Profile Summary (Total time: 1411.783 s)

Generated 29-Jan-2021 10:18:05 using performance time.

Function Name	Calls	Total Time (s)	Self Time* (s)	Total Time Plot (dark band = self time)
main	1	1411.783	2.105	
buildWeightedNetwork	30000	774.891	774.891	
centralityClusters	30000	546.687	2.550	
topologicalOverlap	2001	474.310	0.959	
stepEffectOverlap	40010	397.820	397.820	
modularitysubmatrix	246	76.109	3.421	
topologicalOverlapMatrix	40010	65.434	65.434	
mupadmex (MEX-file)	397880	59.182	57.896	
densityModularity	1	42.555	0.014	
table.table>table.table	142014	35.080	4.979	
patternModularity	1	33.818	0.014	
digraph.digraph>digraph.digraph	42005	32.425	3.181	
sym.sym>sym.double	39788	31.221	3.049	
sym.kroneckerDelta	39788	29.737	0.216	
sym.sym>sym.privBinaryOp	39788	29.521	0.703	
graph.graph>graph.graph	32002	25.730	2.457	
tabular.tabular>tabular.initInternals	68007	16.246	2.896	
sym.size	39788	14.405	1.855	
statusIndices	6001	13.592	0.412	
tabularDimension>tabularDimension.createLike	136014	12.169	2.417	
sym.sym>sym.sym	119364	10.710	1.477	
varNamesDim>varNamesDim.createLike	68007	9.921	1.181	
tabularDimension>tabularDimension.setLabels	136016	9.758	1.312	
metaDim>metaDim.checkAgainstVarLabels	68008	8.611	0.751	
digraph.digraph>digraph.set.EdgeProperties	42005	7.993	0.283	
tabular.subsref	178020	7.914	1.620	
digraph.digraph>digraph.validateEdgeProperties	42005	7.710	3.420	
sym.sym>tomupad	119364	7.507	0.677	
makeUniqueStrings	68011	7.479	2.085	
varNamesDim>varNamesDim.validateAndAssignLabels	68008	6.950	2.101	
graph.graph>graph.set.EdgeProperties	32002	5.915	0.234	
graph.graph>graph.validateEdgeProperties	32002	5.681	2.541	
tabular.subsrefDot	172019	5.339	2.896	
keystoneIndices	10001	5.019	1.639	
table.table>table.empty	68006	4.605	2.713	
interactorMatrix	40010	4.422	4.422	
digraph.distances	12002	4.045	0.788	
centralityNodes	30000	3.968	3.968	
makeUniqueStrings>makeUnique	68010	3.714	3.714	
sym.sym>sym.delete	119364	3.623	2.392	
oneStepEffect	40010	3.258	3.258	
digraph.flipedge	6001	3.074	0.436	
parseArgsTabularConstructors	68006	2.704	2.704	

tabular.getProperty	86011	2.444	1.549	
toundirected	36004	2.268	2.268	
tounweighted	22009	2.123	2.123	
degreeMatrix	2001	2.112	0.130	
buildBinaryNetwork	30000	1.907	1.907	
sym.sym>numeric2cellstr	79576	1.776	0.809	
tabular.tabular>tabular.tabular	142014	1.757	1.395	
symengine	119364	1.726	1.726	
digraph.digraph>digraph.hasEdgeWeights	12002	1.703	0.717	
varNamesDim>varNamesDim.makeValidName	68009	1.666	0.684	
rowNamesDim>rowNamesDim.validateAndAssignLabels	68007	1.491	1.491	
KendallCoef	30000	1.487	0.822	
tabularDimension>tabularDimension.checkDuplicateLabels	68009	1.453	1.453	
digraph.distances>parseFlags	12002	1.347	0.542	
sym.sym>sym.privResolveArgs	79576	1.284	1.284	
tabular.size	134017	1.280	1.000	
tabularDimension>tabularDimension.assignLabels	68009	1.151	1.151	
sym.sym>symr	79576	0.967	0.417	
tabular.subsrefParens	6001	0.955	0.374	
realisedConnections	5	0.897	0.897	
