UNIVERSIDAD DE COSTA RICA

CIN Centro de Investigación en Neurociencias

May 23, 2023

Dear Editor of Methods in Ecology and Evolution,

I would like to re-submit the accompanying manuscript entitled “ohun: an R package for diagnosing and optimizing automatic sound event detection”, for consideration as an Application in Methods in Ecology and Evolution. The R package described in this manuscript has been recently made available on CRAN, but has not been submitted for publication elsewhere. The manuscript was initially submitted in December 2022 and rejected/invited to resubmit in March 2023. The manuscript was revised by two reviewers which provided very valuable comments and observations. We have answered all reviewer’s concerns, incorporating most of their suggestions and even some modifications to the original code of the package. By doing so we feel that we have significantly improved the manuscript.

The R package ohun is intended to facilitate the automated detection of sound events. The most important contribution of the package 1) a friendly implementation of two widely used methods for automated acoustic detection in a platform familiar to the scientific community and 2) an analytical workflow for diagnosing detection performance and applying it to detection optimization, which can be applied to detections from other software. These tools can be extremely helpful for comparing different detection approaches and identifying the right method for a particular study system and research question. Given the growing availability of detection methods and the wide usage of bioacustic approaches in ecological and evolutionary research, the package ohun can be of special interest to the journals’ audience.

The package ohun is also the result of a personal journey exploring the potential of programming approaches in bioacoustic research, and making those approaches accessible to a wider audience using R as a lingua franca that reaches researchers with limited programming skills. Luckily, these tools have been well received by the community. This reflects the need for free open-source software that allow to implement analyses that better fit the existing diversity of research questions and study systems.

We also wanted to bring to your attention that we hope to include as supporting information two Rmarkdown generated html reports that contain all the necessary code to replicate the analyses shown in the package. However, the submission system does not allow html files to be included as supporting information. Therefore, we have made them available in a data repository and the link is available at the “Supporting information” section in the manuscript.

We suggest the manuscript could be evaluated by: Dr. Dan Stowell (d.stowell@tilburguniversity.edu), Simeon Smeele (simeonqs@hotmail.com), Dr. Mitchel Aide (tmaide@yahoo.com) and Dr Juan Ulloa (julloa@humboldt.org.co).

Kind regards,

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