R Is A Great Language, But Some Small Tweaks Would Make It Even Better

Quora, CONTRIBUTOR

As an extremely experienced user of R, what limitations do you find with the language and where would you like to see improvements? originally appeared on Quora: the knowledge sharing network where compelling questions are answered by people with unique insights.

Answer by Hadley Wickham, Chief Scientist, RStudio, on Quora:

As an extremely experienced user of R, what limitations do you find with the language and where would you like to see improvements? To answer this question, it’s important to distinguish between R “the language” and the “standard library” that comes bundled with R. It’s tricky to precisely define the difference for R. If there’s a problem in the standard library, you can fix it with a package; problems with the language can only be fixed by R core.

Overall, I think the R the language is solid and well suited to the purpose for which it was designed. It’s certainly not perfect, but I don’t think there aren’t many major flaws. I think there are some nice potential improvements to the syntax laid out by Lionel Henry — in particular, I think it’s a shame that R doesn’t have a shorter anonymous function syntax, given that it’s a functional programming language. I’d also love to have Julia’s triple quoted strings and non-standard string literals.

Thinking bigger:

- I’d love a unification of S3 and S4, at least in the backend, as the APIs would need to remain the same for backward compatibility.

- It would be cool to type annotation. I think the most natural model to follow would be something like clojure.spec. You could imagine extending this to flag other common R behaviours like NSE, or vectorisation, or which function ... is passed on to.

This question originally appeared on Quora. Ask a question, get a great answer. Learn from experts and access insider knowledge. You can follow Quora on Twitter, Facebook, and Google+. More questions:

- Data Science: What are the best R (and data science) blogs to follow on a regular basis?

- R (programming language): How do I expose R code as a web service?

- Programming Languages: What is your take on Julia language?