Profile Summary (Total time: 1360.678 s)

Generated 21-May-2023 22:20:46 using performance time.

Function Name	Calls	Total Time (s) ↓	Self Time* (s)	Total Time Plot (dark band = self time)
classificationres	1	1360.667	1.911	
runSpringerSegmentationAlgorithm	3240	1119.528	0.289	
viterbiDecodePCG_Springer	3240	834.263	91.254	
viterbi_Springer (MEX-file)	3240	486.481	486.481	
getSpringerPCGFeatures	3240	242.460	2.306	
spectrogram	6480	233.923	0.361	
signal\private\pspectrogram	6480	233.538	4.126	
signal\private\computeDFT	6480	199.527	1.252	
signal\private\computeDFT>computeDFTviaCZT	6480	197.889	0.200	
czt	6480	197.689	197.167	
extractFeaturesFromHsIntervals	3240	190.721	2.271	
mvnpdf	15110444	179.625	114.719	
calculate_energy	3240	149.347	17.739	
get_PSD_feature_Springer_HMM	3240	132.524	4.324	
cell2mat	30233848	71.551	71.551	
cholcov	15110444	64.906	64.906	
getHeartRateSchmidt	3240	41.209	1.604	
getDWT	3240	40.623	9.725	
audioread	3240	36.013	0.503	
resample	16200	33.621	1.394	
audioread>readaudio	3240	32.673	2.069	
Homomorphic_Envelope_with_Hilbert	6480	29.580	3.995	
uniformResample	16200	29.093	2.672	
filtfilt	19440	25.618	0.615	
spectralEntropy	3240	25.387	3.083	
filtfilt>efiltfilt	19440	24.068	0.768	
preprocess	3240	22.304	1.084	
createFilter	16200	21.109	2.270	
hilbert	9720	20.860	0.107	
hilbert>hilbert_ml	9720	20.724	20.537	
stft	3240	20.483	3.578	
filtfilt>ffOneChan	15798	18.149	18.149	
buffer	3240	16.847	16.842	
getSTFTColumns	6480	15.949	15.949	
appcoef	9720	15.133	0.985	
absolutePathForReading	3240	14.692	1.044	
butterworth_low_pass_filter	6480	13.641	0.105	
wavedec	3240	12.912	1.841	
signal_entropy	3240	12.534	0.217	
histogram_signalEntropy	3240	12.317	12.317	
butterworth_high_pass_filter	6480	12.191	0.370	
butter	19440	11.290	0.504	
firls	16200	11.083	0.290	
firls>eFirls	16200	10.726	6.413	
butter>butterImpl	19440	10.724	1.753	

xcorr	3240	9.405	0.116	
signal\private\pspectrogram>compute_PSD	3240	9.339	6.741	
xcorr>autocorr	3240	9.015	8.313	
dwt	9720	8.814	3.292	
spectral_entropy	3240	8.575	6.136	
idwt	9720	8.418	1.501	
FilePath>FilePath.get.Exists	9720	8.153	8.153	
kaiser	16200	7.673	6.240	
Hilbert_Envelope	3240	7.596	0.768	
wfilters	12960	7.212	1.138	
upsconv1	19440	6.624	0.264	
Channel>Channel.Channel	3240	6.222	4.440	
prctile	9720	5.935	5.701	
wconv1	38880	5.434	0.966	
schmidt_spike_removal	6480	5.172	4.959	
mnrval	12960	5.006	3.050	
FilePath>FilePath.get.Absolute	3240	4.874	2.438	
FilePath>FilePath.get.Readable	3240	4.811	2.364	
conv	38880	4.469	4.469	
upfirdn	16200	4.364	0.360	
sinc	64800	4.127	4.127	
wkeep1	38880	4.045	3.948	
quantile	6480	3.865	0.074	
filtfilt>ffOneChanCat	3642	3.793	3.786	
skewness	3240	3.547	2.997	
xlsread	1	3.489	0.006	
wavemngr	25920	3.487	3.050	
kurtosis	3240	3.484	2.983	
