Profile Summary

Generated 30-Apr-2019 13:29:08 using performance time.

Function Name	Calls	Total Time	Self Time*
iterativeRun	1	2700.802 s	0.163 s
chrisAttacks	1850	2420.821 s	2392.980 s
attackingLearnPlusPlus_AdvLearn	25	1940.771 s	0.460 s
attackingLearnPlusPlus_chrisAttack_SINDy	25	759.439 s	0.798 s
learn_nse_for_attacking	2000	156.393 s	1.134 s
classifier_test	121000	120.052 s	2.480 s
...M>CompactClassificationSVM.predict	121000	117.572 s	3.522 s
...nModel>ClassificationModel.predict	121000	114.050 s	7.902 s
...se_for_attacking>classify_ensemble	3950	81.925 s	2.779 s
waitbar	3925	59.638 s	26.749 s
...SVM>CompactClassificationSVM.score	121000	51.219 s	7.020 s
SINDy>SINDy.buildModel	1950	49.238 s	0.471 s
...se_for_attacking>decision_ensemble	2000	41.345 s	0.438 s
SINDyPreprocessing	25	39.995 s	0.226 s
SINDy>SINDy.SINDy	75	39.700 s	0.015 s
addpath	300	39.571 s	0.491 s
path	300	39.051 s	32.132 s
SINDy>SINDy.performSparseGalerkin	1950	37.069 s	0.881 s
CompactSVMImpl>CompactSVMImpl.score	121000	36.900 s	4.849 s
ode45	3900	33.474 s	3.467 s
classifier_train	2022	31.635 s	0.128 s

Total Time Plot (dark band = self time)
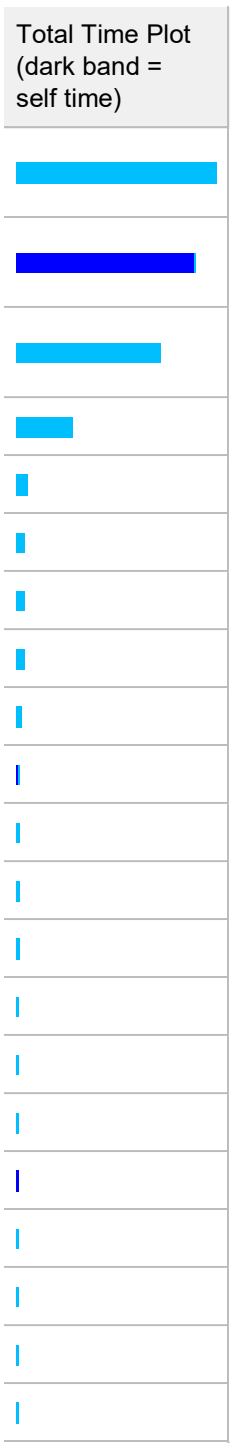
fitcsvm	2022	31.507 s	0.248 s
CompactSVMImpl>iDispatchPredict	121000	30.691 s	30.691 s
waitbar>updateWaitbar	3925	30.601 s	2.048 s
ClassificationSVM>ClassificationSVM.fit	2022	30.376 s	0.114 s
uitools\private\uiwaitbar	3925	28.553 s	1.083 s
...tomSparseGalerkin(t,x,Xi,numDims,obj)	264600	28.117 s	2.044 s
javax.swing.JProgressBar (Java method)	3925	27.470 s	27.470 s
SINDy>SINDy.customSparseGalerkin	264600	26.073 s	2.578 s
orientX	121000	24.174 s	3.294 s
SINDy>SINDy.customPoolData	266550	23.873 s	14.782 s
FitTemplate>FitTemplate.fit	2022	22.256 s	0.485 s
...t;ClassificationSVM.ClassificationSVM	2022	17.249 s	3.770 s
odextend	1950	15.819 s	0.682 s
parseArgs	151330	15.607 s	5.321 s
ClassLabel>ClassLabel.ismember	250088	10.770 s	6.302 s
parseArgs	151330	10.286 s	8.815 s
validatestring	123022	10.021 s	2.781 s
nsumk	268500	9.204 s	5.315 s
...odel>ClassificationModel.get.Prior	121000	9.009 s	4.011 s
...Model>ClassificationModel.maxScore	121000	8.195 s	7.909 s
...tionSVM>ClassificationSVM.template	2022	8.005 s	0.057 s
SVMImpl>SVMImpl.make	2022	7.603 s	1.274 s
FitTemplate>FitTemplate.make	2022	7.530 s	0.439 s
general\private\parsedirs	600	6.720 s	6.688 s
FitTemplate>FitTemplate.fillIfNeeded	2022	6.468 s	3.184 s
makeClassificationModelAdapter	121000	6.099 s	4.959 s
SINDy>SINDy.performSparseDynamics	1950	5.492 s	0.048 s

