

The MDS-GUI: A Graphical User Interface for Comprehensive Multidimensional Scaling Applications

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The **MDS-GUI** is an R based graphical user interface for performing Multidimensional Scaling (MDS) methods in a comprehensive manner. The software was developed using the R wrapped tcltk package and a number of the packages affiliated it. The GUI is housed in the R package MDSGUI which is available both through CRAN and R-Forge. The **MDS-GUI** has been developed to provide the user, even with no theoretical background on the subject, with the opportunity to perform a number of MDS methods and output a host of relevant details and graphics. In broad terms, the GUI allows the user to simply and efficiently input their desired data, choose the type of MDS they would like to perform as well as select the type of output they would like to achieve by the analysis. The use of sub-menus and property tabs gives the user the option to fine tune specific parameters of the desired MDS procedure as well as provide options to alter the way in which the resulting plots are displayed. The graphical outputs are of an interactive nature and allow the user to make adjustments to the output with a cursor to observe any difference in results. Multidimensional Scaling is usually an iterative technique, which is a quality preserved by the graphics of the software. The user is thus able to have a visual display of the processes at work and observe the moving ordination configuration. The presentation will, first of all, discuss the MDS-GUI in terms of both its development and relevance from a Multidimensional Scaling point of view. This discussion will include an overview of the main features of the software as well as the coding techniques and methods used in its construction. Following this will be a small case study demonstrating the practical applications of the **MDS-GUI**.

Keywords: MDS, GUI, tcltk, R