

The hark package for S-PLUS

Instructions for Installation and Use

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Overview

The hark package fits the Hierarchical Adaptive Regression Kernels model described in Woodard, Crainiceanu and Ruppert (2012). The authors welcome any contributions or suggestions. The package has been tested only on RedHat Linux, although the authors are not aware of any reason why it should not work on other platforms, including Windows. We have been unsuccessful with our attempts to port the package to R, and believe that this is due to the C++ dependencies used in the package. hark includes much of the source code of the Template Numerical Toolkit, developed by the National Institute of Standards and Technology.

Several files are also included that demonstrate the use of the hark package for obtaining the simulation results given in Woodard, Crainiceanu and Ruppert (2012).

System Requirements

Requires S-PLUS 8.0.1+.

Instructions for Package Installation and Use (Linux)

1. Download the source code for the package and unzip in a local directory
2. Edit the file installPackage in the base directory, by replacing “~/rlibs” (in both lines) with the directory where you would like to install the package.
3. Change directory using the “cd” command so that you are in the directory where you unzipped the files. Run the executable file installPackage by calling “./installPackage”. The first time you run it you will get a warning “cannot remove <lib_directory_name>: no such file or directory;” ignore this warning. After the warning it should say “Installing *source* package ‘hark’”, and give a list of “make”, “g++”, and “LIBRARY” statements. Then it should output some notes on the progress of the package build.
4. Open S-PLUS and call library(hark, lib.loc=<your_lib_dir>), where <your_lib_dir> is the directory where the timeClust package is installed.
5. Example code is provided in simulHARK.R, which uses the hark package to obtain the simulation results given in Woodard, Crainiceanu, and Ruppert (2011). As noted in the inline comments, after the data are simulated in S-PLUS, it is necessary to open R and run simulHARKpriorConsts.R in order to obtain the prior hyperparameters. Then one can continue running the code in simulHARK.R, which reads in the R output.