sparsifyDynamics	1950	5.444 s	5.444 s
SINDy>SINDy.createLearnedFunctionsTable	1950	5.146 s	0.034 s
SINDy>SINDy.customPoolDataLIST	1950	5.112 s	0.817 s
validatestring>checkString	123022	4.722 s	4.722 s
...nSVM>ClassificationSVM.prepareData	2022	4.522 s	0.956 s
...ectorOps>DisallowVectorOps.subsref	44484	4.486 s	4.486 s
SVMImpl>iDispatchSolve	2022	4.297 s	4.297 s
...Model>ClassificationModel.get.Cost	121000	2.779 s	2.320 s
ClassLabel>ClassLabel.eq	246044	2.673 s	1.931 s
nchoosek	268500	2.531 s	2.531 s
validatestring>checkInputs	123022	2.518 s	2.518 s
struct2table	1950	2.397 s	0.129 s
ClassLabel>ClassLabel.numel	631286	2.256 s	2.256 s
table.table>table.fromScalarStruct	1950	2.132 s	0.084 s
...gt;ClassificationModel.get.ClassNames	121000	2.126 s	1.414 s
table.table>table.init	1950	2.028 s	0.364 s
deval	1950	1.885 s	1.196 s
optimalKernelScale	2022	1.593 s	0.246 s
tabular.tabular>tabular.initInternals	1950	1.539 s	0.226 s
num2cell	143242	1.471 s	1.471 s
...mension>tabularDimension.setLabels	5850	1.415 s	0.139 s
funfun\private\odearguments	3900	1.393 s	0.398 s
VChooseK (MEX-file)	268500	1.358 s	1.358 s
Predictor>Predictor.get.TableInput	121000	1.347 s	1.347 s
...in>@(e,d)obj.postUpdateFcn(canvas)	3850	1.269 s	0.090 s
...ension>tabularDimension.createLike	3900	1.234 s	0.169 s
...gin>PostUpdatePlugin.postUpdateFcn	3850	1.179 s	0.508 s

...ficationModelAdapter>@(x)istall(x)	121000	1.140 s	0.769 s
...ficationRegressionModel.prepareDataCR	2022	1.127 s	0.380 s
SVMParams>SVMParams.make	2022	1.068 s	0.347 s
ClassLabel>ClassLabel.length	256154	1.003 s	1.003 s
...t;Predictor.get.CategoricalPredictors	123022	1.002 s	1.002 s
varNamesDim>varNamesDim.createLike	1950	0.959 s	0.079 s
tabular.subsasgn	1950	0.923 s	0.095 s
...r>Predictor.get.ObservationsInRows	121000	0.878 s	0.878 s
...ficationModel.FullClassificationModel	2022	0.849 s	0.083 s
learnPlusPlus_NSE_Preprocessing	50	0.829 s	0.534 s
tabular.subsasgnDot	1950	0.828 s	0.157 s
ClassLabel>ClassLabel.isempty	250088	0.765 s	0.765 s
typeof	250088	0.759 s	0.759 s
...t;varNamesDim.validateAndAssignLabels	1950	0.753 s	0.160 s
checkSupportedNumeric	131110	0.741 s	0.741 s
ClassLabel>ClassLabel.labels	121000	0.712 s	0.712 s
funfun\private\odefinalize	3900	0.711 s	0.671 s
string.strcat	3900	0.704 s	0.207 s
PostUpdatePlugin>isAxesToolbarExcluded	3850	0.671 s	0.671 s
datasample	4044	0.638 s	0.333 s
odeget	42900	0.636 s	0.327 s
pdist2	2022	0.630 s	0.518 s
ClassLabel>ClassLabel.levels	4044	0.580 s	0.215 s
tabular.setProperty	1950	0.532 s	0.131 s
...t;rowNamesDim.validateAndAssignLabels	3900	0.523 s	0.345 s
cell.strcat	3900	0.497 s	0.497 s
parseOptimizationArgs	2022	0.494 s	0.076 s