tabular.matchPropertyName	86013	0.895	0.700	
tabular.tabular>tabular.countVarInputs	68006	0.783	0.494	
getridofinf	12002	0.755	0.755	
predatorCoefficientsCol	10001	0.731	0.731	
predatorCoefficients	10001	0.725	0.725	
varNamesDim>varNamesDim.checkReservedNames	68011	0.713	0.445	
makeUniqueStrings>validateExclStrOrElemToChk	68010	0.698	0.566	
sortrows	60000	0.664	0.584	
makeUniqueStrings>truncateString	68009	0.660	0.660	
validateVariableNameLength	136017	0.659	0.659	
rowNamesDim>rowNamesDim.lengthenTo	68006	0.643	0.643	
preyCoefficients	10001	0.589	0.589	
ExecutableFunction>ExecutableFunction.validateAndExecute	4	0.586	0.006	
isText	68010	0.584	0.584	
isCharString	272033	0.577	0.577	
trophicPosition	2001	0.536	0.142	
topologicalImportance	2001	0.496	0.106	
digraph.distances>parseSubset	12002	0.484	0.078	
cell.ismember	74007	0.483	0.483	
readmatrix	3	0.453	0.007	
graph.centrality	4002	0.388	0.145	
kIndirect	10001	0.383	0.383	
…veLoadCompatibility>saveLoadCompatibility.saveLoadCompatibility	142014	0.362	0.362	
ReadMatrix>ReadMatrix.execute	3	0.340	0.006	
digraph.digraph>digraph.hasNodeNames	24004	0.339	0.133	
averageEffect	40010	0.305	0.305	
validatestring	6018	0.299	0.075	
digraph.distances>isNodeName	12002	0.299	0.149	

isScalarInt	134017	0.280	0.280	
tabularDimension>tabularDimension.subs2inds	12002	0.273	0.166	
tabularDimension>tabularDimension.checkReservedNamesImpl	68012	0.268	0.268	
tabular.numArgumentsFromSubscript	12002	0.258	0.258	
DetectImportOptions>DetectImportOptions.execute	4	0.228	0.006	
table.table>table.cloneAsEmpty	6001	0.224	0.113	
DetectImportOptionsText>DetectImportOptionsText.execute	4	0.218	0.004	
DetectImportOptionsText>DetectImportOptionsText.getTextOpts	4	0.210	0.004	
weightedDegree	2001	0.208	0.088	
digraph.digraph>digraph.partialMatch	48008	0.206	0.206	
digraph.centrality	2001	0.199	0.107	
isScalarText	86013	0.195	0.195	
…mportOptionsText>DetectImportOptionsText.getOptsFromDetection	4	0.195	0.053	
varNamesDim>varNamesDim.subs2inds	6001	0.168	0.076	
makeUniqueStrings>validateMaxStringLength	68009	0.167	0.167	
validatestring>checkString	6018	0.156	0.142	
readtable	1	0.147	0.003	
istable	80012	0.134	0.134	
DetectImportOptions>DetectImportOptions.validate	4	0.120	0.006	
fluxRatio	2001	0.114	0.114	
ReadTable>ReadTable.execute	1	0.113	0.004	
sym.sym>sym.formula	79576	0.112	0.112	
finetune	248	0.102	0.102	
digraph.digraph>digraph.validateNodeProperties	6001	0.098	0.040	
ReadMatrix>ReadMatrix.validate	3	0.097	0.002	
withoutAutotrophs	2001	0.091	0.091	
digraph.digraph>digraph.numnodes	6001	0.082	0.082	
sortrows>canCallBuiltinHelper	60000	0.080	0.080	
..eadMatrixWithImportOptions>ReadMatrixWithImportOptions.execute	3	0.080	0.008	
ExecutableFunction>ExecutableFunction.validate	4	0.079	0.003	
oneStepTI	2001	0.077	0.077	
ExecutableFunction>ExecutableFunction.validateArguments	4	0.076	0.011	
sym.sym>sym.privResolveOutput	39788	0.075	0.075	
graph.degree	4002	0.071	0.071	
ReadMatrixText>ReadMatrixText.execute	3	0.071	0.003	
