Dear Editor

Please find enclosed our manuscript entitled “KSPM: A Package For Kernel Semi-Parametric Models” for consideration for publication in the R journal (Add-on packages).

Kernel semi-parametric models provide analysts with the flexibility of machine learning methods and their equivalence with linear mixed models provides a foundation for inference and tests of hypothesis. Several methods based on these models have been developed, especially in the genetics field. These methods are appealing and numerous, however only a few R programs are available and none includes a complete set of features. Since analysts of any field may be interested in all of these features, we have consolidated them in the R package KSPM. This package has been implemented for fitting single and multiple kernel semi-parametric models and their extensions in a unified framework. It allows kernel interactions and includes tools for predictions, statistical tests and interpretation, this latter remaining an outstanding challenge of the machine learning field. We have also included diagnostic plots and variables selection procedure that are not included in other packages for kernel semi-parametric models. KSPM has the advantage of being easier-to-use as the user does not need to compute kernel matrix nor matrix of interactions. Finally, although most popular kernel functions are available in the package, the user also has the option of designing and using his/her own kernel functions.

The KSPM package is a new tool for semi-parametric regression. It is not competing with other R packages for semi- or non-parametric regression models since either our methods or our objectives are different. The package and a vignette including detailed examples are available from the comprehensive R archive network (CRAN).

We thank you for your consideration.

Yours sincerely,

The authors