

Write your first R package

A workflow using devtools, roxygen2, RStudio and github

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In my opinion **packages** are one of the main reasons why R is so successful. They add a whole new level of functionality and reproducibility and also increase the productivity of every user by reusable R functions, their documentation and sample data.

When and how should I use packages?

The workflow behind finding and using new packages is almost too natural to write about, but here is how I do it:

Step 1: I have a problem in R, which I can't solve in 10 seconds

Step 2: I google if there is already a solution to this problem

Step 3: In ~99 % there is actually already a solution

Step 4: I look at the documentation

Step 5: I download the package

Step 6: I use it on my own data

Step 7: Problem solved!

As you can see there is no way to avoid packages and no reason to.

But have you ever written your own package?

I am just curious. Because until recently I myself actually did not. It came up to my mind when I was working on quality control plots of Nanopore sequencing data, where I had some functions written, but I had to reload them every single time before using. I was so sick of it. And that's why I decided to package the functions.

In this post I do not want to show you my NanoporeQC package (*I will cover this topic in a future post*), but simply share my thoughts in writing your first **R package** on an easy example.

A warning: It will not be perfect, but hey what is perfect anyway? And you have to start somewhere. For those interested I highly recommend this awesome book by Hadley Wickham.

Let's get started:

Example task

Imagine there are no arithmetic functions in R.

```
5 + 10
sum(5,10)
```

Motivation

Where to start

Push to github

Use your package

Next steps?