svector	248	0.069	0.067	
ImportOptions.ImportOptions>ImportOptions.setvartype	3	0.069	0.005	
validatestring>checkInputs	6018	0.068	0.068	
TextDataReader>TextDataReader.read	4	0.067	0.014	
tabularDimension>tabularDimension.selectFrom	6001	0.066	0.066	
FastVarOpts>FastVarOpts.setTypes	11	0.063	0.011	
AcceptsReadableFilename>AcceptsReadableFilename.set.Filename	4	0.056	0.005	
…tsReadableFilename>AcceptsReadableFilename.validateFilename	4	0.051	0.004	
ReadTableWithImportOptions>ReadTableWithImportOptions.execute	1	0.051	0.000	
…WithImportOptionsText>ReadTableWithImportOptionsText.execute	1	0.051	0.000	
…ableWithImportOptions>ReadTableWithImportOptions.executeImpl	1	0.051	0.000	
…hImportOptionsText>ReadTableWithImportOptionsText.executeImpl	1	0.050	0.001	
TextDataReader>TextDataReader.TextDataReader	4	0.048	0.005	

findBranches	2	0.047	0.009	
ismember	13	0.040	0.009	
TextDataReader>TextDataReader.initTextParser	4	0.038	0.008	
validateFileName	4	0.038	0.006	
detectTypes	4	0.037	0.019	
TableBuilder>TableBuilder.build	1	0.036	0.007	
cluster	2	0.035	0.003	
digraph.digraph>digraph.isvalidoption	24004	0.034	0.034	
ismember>ismemberR2012a	13	0.030	0.008	
setxor	3	0.029	0.002	
…rtOptions>DelimitedTextImportOptions.DelimitedTextImportOptions	4	0.028	0.004	
sharedOutLink	1	0.028	0.028	
ReadTable>ReadTable.validate	1	0.027	0.000	
setxor>setxorR2012a	3	0.026	0.007	
chooseLinkageCriteria	2	0.026	0.002	
unique	11	0.025	0.010	
graph.graph>graph.numnodes	2001	0.024	0.024	
AcceptsFileType>AcceptsFileType.set.FileType	4	0.022	0.003	
DelimitedTextImportOptions>DelimitedTextImportOptions.getParser	4	0.022	0.008	
fullfile	12	0.021	0.008	
isColon	12002	0.021	0.021	
HasPropertiesAsNVPairs>HasPropertiesAsNVPairs.parseInputs	4	0.020	0.011	
digraph.digraph>digraph.get.Nodes	6001	0.019	0.019	
ismember>ismemberClassTypes	3	0.017	0.005	
linkage	10	0.016	0.006	
unique>uniqueR2012a	11	0.015	0.015	
tabular.subsasgn	2	0.015	0.002	
ReadTable>ReadTable.buildTableFromData	1	0.015	0.001	
mode	7	0.014	0.014	
rowNamesDim>rowNamesDim.orientAs	6001	0.014	0.014	
attributes	4	0.014	0.002	
cluster>labeltree	2	0.014	0.009	
FastVarOpts>FastVarOpts.FastVarOpts	5	0.013	0.010	
tabular.subsasgnDot	2	0.013	0.002	
varNamesDim>varNamesDim.orientAs	6001	0.013	0.013	
delimitedTextImportOptions	1	0.012	0.001	
DelimitedTextInputs>DelimitedTextInputs.set.Delimiter	4	0.012	0.002	
AcceptsFileType>AcceptsFileType.getFileTypeFirst	4	0.012	0.004	
unescape	22	0.012	0.007	
modulecomposition	414	0.011	0.011	
fileparts	13	0.010	0.005	
ArrayBuilder>ArrayBuilder.build	3	0.010	0.007	
DetectImportOptionsText>DetectImportOptionsText.setHexType	4	0.010	0.006	
DetectImportOptionsText>DetectImportOptionsText.removeBOM	4	0.010	0.009	
validateAndEscapeCellStrings	16	0.009	0.004	
cophenet	8	0.009	0.009	
tabular.setProperty	2	0.009	0.005	
ArgumentParser>ArgumentParser.canonicalizeNames	8	0.009	0.007	

parseArgs	12	0.008	0.002	
validateFileName>validateFileNameOnMATLABPath	1	0.008	0.001	
