Source and ideas

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This is a source document for changes made on the BCCVL scripts for implementation on the EcoCommons R package.

Functions and script common vocabulary follows Hadley Wickham's style guide (which is based of the Google style guide) http://adv-r.had.co.nz/Style.html.

General Rules

All the functions created within EcoCommons starts with "EC_". The algorithm scripts that I am turning into functions starts with "model_". The "utilities_" are functions are subfunctions related to the algorithms, some specific to statistical regression, some to geographical, etc

The "EcoCommons_source.R" is the script I am working on as the initial/example script to run everything.

You can find the original scripts, variables to run the algorithms in your personal computer, and more info on the "inst" folder on GitHub.

Step-by-step process

1st STEP I turned functions that were in a big script into individual files and rename them

2nd STEP Created the package via devtools

3rd STEP Added roxygen2 documentation for all functions

4th STEP Improved comments and familiarised with the functions

5th STEP in construction – transform algorithm scripts into functions in construction – test algorithm scripts

NEXT STEPS create a script with example on flux/how to do

Renaming Functions

Functions were renamed and a few were deleted. parameter.as.string -> EC_RenameParameters parameter.print -> EC_ParameterPrint bccvl.err.null -> EC_ErrNull bccvl.species.read -> EC_ReadSp bccvl.data.transform -> EC_DataProjection bccvl.format.outfilename -> EC_OutfileName bccvl.biomod2.formatData -> EC_FormatDataBIOMOD2 bccvl.merge.save -> EC_MergeSave bccvl.log.warning -> EC_LogWarning bccvl.raster.load -> EC_ReadRaster bccvl.raster.common.extent -> EC_RasterExtent bccvl.raster.extent.to.str –> EC_RasterExtentToSTR bccvl.rasters.common.resolution -> EC_RasterResolution bccvl.rasters.common.reference -> EC_RasterRef bccvl.rasters.warp -> EC_RasterWarp bccvl.rasters.to.common.extent.and.resampled.resolution -> EC_RasterResampled bccvl.enviro.stack -> EC_EnviroStack bccvl.remove.rasterObject -> EC_RevRasterObject bccvl.sp.transform -> EC_SpDataProjection bccvl.mask -> EC_Mask bccvl.sdm.geoconstrained

-> EC_SDMGeoConstrained generate_background_data -> EC_CreateBackgroundData generate_biased_background_data -> EC_CreateeBiasedBackgroundData generate_response_curve -> EC_PlotResponseCurve exploratoryPlots.contin.occ -> EC_PlotContinOCC exploratoryPlots.categ.occ -> EC_PlotCategOCC exploratoryPlots.contin.bg -> EC_PlotContinBG exploratoryPlots.categ.bg -> EC_PlotCategBG saveEvaluationStatistics -> EC_SummaryStats computeAreaExtentOccuopancy -> EC_AreaExtentOccupancy bccvl.generateThresholdMap -> EC_ThresholdMap bccvl.plotProjection -> EC_PLotProjection bccvl.get_filepath -> EC_FilePath bccvl.saveProjectionImage -> EC_ProjectionImage bccvl.generateOccurrenceProbChangeMetric -> EC_OccurenceProbMetric bccvl.generateSpeciesRangeChangeMetric -> EC_SpRangeMetric bccvl.generateCentreOfGravityMetric -> EC_CentreofGravityMetric bccvl.saveModelProjection -> EC_SaveModelProjection bccvl.save -> EC_Save bccvl.write.csv -> EC_WriteCSV bccvl.getModelObject -> EC_GetModelObejct bccvl.grdtogtiff -> EC_GRDtoGTIFF bccvl.checkModelLayers -> EC_CHeckLayers family_from_string -> EC_FamilyFromString grid.info -> EC_GridInfo distance -> EC_Distance sample.factor.levels -> SampleFactorLevels .SampleFactorLevels.raster -> SampleFactorLevelsRaster .SampleFactorLevels.data.frame -> SampleFactorLevelsDataFrame

EVAL SCRIPT: Change functions names, as Function names have initial capital letters and no dots bccvl.saveModelEvaluation -> EC_SaveModelEval bccvl.saveProjection -> EC_SaveProjection performance.2D -> EC_Performance2D dev.save -> EC_DevSave bccvl.createMarginalResponseCurves -> EC_CreateResponseCurve bccvl.calculateVariableImpt -> EC_CalcVariableImpt bccvl.calculatePermutationVarImpt -> EC_CalcPermutationVarImpt bccvl.saveDISMOModelEvaluation -> EC_SaveDISMOModelEval bccvl.saveBIOMODModelEvaluation -> EC_SaveBIOMODModelEval bccvl.savePdf -> EC_SavePDF bccvl.VIPplot -> EC_VIPplot

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Ideas to implement in the future

- Easy to see list of available algorithms
- Submit package to CRAN
- Add changelog (list of new functions) on README GitHub
- Logo?
- Add Author(s) per function, and include link to report bugs

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TO DO

On EC_EnviroStack gdalUtils::gdalwarp -> ?? rgdal::GDALinfo -> terra::describe rgdal::CRSargs -> ??