

Appendix B

Implementation Notes

The prototypes used for testing the various RIT algorithms were implemented in R and C++. The `Rcpp` package was used as an interface between the R code and the C++ code.

Several Github repositories were set up to contain the source code for the various algorithms. Each one is structured as a R package and may be installed as such. The repositories can be found at the following urls:

- The *discRIT* algorithm may be found at <https://github.com/RobABL/baseRIT>
- The *covRIT* algorithm may be found at <https://github.com/RobABL/covRIT>
- The *relRIT* algorithm may be found at <https://github.com/RobABL/relRIT>

In addition, the packages were submitted along with this thesis as a `tar.gz` archive.

B.1 Used Packages

Various pre-existing packages were used to implement the various RIT algorithms as well as test them (e.g. cross-validation). Here is a list of the packages that were used:

- *discretization*: implements several supervised discretization algorithms.
- *data.table*: extension of *data.frame* objects in R.
- *TunePareto*: useful functions for cross-validation.
- *devtools*: development tools for R packages.
- *parallel*: high-level parallelism in R, useful in cross-validation schemes to reduce execution time.
- *Rcpp*: R and C++ hybridization.

Additionally, it should be noted that some of the code in the various implementations of RIT was inspired the R package *FSInteract*, which already implements a basic version of RIT.