FastVarOpts>FastVarOpts.getVarOptsStruct	8	0.008	0.004	
TextInputs>TextInputs.get.LineEnding	8	0.008	0.002	
cell.strcat	4	0.008	0.006	
repmat	58	0.008	0.007	
ismember>ismemberBuiltinTypes	12	0.007	0.007	
TextInputs>TextInputs.set.DataLines	4	0.007	0.001	
table.table>table.init	1	0.007	0.001	
parseArgs	12	0.007	0.005	
inconsistent	2	0.006	0.003	
detectTypes>getDominantType	4	0.006	0.004	
ArgumentParser>ArgumentParser.extractArgs	4	0.006	0.006	
cluster>checkcut	2	0.006	0.006	
validateFileName>validateFileNameOnMATLABPathScalar	14	0.006	0.006	
attributes>checkAttrs	4	0.006	0.003	
HasPropertiesAsNVPairs>getParserByClass	4	0.006	0.006	
validateLineIntervals	4	0.005	0.005	
DetectImportOptionsText>DetectImportOptionsText.setBinaryType	4	0.005	0.005	
DetectImportOptions>DetectImportOptions.setVariableProps	7	0.005	0.004	
getParamVal	13	0.005	0.001	
createmodulesandb	2	0.005	0.005	
regeTransform	1	0.005	0.002	
attributes>checkInputs	4	0.005	0.002	
ExecutableFunction>ExecutableFunction.obj2struct	4	0.004	0.004	
cell.unique	4	0.004	0.002	
metaDim>metaDim.validateAndAssignLabels	1	0.004	0.001	
pdist	1	0.004	0.004	
moduleofnodes	2	0.004	0.004	
replace	24	0.004	0.002	
modularityMatrixPattern	1	0.004	0.004	
inconsistent>tracetree	122	0.004	0.004	
…rtOptions.TextImportOptions>TextImportOptions.TextImportOptions	4	0.004	0.001	
compose	3	0.004	0.004	
getParamVal	13	0.004	0.003	
validateAndEscapeCellStrings>escape	20	0.004	0.001	
linkage>rearrange	8	0.004	0.004	
Builder>Builder.getBuilder	4	0.004	0.002	
…itedTextInputs>DelimitedTextInputs.set.ConsecutiveDelimitersRule	3	0.003	0.001	
changemodulenumber	2	0.003	0.001	
ImportOptions.ImportOptions>ImportOptions.set.NumVariables	1	0.003	0.001	
squareform	1	0.003	0.001	
FastVarOpts>getOptsStructWithDefaults	8	0.003	0.003	
DelimitedTextInputs>DelimitedTextInputs.get.Delimiter	6	0.003	0.001	
ImportOptions.ImportOptions>ImportOptions.get.VariableNames	1	0.003	0.000	
generateArgumentDescriptor	4	0.003	0.003	
FastVarOpts>FastVarOpts.get.Names	1	0.003	0.000	
EncodingInput>EncodingInput.detectEncodingFromFilename	4	0.003	0.003	

fileparts>unixExecution	13	0.003	0.003	
FunctionStore>FunctionStore.getFunctionByName	4	0.003	0.001	
cell.unique>celluniqueR2012a	4	0.003	0.003	
isCellOfCharVectors	33	0.003	0.003	
…esInput>PreserveVariableNamesInput.set.PreserveVariableNames	4	0.002	0.001	
EncodingInput>EncodingInput.set.Encoding	8	0.002	0.002	
cellstr	21	0.002	0.002	
unescape>unescapestring	34	0.002	0.002	
validateAndEscapeStrings	4	0.002	0.001	
ImportOptions.ImportOptions>ImportOptions.ImportOptions	4	0.002	0.001	
…tImportOptionsText>DetectImportOptionsText.setTextFileProperties	4	0.002	0.002	
fullfile>refinePath	12	0.002	0.002	
metaDim>metaDim.metaDim	1	0.002	0.001	
TextInputs>TextInputs.get.Whitespace	4	0.002	0.001	
ind2sub	248	0.002	0.002	
TextInputs>TextInputs.get.CommentStyle	4	0.002	0.000	
DetectImportOptionsText>checkWrongParamsWrongType	4	0.002	0.001	
modularitymatrix	1	0.002	0.002	
ReadMatrix>ReadMatrix.getExtensions	3	0.002	0.001	