iofun\private\xlsreadCOM	1	3.473	0.009	
zp2ss	19440	3.410	1.154	
hamming	9720	3.327	0.128	
InputStream>InputStream.read	3240	3.307	0.877	
signal\private\gencoswin	9720	3.168	0.274	
tabular.braceAssign	3240	3.104	0.674	
mean	84204	3.025	2.494	
welchparse	6480	2.955	0.293	
PluginManager>PluginManager.getPluginForRead	3240	2.778	2.396	
iofun\private\xlsreadCOM>segmentedRead	1	2.757	2.698	
signal\private\upfirdnmex (MEX-file)	16200	2.671	2.671	
RemoteToLocal>RemoteToLocal.RemoteToLocal	3240	2.610	0.118	
computepsd	3240	2.599	2.599	
sharedParser	16200	2.549	0.817	
wextend	9720	2.523	0.156	
RemoteToLocal>RemoteToLocal.hasHTTPSPrefix	3240	2.478	2.478	
InputStream>InputStream.readPackets	3872	2.409	2.409	
wextend	9720	2.366	0.184	
iqr	3240	2.185	0.041	
wextend>makeSym	9720	2.183	2.183	
signal\private\gencoswin>sym_window	9720	2.165	0.941	
isUnderlyingType	142560	2.151	1.674	

tabular,oneLevelParenAssign	3240	1.980	1.605
std	48564	1.684	0.297
sigcasttofloat	45360	1.634	0.564
dyadup	19440	1.586	1.586
poly	51840	1.566	1.566
nanmean	25920	1.498	0.202
rbiowavf	12960	1.444	0.214
median	17330	1.410	1.410
var	48564	1.387	1.259
detcoef	19440	1.372	1.372
sigcheckfloattype	64800	1.365	1.365
filtfilt>getCoeffsAndInitialConditions	19440	1.358	1.122
sharedParser>dimParser	16200	1.344	0.657
upfirdnParser	16200	1.333	0.741
expand_qt	3240	1.307	1.307
bilinear	19440	1.289	0.935
biorwavf	12960	1.229	0.335
cplxpair	38880	1.184	0.991
audioread>@()delete(durationListener)	3240	1.178	0.315
welchparse>welch_options	6480	1.153	0.491
mad	3240	1.092	0.645
welchparse>segment_info	6480	1.088	0.129
signal\private\gencoswin>calc_window	9720	1.033	1.033
lp2lp	12960	1.027	0.491
normalise_signal	12960	1.019	0.187
abcdchk	38880	0.974	0.905
bandpower	3240	0.958	0.129
validatestring	12960	0.926	0.286
buttap	19440	0.908	0.549
uniformParser	16200	0.889	0.274
Channel>Channel.delete	3240	0.862	0.486
biorfilt	12960	0.862	0.367
getParamVal	25920	0.858	0.140
errorIf	417960	0.857	0.857
str2num	25920	0.814	0.171
bandpower>timedomainbandpower	3240	0.805	0.501
audioread>@()channel.close()	3240	0.775	0.037
Channel>Channel.open	3240	0.774	0.342
Stream>Stream.Stream	6480	0.749	0.529
Channel>Channel.close	3240	0.738	0.392
getParamVal	25920	0.717	0.471
target	317520	0.703	0.703
xcorr>findTransformLength	3240	0.702	0.702
FilePath>FilePath.FilePath	3240	0.692	0.367
…riptorValidator>SpectralDescriptorValidator.SpectralDescriptorValidator	3240	0.663	0.342
str2num>protected_conversion	25920	0.643	0.643
signal\private\pspectrogram>nonConjugateTransposeOutputs	6480	0.636	0.636
parseArgs	12960	0.622	0.438
psdoptions	6480	0.620	0.532
iofun\private\xlsreadSplitNumericAndText	1	0.566	0.560

InputStream>InputStream.InputStream	3240	0.557	0.056	
lp2hp	6480	0.534	0.330	