Partitioner>Partitioner.processArgs	2022	0.481 s	0.100 s
SINDy>SINDy.buildLibrary	1950	0.440 s	0.062 s
istall	141220	0.439 s	0.439 s
ismember	6116	0.429 s	0.083 s
FitTemplate>FitTemplate.catchType	2022	0.419 s	0.065 s
ModelParams>ModelParams.fillIfNeeded	2022	0.415 s	0.031 s
Resampler>Resampler.processArgs	2022	0.400 s	0.078 s
classCount	2022	0.400 s	0.085 s
checkNotTall	2022	0.390 s	0.321 s
SVMParams>SVMParams.fillDefaultParams	2022	0.384 s	0.293 s
waitbar>extractHandles	3925	0.376 s	0.376 s
...ampler>SubspaceSampler.processArgs	2022	0.374 s	0.066 s
...Dim>varNamesDim.checkReservedNames	3900	0.373 s	0.293 s
SINDy>SINDy.getDerivatives	1950	0.370 s	0.058 s
deval>extract_idata	16400	0.367 s	0.367 s
...r>MajorityUndersampler.processArgs	2022	0.364 s	0.059 s
...ractions.createAndRegisterTextControl	3850	0.359 s	0.117 s
stats	2000	0.354 s	0.095 s
Predictor>Predictor.Predictor	6066	0.354 s	0.318 s
ismember>ismemberR2012a	6116	0.346 s	0.109 s
varNamesDim>varNamesDim.makeValidName	1950	0.329 s	0.096 s
istable	123022	0.329 s	0.329 s
funfun\private\ntrp45	16400	0.322 s	0.322 s
unique	4094	0.322 s	0.140 s
gradient	1950	0.313 s	0.233 s
odeget>getknownfield	42900	0.309 s	0.309 s
...assificationModel.ClassificationModel	4044	0.295 s	0.081 s

identity	121000	0.286 s	0.286 s
...ClassificationModel.processClassNames	2022	0.283 s	0.028 s
mvnrnd	1950	0.271 s	0.146 s
ClassLabel>ClassLabel.grp2idx	2022	0.257 s	0.046 s
...tabularDimension.checkDuplicateLabels	3900	0.254 s	0.254 s
...actions>TextInteractions.getCanvas	3850	0.242 s	0.242 s
cell.ismember	9966	0.239 s	0.239 s
usejava	3925	0.234 s	0.234 s
...ificationSVM.CompactClassificationSVM	2022	0.230 s	0.085 s
ismember>ismemberBuiltinTypes	6066	0.228 s	0.228 s
SVMParams>SVMParams.SVMParams	2022	0.209 s	0.109 s
...del.FullClassificationRegressionModel	2022	0.201 s	0.062 s
strcat	300	0.195 s	0.179 s
ClassLabel>ClassLabel.subsref	2022	0.191 s	0.159 s
gather	12132	0.187 s	0.187 s
unique>uniqueR2012a	4094	0.181 s	0.181 s
...lClassificationModel.makeClassSummary	2022	0.178 s	0.088 s
ClassLabel>ClassLabel.ClassLabel	10110	0.165 s	0.165 s
strjoin	3900	0.156 s	0.139 s
expandCategorical	2022	0.144 s	0.049 s
table2FitMatrix	2022	0.138 s	0.078 s
parseArgs	1950	0.136 s	0.136 s
...sion>tabularDimension.assignLabels	3900	0.135 s	0.135 s
FitTemplate>FitTemplate.isfilled	2022	0.130 s	0.130 s
table.table>table.table	1950	0.124 s	0.033 s
funfun\private\odemass	3900	0.122 s	0.071 s
deal	6400	0.114 s	0.114 s

fullfile	300	0.114 s	0.077 s
FitTemplate>FitTemplate.FitTemplate	2022	0.109 s	0.089 s
...Plus_NSE_Preprocessing>@(x)mean(x)	4000	0.108 s	0.018 s
...sPlus_NSE_Preprocessing>@(x)cov(x)	4000	0.108 s	0.026 s
stats>index2vector	4000	0.106 s	0.106 s
ModelParams>ModelParams.ModelParams	2022	0.101 s	0.081 s
...pi(x,this.NamesDataPrepIn,length(x)))	8088	0.099 s	0.099 s
...;FullClassificationModel.processPrior	2022	0.095 s	0.062 s
funfun\private\odeevents	3900	0.092 s	0.042 s
tabular.tabular>tabular.tabular	1950	0.091 s	0.074 s
mean	4000	0.090 s	0.066 s
mustBePositive	6100	0.084 s	0.034 s
cov	4000	0.081 s	0.081 s
gradient>parse_inputs	1950	0.079 s	0.079 s
median	2022	0.079 s	0.079 s
...t;tabularDimension.checkReservedNames	3900	0.079 s	0.079 s
cholcov	1950	0.079 s	0.079 s
...t;FullClassificationModel.processCost	2022	0.077 s	0.049 s
...t;DisallowVectorOps.DisallowVectorOps	10110	0.075 s	0.075 s
...lidateInputForUnaryComparisonFunction	10000	0.071 s	0.046 s
mustBeFinite	14300	0.059 s	0.059 s
stats>compute_f_measure	2000	0.053 s	0.053 s
isText	1950	0.053 s	0.053 s
...sificationTree.removeZeroPriorAndCost	2022	0.052 s	0.052 s
tabular.matchPropertyName	1950	0.052 s	0.042 s
SVMImpl>mapIdx	8088	0.048 s	0.048 s
stats>compute_recall	2000	0.047 s	0.047 s