possibleConnections	5	0.002	0.002	
…taFromDetection>TableMetaDataFromDetection.setMetaLocations	4	0.002	0.002	
DetectImportOptionsText>DetectImportOptionsText.setFileProps	4	0.002	0.002	
…),A,'scalartext',fname,'expectedScalartext',msgId,argname,argpos)	4	0.002	0.001	
AcceptsFileType>AcceptsFileType.getExtensions	4	0.002	0.001	
validateNVPairs	4	0.002	0.002	
fullfile>ensureTrailingFilesep	12	0.002	0.001	
FunctionStore>accessMap	4	0.002	0.002	
ArrayBuilder>ArrayBuilder.shapedata	3	0.002	0.002	
ExecutableFunction>ExecutableFunction.get.NumRequired	8	0.002	0.001	
isCharVector	42	0.002	0.002	
assertUnsupportedParamsForFileType	8	0.002	0.002	
Builder>Builder.removeOmittedRowsAndVars	4	0.002	0.002	
attributes>checkClass	4	0.001	0.001	
…amesInput>PreserveVariableNamesInput.set.VariableNamingRule	4	0.001	0.001	
tabularDimension>tabularDimension.init	1	0.001	0.001	
DetectImportOptions>getSuppliedProperties	13	0.001	0.001	
readmatrix>@()func.WorkSheet.clear()	3	0.001	0.001	
numberoflinks	1	0.001	0.001	
clusterSize	5	0.001	0.001	
fileparts>getExtension	9	0.001	0.001	
fullfile>@(x)~iscell(x)&&isempty(x)	8	0.001	0.001	
TextInputs>TextInputs.set.VariableNamesLine	5	0.001	0.001	
attributes>findSupportedAttr	4	0.001	0.001	
attributes>valueAttributor	4	0.001	0.001	
ArgumentParser>ArgumentParser.checkAlias	4	0.001	0.001	
ArrayBuilder>ArrayBuilder.ArrayBuilder	3	0.001	0.001	
num2cell	2	0.001	0.001	
FastVarOpts>FastVarOpts.fixSelection	8	0.001	0.001	

validateFileName>localUnique	8	0.001	0.001	
makeValidName	2	0.001	0.001	
…ns>DetectImportOptionsFileExtensions.getFileTypeFromExtension	4	0.001	0.001	
ImportOptions.ImportOptions>ImportOptions.get.selectedIDs	7	0.001	0.001	
varNamesDim>varNamesDim.setUnits	1	0.001	0.000	
DetectImportOptionsText>checkDelimitedFixedWidthWrongParams	4	0.001	0.001	
DetectImportOptionsText>DetectImportOptionsText.setVarNames	4	0.001	0.001	
partialMatchString	6	0.001	0.001	
fullfile>addTrailingFileSep	12	0.001	0.001	
ReadMatrixText>checkWrongParamsWrongType	3	0.001	0.001	
ImportOptions.ImportOptions>ImportOptions.useGeneratedNames	8	0.001	0.001	
…esInput>PreserveVariableNamesInput.get.PreserveVariableNames	5	0.001	0.001	
strfun/private/isTextStrict	28	0.001	0.001	
TextDataReader>TextDataReader.initRowNames	4	0.001	0.001	
ImportOptions.ImportOptions>ImportOptions.setUnboundedSelection	4	0.001	0.001	
FastVarOpts>FastVarOpts.numVars	21	0.001	0.001	
DataReader>DataReader.get.SelectedVariableNames	1	0.001	0.000	
strfun/private/convertStringToOriginalTextType	25	0.001	0.001	
FastVarOpts>FastVarOpts.get.Types	21	0.001	0.001	
FileExtensions>FileExtensions.getExtensionsFromType	4	0.001	0.001	
FastVarOpts>FastVarOpts.setVarOpts	16	0.001	0.001	
TableBuilder>TableBuilder.TableBuilder	1	0.001	0.001	
linkWithBestCriteria	2	0.001	0.000	
fileparts>returnCharOrString	4	0.001	0.001	
metaDim>metaDim.fixLabelsForCompatibility	1	0.001	0.000	
assertNoTableInputs	3	0.001	0.001	
repmat>checkSizesType	113	0.001	0.001	
