

## 2.1 R has a lot going for it

R is a general tool ( [R Core Team \(2022\)](#) ). It is a statistical programming language ( [Ihaka & Gentleman \(1996\)](#) ). There are a lot of people using R. There are a lot of good reasons for this.

### R is freely available

You can download and use R for free. What's not to like about that?

### R can be used on any platform

It doesn't matter whether you are working on a PC, a Mac, or using a Linux operating system, R code works on any of these platforms, and R code is transferrable and can be shared.

### R is open source

Because R is completely transparent and open source, there is a burgeoning global community of contributors. Anyone can write R code and share it openly with others. Anyone can make R packages or libraries and offer them to others. There are also a lot of free online groups/networks to support people in their quest to create R code for particular purposes and applications.

### R code is useful for scripting/repeatability

Once you get your R code working to perform a specific analysis (and you are sure it does what you want it to do), let's suppose you now want to repeat that analysis hundreds of times. Because R is a programming language, it readily permits a straightforward avenue for scripting and repeatability.

### R is always evolving and improving

The R community is always growing. Thus, both the R base package and contributed packages/libraries tend to continuously evolve and get better over time.

### R is a language, so it is broad in scope

Because R is a language (rather than being a 'point-and-click' type of software), it is amenable to being used in lots of different ways by a lot of different communities. Everyone can shape (and share) their R code for their own needs. Indeed, you can find R packages and libraries implementing a very broad range of methods, which collectively services virtually any (perhaps

all?) branches of statistics.

## In short...

The above is not intended to be an exhaustive list of what is good about R, but it makes it easy to understand what makes R a useful tool. In short, I am a fan of R. I have used it in my teaching, and I use it a lot in my own statistical research, particularly for programming new statistical methods from scratch and testing them to see how they perform under different scenarios.

However, R is not the only thing I use, and there are certainly also some down-sides to using R. Let's consider some of those.

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