

R is a programming language and a tool used mostly in statistics and data analysis domains, with a rich package-based extension system. GNU-R, the standard interpreter of R, in version 3.5.0 introduced a new native API (ALTREP) for R extensions developers. The goal of the thesis is to implement this API for FastR, an interpreter of R based on GraalVM and Truffle, and explore options for optimization of FastR in context of this API. The motivation is to increase the number of extensions that can be installed and run on FastR.