Channel>Channel.postInit	3240	0.502	0.502	
fileparts	9725	0.490	0.126	
signal\private\iirchk	19440	0.484	0.452	
stats\private\stattestlink	12960	0.477	0.477	
zp2ss>parse_input	19440	0.452	0.400	
orientToNdim	16200	0.448	0.351	
isodd	51840	0.421	0.333	
validatestring>checkString	12960	0.412	0.412	
welchparse>parse_inputs	6480	0.410	0.378	
rat	16200	0.395	0.395	
shiftdim	38880	0.380	0.380	
fileparts>legacyPCExecution	9725	0.363	0.363	
Channel>Channel.isOpen	9720	0.355	0.355	
orthfilt	25920	0.354	0.173	
PluginManager>PluginManager.errorIfUnsupportedFile	3240	0.347	0.134	
wavemngr>noblank	155520	0.337	0.337	
audioread>validateDataType	3240	0.332	0.045	
isStringScalar	139320	0.318	0.318	
OutputStream>OutputStream.OutputStream	3240	0.304	0.029	
Channel>Channel.preOpen	3240	0.304	0.304	
getSpectrogramOptions	6480	0.303	0.173	
default_Springer_HSMM_options	9721	0.293	0.293	
const	32400	0.286	0.286	
signal\private\check_order	25920	0.282	0.282	
assert	106920	0.281	0.281	
mean>mysize	84204	0.278	0.278	
butter>buttzeros	19440	0.272	0.272	
nullcopy	77760	0.269	0.269	
sharedParser>countNumericInputs	32400	0.261	0.223	
signal\private\isodd	19440	0.260	0.093	
Stream>Stream.addFilter	3240	0.255	0.255	
tabularDimension>tabularDimension.subs2inds	9720	0.254	0.162	
mean>parseInputs	25920	0.253	0.207	
cellstr	25920	0.246	0.246	
sharedParser>getInterpMethod	16200	0.236	0.179	
isUnderlyingType>iIsScalarText	142560	0.233	0.233	
nextpow2	12960	0.232	0.232	
deblankl	25920	0.231	0.231	
varNamesDim>varNamesDim.subs2inds	6479	0.231	0.111	
validatestring>checkInputs	12960	0.228	0.228	
getUniformApprox	6480	0.224	0.122	
validateResampleRatio	16200	0.221	0.221	
Stream>Stream.isSupported	6480	0.220	0.220	
Channel>Channel.postClose	3240	0.219	0.219	
…escriptorValidator>SpectralDescriptorValidator.validateOptionalInputs	3240	0.208	0.155	
mat2cell	3240	0.208	0.208	
FilePath>FilePath.set.Extension	3240	0.202	0.079	
get_duration_distributions	3240	0.195	0.097	

signal\private\pspectrogram>assignAndcastToSingle	6480	0.194	0.194	
Channel>@(s)validateStreamLimits(obj,s)	3240	0.194	0.168	
signal\private\iseven	9720	0.192	0.051	
PluginManager>PluginManager.getInstance	9720	0.185	0.185	
parseArgs	12960	0.184	0.184	
qmf	25920	0.181	0.181	
prctile>interpColsSame	9720	0.166	0.166	
xcorr>scaleOutput	3240	0.162	0.162	
signal\private\firchk	16200	0.161	0.132	
unroll	68040	0.154	0.154	
errargt	12960	0.151	0.151	
iseven	9720	0.141	0.102	
Channel>Channel.lock	3240	0.140	0.102	
unique	3241	0.139	0.101	
var>mysize	48564	0.128	0.128	
erase	3240	0.123	0.081	
Channel>Channel.preTerm	3240	0.121	0.121	
psdesttype	6480	0.121	0.105	
iofun\private\openExcelWorkbook	1	0.118	0.088	
parseXcorrOptions	3240	0.112	0.112	
audioread>validateRange	3240	0.106	0.034	
mustBeMember	3240	0.095	0.045	
