Profile Summary (Total time: 2424.359 s)

Generated 01-Mar-2021 16:17:40 using performance time.

Function Name	Calls	Total Time (s)	Self Time* (s)	Total Time Plot (dark band = self time)
Boss 2 RC nnlc accuracy	1	2424.359	0.081	
clientconstraint fixedrank equality nonneg lowrankcompletion	1	2424.244	0.065	
ribfgs	53385	1626.083	18.633	
linesearch hint	138193	1260.306	27.295	
getCost	3756655	1053.461	245.501	
exactpenaltyViaSmoothinglgh	2	600.498	6.830	
almbddmultiplier	1	600.343	0.239	
SQP	1	600.051	23.646	
exactpenaltyViaSmoothinglse	1	600.036	5.611	
hessianmatrix	9823	463.919	5.978	
getHessian	392920	423.311	16.694	
SQP>@(X,d)hessLagrangian(X,d,mus,lambdas)	196460	370.733	0.868	
SQP>hessLagrangian	196460	369.865	84.336	
nk equality_nonneg_lowrankcompletion>@(Y)nncostfun(Y,row,col)	56186424	360.664	150.129	
qetCostGrad	191578	301.913	3.451	_
getGradient	404508	286.569	25.638	
almbddmultiplier>@(X)cost_alm(X,problem0,rho,lambdas,qammas)	776329	264.605	15.490	
fixedrankembeddedfactory>projection	11997381	249.969	203.897	_
almbddmultiplier>cost alm	776329	249.115	77.411	_
fixedrankembeddedfactory>ehess2rhess	6483180	238.481	91.126	-
nstraint fixedrank equality nonneg lowrankcompletion>nncostfun	56186424	210.535	210.535	_
tpenaltyViaSmoothinglse>@(X)grad_exactpenalty(X,problem0,rho)	94699	197.797	1.936	_
exactpenaltyViaSmoothinglse>grad_exactpenalty_	94699	189.326	71.854	-
ctpenaltyViaSmoothinglgh>@(X)cost_exactpenalty(X,problem0,rho)	579846	177.586	11.118	-
exactpenaltyViaSmoothinglgh>cost_exactpenalty	579846	166.468	56.493	_
<u> </u>	463483	142.360	8.840	-
ctpenaltyViaSmoothinglse>@(X)cost_exactpenalty(X,problem0,rho) exactpenaltyViaSmoothinglse>cost_exactpenalty	463483	133.521	46.150	-
StoreDB-StoreDB.getNewKey	4206868	119.300	119.300	
nk equality nonneq_lowrankcompletion>@(Y)eqcostfun(Y,row,col)	18223072	118.232	49.128	-
tpenaltyViaSmoothinglgh>@(X)grad_exactpenalty(X,problem0,rho)	117802	97.012	2.433	
fixedrankembeddedfactory>retraction	1810572	96.680	96.680	
fixedrankembeddedfactory>lincomb	14055121	91.738	91.738	•
StoreDB>StoreDB.getWithShared	5090446	88.861	22.917	•
exactpenaltyViaSmoothinglgh>grad exactpenalty	117802	86.363	30.410	
StoreDB-StoreDB.remove	1628080	75.234	16.818	
StoreDB>StoreDB.remove StoreDB>StoreDB.setWithShared	4654938	75.234	30.423	I I
nstraint fixedrank equality nonneg lowrankcompletion>eqcostfun	18223072	69.104	69.104	
exactpenaltyViaSmoothinglse>KKT_residual	23479	68.318	3.033	
StoreDB-StoreDB.get	5090446	65.944	65.944	•
rmfield	1654971	59.769	59.769	
				-
exactpenaltyViaSmoothinglqh>KKT_residual StoreDB>StoreDB set	29425	48.681	3.795	
StoreDB>StoreDB.set	4654938	42.541	42.541	
				
<u>SQF-yraoLagrangian</u>	19048	35.135	13.053	1
fixedrankembeddedfactory>apply_ambient SQP>gradLagrangian	18480561 19648	36.918 35.135	36.918 13.053	1