AcceptsReadableFilename>AcceptsReadableFilename.get.Filename	20	0.001	0.001	
DelimitedTextInputs>DelimitedTextInputs.set.TrailingDelimitersRule	3	0.001	0.001	
TextInputs>TextInputs.TextInputs	4	0.001	0.000	
DetectImportOptions>DetectImportOptions.set.EmptyColumnType	1	0.001	0.000	
…bleNamesInput>PreserveVariableNamesInput.validateNamingRule	4	0.001	0.000	
DataReader>DataReader.get.VariableUnits	1	0.001	0.000	
ReadTable>ReadTable.getExtensions	1	0.001	0.000	
metaDim>metaDim.checkReservedNames	1	0.001	0.000	
…(x,'string')&&isscalar(x)&&~ismissing(x))||(ischar(x)&&size(x,1)<=1)	4	0.001	0.001	
inTimesInMinusOne	1	0.000	0.000	
UsesWorksheet>UsesWorksheet.clear	4	0.000	0.000	
Builder>Builder.Builder	4	0.000	0.000	
TextDataReader>updateDatalines	4	0.000	0.000	
DataReader>DataReader.get.VariableDescriptions	1	0.000	0.000	
mustBeNonnegative	5	0.000	0.000	
TextDataReader>TextDataReader.readVariableUnits	1	0.000	0.000	
TextInputs>TextInputs.setUnescapedWhitespace	3	0.000	0.000	
TextInputs>validateLineNumber	5	0.000	0.000	
TextDataReader>TextDataReader.readVariableNames	1	0.000	0.000	
mustBeNumericOrLogical	4	0.000	0.000	
pwd	12	0.000	0.000	

DelimitedTextInputs>DelimitedTextInputs.getUnescapedDelimiter	3	0.000	0.000	
ArgumentParser>matchPartial	4	0.000	0.000	
TextInputs>TextInputs.getUnescapedWhitespace	3	0.000	0.000	
strip	1	0.000	0.000	
readtable>@()func.WorkSheet.clear()	1	0.000	0.000	
DataReader>DataReader.DataReader	4	0.000	0.000	
DelimitedTextInputs>DelimitedTextInputs.DelimitedTextInputs	4	0.000	0.000	
tabularDimension>tabularDimension.tabularDimension	1	0.000	0.000	
digraph.indegree	2	0.000	0.000	
…tiesAsNVPairs>HasPropertiesAsNVPairs.HasPropertiesAsNVPairs	4	0.000	0.000	
…sNVPairs>HasPropertiesAsNVPairs.assertNoAdditionalParameters	4	0.000	0.000	
EncodingInput>EncodingInput.EncodingInput	4	0.000	0.000	
TextDataReader>TextDataReader.readVariableDescriptions	1	0.000	0.000	
generateArgumentDescriptor>isCharOrString	12	0.000	0.000	
Saveable>Saveable.Saveable	4	0.000	0.000	
FastVarOpts>FastVarOpts.isUniformOptions	2	0.000	0.000	
…sInput>PreserveVariableNamesInput.PreserveVariableNamesInput	4	0.000	0.000	
ReadTableWithImportOptionsText>checkWrongParamsWrongType	1	0.000	0.000	
…rrorRulesInputs>MissingErrorRulesInputs.MissingErrorRulesInputs	4	0.000	0.000	
DataReader>DataReader.get.VariableNames	2	0.000	0.000	
metaDim>metaDim.orientAs	1	0.000	0.000	
ReadMatrix>ReadMatrix.usingRequired	9	0.000	0.000	
supportedTypeNames	7	0.000	0.000	
digraph.outdegree	2	0.000	0.000	
tabular.height	2	0.000	0.000	
ReadTable>ReadTable.usingRequired	3	0.000	0.000	
validateNVPairs>isNonEmptyScalarText	2	0.000	0.000	
tabular.width	1	0.000	0.000	
TextDataReader>TextDataReader.readMetaLine	2	0.000	0.000	
removeRowNamesFromVariables	1	0.000	0.000	
TableBuilder>TableBuilder.handleExtraVariables	1	0.000	0.000	

Self time is the time spent in a function excluding any time spent in child functions. The time includes any overhead time resulting from the profiling process.