** Hadley Wickham [hadley@posit.co](mailto:hadley@posit.co) ([ORCID](#))

Authors:

- Romain François ([ORCID](#))
- Lionel Henry
- Kirill Müller ([ORCID](#))
- Davis Vaughan [davis@posit.co](mailto:davis@posit.co) ([ORCID](#))

Other contributors:

- Posit Software, PBC [copyright holder, funder]

### See Also



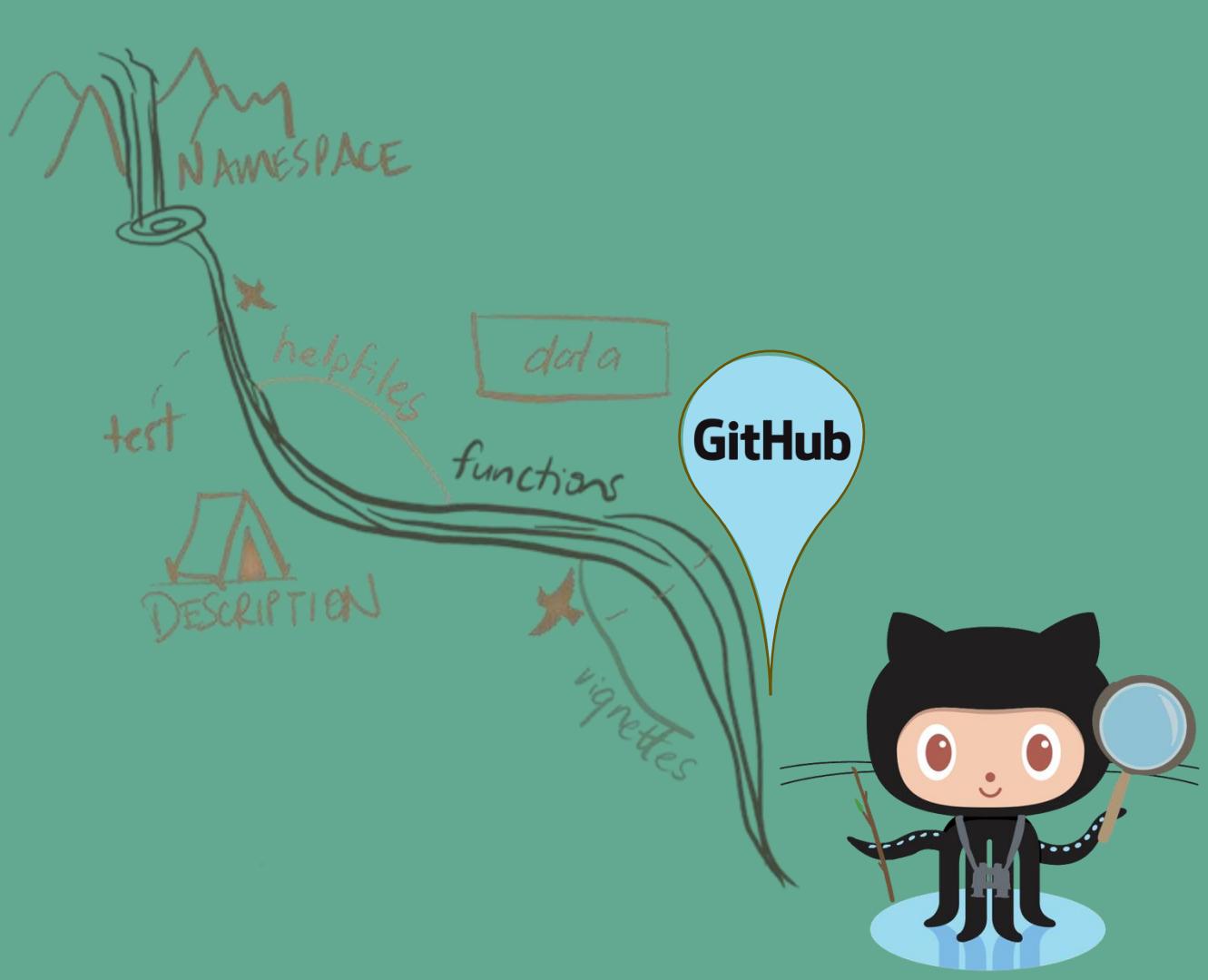
usethis::use\_ |

- ◆ use\_readme\_md {usethis}
- ◆ use\_readme\_rmd {usethis}
- ◆ use\_vignette {usethis}
- ◆ use\_article {usethis}
- ◆ use\_package\_doc {usethis}



# ?use\_package\_doc()







change stuff

devtools::document()  
::load\_all()



!





embrace the bugs\*

\*errors, issues, warnings, failures





bugs\* are  
enriching



\*errors, issues, warnings, failures

# bugs\* improve and innovate

\*errors, issues, warnings, failures



A photograph of a group of six people in a rugged, red-colored landscape, likely Uluru-Kata Tjuta National Park. The terrain is covered in large, reddish-brown boulders and rock formations under a clear blue sky.

# seek out bugs\*

\*errors, issues, warnings, failures



learn more:

 R packages Hadley Wickham & Jenny Bryan

 Develop good R packages (for open science)

Maëlle Salmon

 Write your own R package and publish it on CRAN

Cosima Meyer & Dennis Hammerschmidt

 DIY R package Yours truly

# thank you

