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To:
Bettina Grün, Edzer Pebesma, Achim Zeileis
Editors-in-Chief
Journal of Statistical Software

From:
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Enclosed please find my manuscript, entitled 'NeuralNetTools: Visualization and Analysis Tools for Neural Networks', to be considered as a research article in the Journal of Statistical Software.

Supervised neural networks are statistical models that have been used to support prediction and exploratory analysis in data-rich environments. A common criticism of these methods is that they represent 'black-boxes' that do not describe any information about relationships among variables. Methods to quantify information from a fitted neural network have been previously described in the literature but have not been available in a statistical computing environment. This article describe the NeuralNetTools package for R that was developed to better quantify information provided by a neural network, including methods for plotting using a neural network interpretation diagram, estimates of variable importance, and a sensitivity analysis. The package is exhaustive in scope by including methods for the most commonly used neural network objects in R.

Accompanying this submission is the manuscript PDF created with the JSS LaTeX template, an R script of the manuscript code, and links to the package source code at the bottom of this letter. Please note that the current version of the package on CRAN was submitted this year on Dec. 1 for minor revisions related to manuscript content. The original package was first uploaded to CRAN on December 16th, 2014. Accordingly, the package has been used by the R community for a sufficient amount of time to address bugs or issues (see here) in the early releases.

I greatly appreciate the opportunity to publish my work in JSS. Please feel free to contact me directly should additional information be needed.

Respectfully,

Dr. Marcus W. Beck

Package sources

Github (dev): `https://github.com/fawda123/NeuralNetTools`

CRAN (stable): `https://cran.r-project.org/web/packages/NeuralNetTools/index.html`