dominantType	1950	0.046 s	0.046 s
...ClassificationModel.removeMissingVals	2022	0.046 s	0.025 s
table2FitMatrix>processArgs	2022	0.043 s	0.043 s
sub2ind	2022	0.041 s	0.041 s
stats>compute_precision	2000	0.041 s	0.041 s
mustBeNonnegative	3900	0.040 s	0.019 s
SVMImpl>SVMImpl.SVMImpl	2022	0.040 s	0.023 s
...sificationModel.processScoreTransform	2022	0.037 s	0.037 s
...r>@(e,d)obj.handleMouseMotion(e,d)	17	0.036 s	0.002 s
...t;ToolbarController.handleMouseMotion	17	0.035 s	0.007 s
FitTemplate>gettype	2022	0.033 s	0.033 s
parseOnOff	2022	0.031 s	0.021 s
funfun\private\odefcncleanup	3900	0.030 s	0.030 s
general\private\catdirs	300	0.029 s	0.020 s
Predictor>Predictor.get.VariableRange	2022	0.028 s	0.028 s
validators\private\isNumericOrLogical	10650	0.028 s	0.028 s
isMatchingSize	3900	0.026 s	0.026 s
chrisAttacks_With_SINDy_Preprocessing	25	0.025 s	0.019 s
...lus_NSE_Preprocessing>@(a,b)a(b,:)	4000	0.025 s	0.025 s
mean>mysize	4000	0.023 s	0.023 s
mustBeMember	50	0.023 s	0.002 s
repmat	275	0.022 s	0.020 s
encodeCategorical	2022	0.022 s	0.022 s
pathsep	900	0.021 s	0.021 s
ClassLabel>ClassLabel.ismissing	2022	0.021 s	0.021 s
...abular>tabular.validateNumRowsVars	1950	0.020 s	0.020 s
filesep	600	0.019 s	0.019 s

fullfile>ensureTrailingFilesep	300	0.019 s	0.006 s
...r>ToolbarController.canShowToolbar	17	0.018 s	0.018 s
...adCompatibility.saveLoadCompatibility	1950	0.018 s	0.018 s
...Impl>CompactSVMImpl.CompactSVMImpl	2022	0.017 s	0.017 s
fullfile>refinePath	300	0.017 s	0.017 s
strfun\private\strescape	3900	0.017 s	0.017 s
SINDy>mustBeTimeSeries	3900	0.016 s	0.016 s
blanks	300	0.016 s	0.016 s
...NSE_Preprocessing>@(x)eq(x,iClass)	4000	0.014 s	0.014 s
simpleModels	2022	0.014 s	0.014 s
fullfile>addTrailingFileSep	300	0.013 s	0.013 s
mustBeNonsparse	3900	0.013 s	0.013 s
stats>compute_g_mean	2000	0.013 s	0.013 s
mustBeNumeric	3900	0.012 s	0.012 s
mustBeReal	3900	0.012 s	0.012 s
Advlearn_Alone_Preprocessing	25	0.012 s	0.009 s
...nteractions.createDefaultInteractions	1	0.011 s	0.005 s
mustBeInteger	550	0.011 s	0.008 s
isScalarText	1950	0.010 s	0.010 s
table2FitMatrix>removeArg	2022	0.009 s	0.009 s
ismember>ismemberClassTypes	50	0.009 s	0.009 s
parseOnOff	2022	0.009 s	0.009 s
classificationModels	2022	0.009 s	0.009 s
...us_NSE_Preprocessing>@(x)size(x,1)	4000	0.009 s	0.009 s
regressionModels	2022	0.007 s	0.007 s
...r>ToolbarController.isPlotEditMode	17	0.005 s	0.005 s
path>isValidInput	600	0.004 s	0.004 s

mustBeGreaterThanOrEqual	50	0.004 s	0.002 s
....queueCreateDefaultInteractionsOnAxes	1	0.003 s	0.002 s
...r>@(e,d)obj.handleMouseExited(e,d)	13	0.003 s	0.002 s
...oller>ToolbarController.getHitAxes	17	0.002 s	0.002 s
...>ToolbarController.getCanvasFigure	17	0.002 s	0.002 s
repmat>checkSizesType	550	0.002 s	0.002 s
...dateInputsForBinaryComparisonFunction	50	0.002 s	0.002 s
...>UnifiedAxesInteractions.getCanvas	1	0.001 s	0.001 s
...t;ToolbarController.handleMouseExited	13	0.001 s	0.001 s
...AxesInteractions.queuedAxesOperations	1	0.001 s	0.001 s
isPublishingTest	1	0.001 s	0.001 s
...r>InteractionContainer.get.Enabled	1	0.000 s	0.000 s

Self time is the time spent in a function excluding the time spent in its child functio
time also includes overhead resulting from the process of profiling.

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