Instalation Guide & Instructions for running the software.

Requirements:

      Java 7 (ORACLE 2015)

      Weka (2009) 3.7.12 library. This is provided in the CD and available for downloading at SOURCEFORGE (2015)

      3.1.2 (2014-10-31) "Pumkin Helmet" version for R language

      0.4-23 version for RWeka (Hornik, Buchta and Zeileis, 2009) This library has dependencies with:

            Rwekajars 3.7.12-1 and

            rJava 0.9-6 packages

All the R software is available for downloading at R Foundation for Statistical Computing (2015b) website.

Instructions for running the software.

Copy the folder SubspaceDiversity in a workspace of R software, for instance R-Studio.

For running all R provided files, write (Except for the DRF_Demo.R):

      >source("nameFile.R")

      >main()

For running DRF_Demo.R file, write:

      >source("DRF_Demo.R")

      >main(dobleValueAttsepallength, dobleValueAttsepalwidth, dobleValueAttpetallength, dobleValueAttpetalwidth, "expectedClass")

After a short time the Class predicted will be shown in the console

Files buildingTRTS_Experiment.R and buildingTRTS.R build the trainig and testing datasets starting by a original dataset

Files RF_Experiment.R and RF.R running the Random Forest Algorithm for testing the

Iris dataset or the datasets from the experiment.

DRF_Experiment.R and DRF_Testing.R running the Diversified Random Forest Algorithm for testing the Iris dataset or the datasets from the experiment.

The folder arrff-files contains the files in Arff format for running the testing and the experiment

The folder Outputs contains the performance results after running the files

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Reference list:

- Hornik, K., Buchta, C., Zeileis, A., (2009) Open-Source Machine Learning: R Meets Weka. [Online] Computational Statistics, 24(2), 225-232. Available from: doi:10.1007/s00180-008-0119-7 [Accessed 28 April 2015]

- ORACLE (2015) *Free Java download.* [online] Available from: https://www.java.com/en/download/ [Accessed 03 May 2015]

- R Foundation for Statistical Computing (2015a) RWeka: R/Weka interface.[online]. CRAN. Available from: http://cran.r-project.org/web/packages/RWeka/index.html [Accessed 28 April 2015]

- R Foundation for Statistical Computing (2015b) The Comprehensive R Archive Network. [online]. CRAN. Available from: http://cran.r-project.org/ [Accessed 28 April 2015]

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- SOURCEFORGE (2015). *Weka. Machine learning software to solve data mining problems. 3.7.9 version* [online] Available from: http://sourceforge.net/projects/weka/files/weka-3-7/3.7.9/ [Accessed 26 April 2015]