

13 May 2022

Manuscript submission

Dear Editors of the Journal of Statistical Software,

This manuscript describes the R package `rolog`, (Querying Prolog from R) that embeds SWI-Prolog in an R package (<https://cran.r-project.org/package=rolog>).

Prolog has recently become 50 years old; it is a classical logic programming language with many applications in expert systems, computer linguistics and traditional artificial intelligence. The main strength of Prolog is its concise representation of facts and rules for the representation of knowledge and grammar, as well as its efficient built-in search engine for closed world domains. Prolog is weak in statistical computation, but strong in symbolic manipulation, the converse may be said for the R language. `rolog` embeds a subset of the SWI-Prolog system and enables deterministic and non-deterministic queries to the Prolog interpreter. Usage is illustrated by a few examples and interesting use cases (e.g., automatic translation of R expressions to MathML, calculations with intervals).

Thank you for considering our manuscript for publication in JSS.

Sincerely,



Matthias Gondan  
Jan Wielemaker (coauthor)