



R Developer's Guide

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Why this Guide?

- Documentation of how to contribute to R Core is dispersed
- This guide will facilitate the onboarding of new contributors to R Core

Some statistics

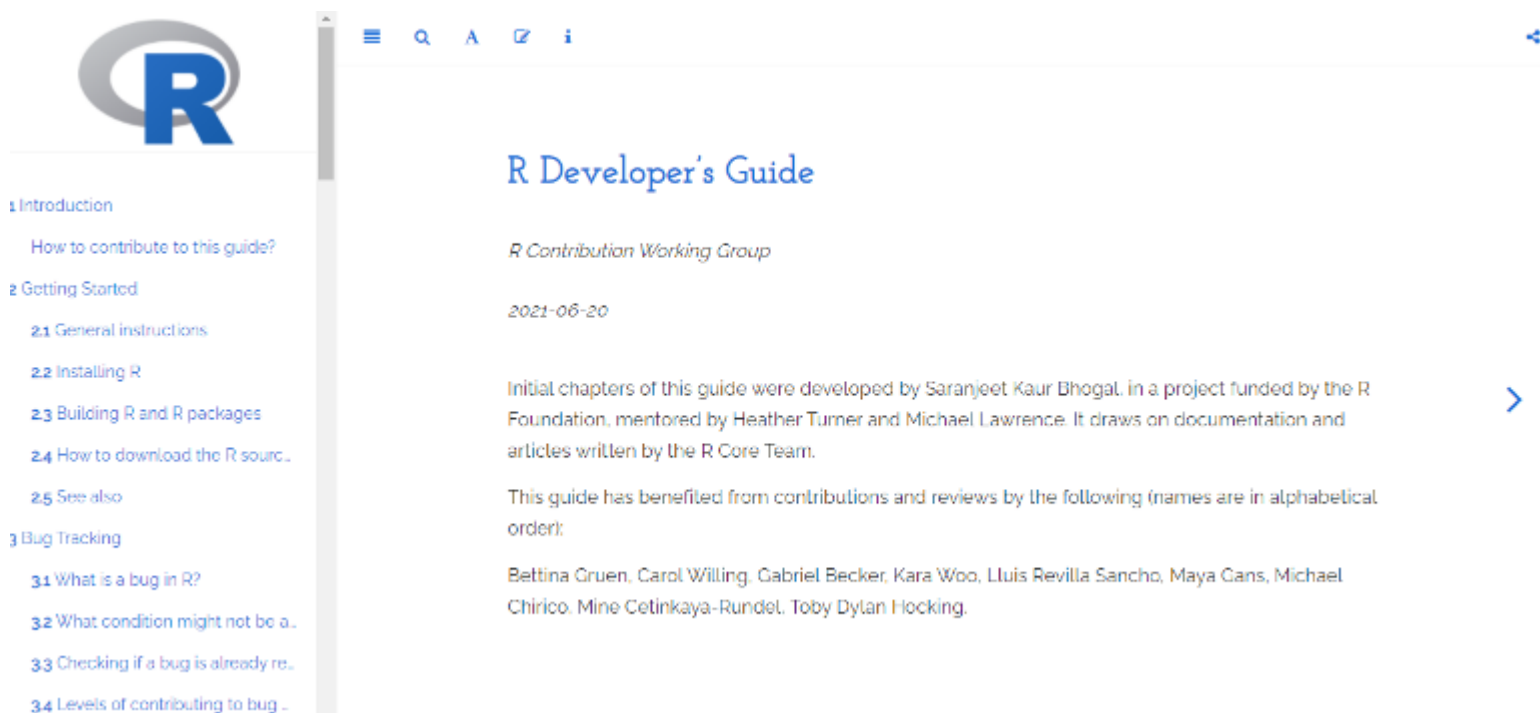
- There are 20 R Core Developers at present. Source: [The R Project website](#)
- Out of approximately 57K respondents, 5.7% (approximately 3K) said that they mostly use R. Source: [Stack Overflow Developer Survey 2020](#)

Where is the R Developer's Guide hosted?

As of now, the R Developer's Guide source code is hosted on the [Forwards Github rdevguide repository](#) and compiled as the R Developer's Guide which you can find at [bit.ly/rdevguide](#).

Inspiration

The format and structure of the chapters in this Guide are highly inspired by the [Python Developer's Guide](#).