Stream>Stream.delete	6480	0.092	0.092	
psdoptions>reshapeInputArg	12960	0.088	0.069	
createFilter>computeZeroPadLength	16200	0.083	0.083	
signal\private\pspectrogram>computeReassign	6480	0.080	0.080	
fliplr	25954	0.080	0.080	
linspace	6480	0.078	0.078	
Channel>Channel.updateAndFetchLockCount	6480	0.075	0.075	
audioread>validateRangeWithTotalSamples	3240	0.072	0.072	
prctile>dominantTypeHelper	9720	0.068	0.068	
signal\private\pspectrogram>chkinput	6480	0.068	0.041	
MessageHandler>MessageHandler.MessageHandler	3240	0.068	0.068	
Channel>Channel.unlock	3240	0.064	0.027	
varsize	23082	0.062	0.062	
signal\private\pspectrogram>processFrequencyOptions	6480	0.059	0.059	
isConstTrue	16200	0.054	0.054	
iofun\private\xlsreadCOM>rowCol2A1	210	0.053	0.007	
cell.ismember	3240	0.050	0.050	
ind2sub	3240	0.049	0.049	
rowNamesDim>rowNamesDim.lengthenTo	3240	0.048	0.048	
tabular.size	3240	0.048	0.048	
num2str	454	0.047	0.016	
mean>isInvalidText	25920	0.046	0.046	
signal\private\pspectrogram>formatSpectrogram	6480	0.045	0.045	
tabular.disp	1	0.043	0.025	
RemoteToLocal>RemoteToLocal.delete	3240	0.040	0.025	
gather	3240	0.039	0.039	
num2cell	3240	0.039	0.039	
unique>uniqueR2012a	3241	0.038	0.038	

PluginManager>PluginManager.errorIfFile	9720	0.035	0.035	
PluginManager>PluginManager.handlePluginError	3240	0.034	0.034	
InputStream>InputStream.clearPartialPacket	3240	0.028	0.028	
strfun\private\convertStringToOriginalTextType	3240	0.028	0.028	
Channel>Channel.validateStreamLimits	3240	0.026	0.026	
int2str	420	0.025	0.025	
isColon	12961	0.023	0.023	
InputStream>InputStream.readPartialPacket	3240	0.021	0.021	
setProperties	3240	0.018	0.018	
Channel>@(x)isstruct(x)||isempty(x)	3240	0.017	0.017	
registerevent	1	0.017	0.006	
varNamesDim>varNamesDim.orientAs	6479	0.017	0.017	
iofun\private\xlsreadCOM>@()xlsCleanup(Excel,file,workbookState)	1	0.017	0.001	
iofun\private\xlsCleanup	1	0.016	0.016	
RemoteToLocal>RemoteToLocal.deleteIfLocalCopy	3240	0.015	0.015	
strfun\private\isTextStrict	3240	0.015	0.015	
isCharVector	3240	0.014	0.014	
tabular.dotAssign	1	0.012	0.006	
varNamesDim>varNamesDim.createLike	1	0.012	0.001	
getFileInfoForToolstrip	2	0.011	0.011	
rowNamesDim>rowNamesDim.orientAs	3241	0.011	0.011	
tabularDimension>tabularDimension.createLike	1	0.011	0.001	
columnLetter	420	0.010	0.010	
tabularDimension>tabularDimension.setLabels	1	0.010	0.001	
tabular.parenReference	1	0.009	0.005	
metaDim>metaDim.checkAgainstVarLabels	1	0.009	0.001	
unregisterevent	1	0.009	0.002	
varNamesDim>varNamesDim.validateAndAssignLabels	1	0.009	0.003	
makeUniqueStrings	1	0.008	0.002	
iofun\private\xlsreadCOM>activate_sheet	1	0.007	0.007	
getExcelInstance	1	0.006	0.002	
winfun\private\removeevent	1	0.006	0.006	
registerevent>addevent	1	0.006	0.006	
varNamesDim>varNamesDim.makeValidName	3	0.006	0.003	
iofun\private\xlsreadSplitNumericAndText>getCorner	4	0.006	0.006	
getExcelInstance>isactive	1	0.005	0.005	
num2str>strvrcat	34	0.005	0.001	
winfun\private\checkeventname	1	0.004	0.004	
table.table>table.table	1	0.004	0.001	
strjust	34	0.004	0.001	
iofun\private\validpath	1	0.004	0.001	
varNamesDim>varNamesDim.lengthenTo	1	0.004	0.002	
iofun\private\xlsreadCOM>ensureIsCell	210	0.003	0.003	
makeUniqueStrings>makeUnique	1	0.003	0.003	
strjust>strjustOnChar	34	0.003	0.003	
tabular.disp>getVarNamesDispLines	1	0.003	0.003	
tabular.tabular>tabular.tabular	1	0.003	0.002	
winfun\private\comeventcallback	1	0.003	0.002	
varNamesDim>varNamesDim.checkReservedNames	4	0.003	0.002	
iofun\private\xlsreadCOM>selectData	1	0.002	0.002	

varNamesDim>varNamesDim,defaultLabels	1	0.002	0.000	
iofun\private\openExcelWorkbook>waitForValidWorkbook	1	0.002	0.002	
num2str>cellPrintf	34	0.002	0.002	
varNamesDim>varNamesDim,dfltLabels	1	0.001	0.001	
tabularDimension>tabularDimension,checkDuplicateLabels	1	0.001	0.001	
isenum	34	0.001	0.001	
validateVariableNameLength	4	0.001	0.001	
isText	1	0.001	0.001	
table,table>table,cloneAsEmpty	1	0.001	0.000	
tabular,disp>getPaddedStr	11	0.001	0.001	
tabularDimension>tabularDimension,checkReservedNamesImpl	4	0.001	0.001	
iofun\private\validpath>getFullName	1	0.001	0.001	
xlsreadSupportedExtensions	1	0.001	0.001	
tabular,disp>boldifyLabels	1	0.001	0.000	
numberedNames	1	0.001	0.001	
iscom	2	0.001	0.001	
makeUniqueStrings>validateExclStrOrElemToChk	1	0.001	0.001	
tabular,disp>nSpaces	26	0.001	0.001	
makeUniqueStrings>truncateString	1	0.001	0.001	
tabularDimension>tabularDimension,selectFrom	1	0.000	0.000	
table,table>table,empty	1	0.000	0.000	
tabularDimension>tabularDimension,assignLabels	1	0.000	0.000	
…odCall>OverridesPublicDotMethodCall,OverridesPublicDotMethodCall	1	0.000	0.000	
iofun\private\openExcelWorkbook>WorkbookActivateHandler	1	0.000	0.000	
getExcelWorkbookActivationTimeout	1	0.000	0.000	
iofun\private\xlsreadSplitNumericAndText>emptyCase	4	0.000	0.000	
tabular,disp>nUnder	34	0.000	0.000	
makeUniqueStrings>validateMaxStringLength	1	0.000	0.000	
tabular,disp>containsRegexp	1	0.000	0.000	
RedefinesParen,RedefinesParen>RedefinesParen,RedefinesParen	1	0.000	0.000	
matricize	33	0.000	0.000	
isCharString	2	0.000	0.000	
…otParen,RedefinesDotParen>RedefinesDotParen,RedefinesDotParen	1	0.000	0.000	
tabular,disp>getFloatFormats	1	0.000	0.000	
RedefinesBrace,RedefinesBrace>RedefinesBrace,RedefinesBrace	1	0.000	0.000	
saveLoadCompatibility>saveLoadCompatibility,saveLoadCompatibility	1	0.000	0.000	
RedefinesDot,RedefinesDot>RedefinesDot,RedefinesDot	1	0.000	0.000	
tabular,disp>vectorizedWrappedLength	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.