First page of the Guide

Getting Started

- Instructions on how to install R and tools required to build R and R packages in Windows.
- Windows is the most widely used platform among general R users, especially in parts of the world that are currently under-represented in the contributor community.

Three main releases of R available to install:

- Official release (`r-release`),
- Patched release (`r-patched`), and
- Development release (`r-devel`).

To build R and R packages in Windows you would require to install RTools and a distribution of LaTeX.

Bug tracking

- Distinguish between what is a bug and what might not be a bug in R
- Once you are confirmed that there is a bug, check if it is already reported
- Create an account on Bugzilla. To get a Bugzilla account, please send an e-mail to `bug-report-request@r-project.org`, briefly explaining why you need an account, from the address that you want to use as your login.

Levels of contributing:

- Report the bug (if not already reported)
- Test the bug
- Fix the bug

Bug tracking (Continued)

You may find a bug in:

- R-Core supported packages (Maintainer: R Core Team <R-core@r-project.org>, run `maintainer("package_name")`), their documentations, and/ or in the R language implementation
- In packages and/or their documentations which are not supported by the R-Core

In R run the command `bug.report(package = "package_name")` for reporting the bug, whereas on RStudio use `utils::bug.report(package = "package_name")`

Expectations of a good bug report: provide a minimal reproducible example, mention the software architecture, use inbuilt data sets as far as possible

Examples of bug reports submitted to the bug tracker are shared

Reviewing Bugs

Help by reviewing the bug reports already present on Bugzilla (advanced search may be used to find reports on specific topics)

What can you do?

- Check if the bug is reproducible and mention the steps to reproduce it
- Check if information like the machine architecture, version of R, and the operating system on which the bug occurred is mentioned or not. If not, add it

Source of functions

You may want to have overview of the R codebase just out of curiosity or maybe to gain more insight into what a particular function is actually doing

- Find the R source code
- Find the C source code

Lifecycle of a patch

Submit a patch when you come across a bug in R and you have an idea of how to fix it!

A patch: The set of differences (additions and/or deletions) between two versions of code.

To submit a patch, you need the subversion (SVN) client and the latest developer version of R.

Follow the guidelines for making good patches.

Get your patch reviewed and also help by reviewing patches already submitted on Bugzilla.

Documenting R

- Follow the .Rd format: Header, Body, Footer.
- Follow the basic rules of documentation.
- Help by correcting typos in the documentation.

Testing pre-release R versions

You can also help with testing of pre-release versions of R.

If possible use fresh package library for testing or even better to use virtual machines for testing.

What can you test?

- Your own programs
- Your own workflows
- Your special ways of installing or setting up R
- Things that interact with external libraries
- Interactive R packages

Where to get help?

Slack and Mailing Lists

The [R-devel slack](#) channels:

- bugreports-for-review
- core-dev-help
- core-documentation
- core-translation
- patches-for-review

Mailing lists: [R-devel](#), [R-help](#), and [R-package-devel](#).

News and announcements

- [Blog](#)
- [Conferences](#)
- [The R Journal](#) (The R news is a separate news section on updates to R, though R core members also contribute regular articles on big changes to R.)
- Mailing lists: [R-announce](#) and [R-packages](#)
- Twitter handle: @_R_foundation

Developer tools

This chapter focuses on how Windows users can get these tools (e.g. Windows clients).

Subversion (svn) client

[grep](#)

[Git](#)

GitHub

- R Core is maintained in SVN, but some recommended packages are on GitHub
- [Creating a pull request](#)
- [Opening an issue from code](#)
- [Resolving a merge conflict on GitHub](#)

How to contribute to the R Developer's Guide?

To be able to edit this guide, you need to have a GitHub account. After you log-in to GitHub, click on the 'Edit' icon highlighted with a red ellipse in the image below:



R Developer's Guide

Highlighted edit icon for contribution

This will take you to an editable version of the source R Markdown file that generated the page you are on, and you can suggest your edits there.

To raise an issue about the guide's content or to make a feature request, use the [issue tracker](#).

Maintainers and contributors are requested to follow the [code of conduct](#).

Call for Action: Join us and help in the further development of this guide!

Further work

- In near future we will include materials on how to translate warning messages and errors in R to non-English languages!
- We also want to expand this guide to include instructions for non-Windows operating systems.

Thanks!

Slides created via the R package [xaringan](#).