_fixedrankembeddedfactory>apply_ambient_transpose	18480561	30.014	30.014	•
tangentorthobasis	9823	29.722	0.792	I
handle_light>handle_light.delete	2440595	28.833	28.833	I
<u>getEuclideanGradient</u>	440390	26.070	10.399	I
evaluation	53393	25.220	5.102	I
$\underline{SQP} > \underline{@(x)loneMeritFunction(x,rho)}$	54122	24.304	0.278	I
SQP>loneMeritFunction	54122	24.026	5.048	I
<u>orthogonalize</u>	9823	23.415	8.819	I
struct2csv	6	23.238	5.735	I
SQP>KKT_residual	9824	23.192	1.091	I
$ @(\underline{x,d1,d2})\underline{d1.M(:).^{!*}d2.M(:)} + \underline{d1.Up(:).^{!*}d2.Up(:)} + \underline{d1.Vp(:).^{!*}d2.Vp(:)}$	10748772	21.186	21.186	I
num2str	595198	19.489	4.204	I
fixedrankembeddedfactory>project_tangent	335988	15.122	1.160	I
exactpenaltyViaSmoothinglqh>savestats	29423	14.990	0.967	I
quadprog	9823	14.371	1.124	I
num2str>handleNumericPrecision	453102	12.974	0.966	I
tconstraint fixedrank equality nonneg lowrankcompletion>objcost	1936788	12.960	12.960	I
StoreDB>StoreDB.StoreDB	2440595	12.128	7.430	I
num2str>convertUsingRecycledSprintf	453102	12.008	12.008	
exactpenaltyViaSmoothinglse>savestats	23478	11.677	0.724	
<u>ipqpdense</u>	9823	11.533	0.813	
ixedrank equality nonneg lowrankcompletion>@(U)constraintgrad	11221003	11.394	11.394	
fixedrankembeddedfactory>tangent2ambient	532448	9.207	9.207	
exactpenaltyViaSmoothinglqh>maxabsLagrangemultipliers	29423	8.594	2.848	
mergeOptions	244973	7.885	7.885	
exactpenaltyViaSmoothinglqh>complementaryPowerViolation	29425	6.600	2.150	
exactpenaltyViaSmoothinglse>maxabsLagrangemultipliers	23478	6.573	2.269	
drank_equality_nonneg_lowrankcompletion>euclidean_objhessian	196460	6.248	2.480	
rlbfgs>savestats	191578	5.950	5.141	
fixedrankembeddedfactory>randomvec	196460	5.506	4.355	
drank equality nonneg lowrankcompletion>@(X,U)constrainthess	6286720	5.481	5.481	
factory>@()sprintf('Manifold of %dx%d matrices of rank %d',m,n,k)	316072	5.175	5.175	
exactpenaltyViaSmoothinglse>complementaryPowerViolation	23479	5.103	1.705	
StoreDB>StoreDB.purge	138193	5.030	3.677	
handle light>handle light.handle light	2440595	4.699	4.699	
createExitMsg	9823	4.626	1.798	
rlbfgs>getDirection	138193	3.975	1.813	
@(x,d)sqrt(norm(d.M,'fro')^2+norm(d.Up,'fro')^2+norm(d.Vp,'fro')^2)	1317289	3.795	3.795	
optimlib/private/interiorPointQPmex (MEX-file)	9823	3.206	3.206	
stoppingcriterion	191578	2.978	2.978	
SQP>const evaluation	9824	2.681	0.909	
onstraint fixedrank equality nonneg lowrankcompletion>eobjgrad	440306	2.273	2.273	
createExitMsg>msgArgs2Str	19646	2.127	0.141	
SQP>complementaryPowerViolation	9824	2.083	0.697	
almbddmultiplier>@(X)grad_alm(X,problem0,rho,lambdas,gammas)	1958	2.032	0.045	
presolve	9823	1.739	0.872	
almbddmultiplier>grad_alm	1958	1.716	0.651	
exactpenaltyViaSmoothinglqh>manifoldPowerViolation	29425	1.414	0.338	
<u>optimget</u>	157168	1.210	0.450	
<u>int2str</u>	92981	1.172	1.172	

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Decision 1987 0.879 0.	exactpenaltyViaSmoothinglse>manifoldPowerViolation	23479	1.085	0.270	
	<u>canGetEuclideanGradient</u>	440390	0.968	0.968	
	<u>prepareOptionsForSolver</u>	9823	0.879	0.879	
	<u>applyStatsfun</u>	201402	0.866	0.866	
	almbddmultiplier>KKT_residual	489	0.850	0.075	
casalt 63227 0.723 0.723 0.702 cestationingspetited HIMLibase 28469 0.7070 0.702 1 carefull intereach 138193 0.471 0.471 0.471 carefull intereach 48115 0.471 0.185 0.471 SCD-manifuld Drower Volation 8924 0.437 0.185 0.471 SCD-manifuld Drower Volation 8924 0.437 0.185 0.471 SCD-manifuld Drower Volation 9824 0.437 0.382 0.471 Schull 0.382 0.382 0.471 0.471 Schull 0.382 0.382 0.471 0.471 Schull 0.382 0.382 0.382 0.471 Schull 0.472 0.247 0.471 Schull 0.473 0.247 0.471 Schull 0.473 0.247 0.241 Schull 0.482 0.281 0.211 0.271 Schull 0.474 0.272 0.272	optimget>optimgetfast	157168	0.760	0.760	
1	fixedrankembeddedfactory>tangent	196460	0.724	0.724	
Marie Mari	rank	63227	0.723	0.723	
Communication Communicatio	createExitMsg>stripHTMLTags	29469	0.702	0.702	
Description	num2str>cellPrintf	49115	0.669	0.669	
SQP::manifoldFowerViolation 9824 0.457 0.117 1 SQP:-savestats 9824 0.439 0.382 1 SQP:-savestats 9823 0.352 0.552 1 sostsove 9823 0.352 0.351 1 costsover forcing Redundant Constr 9823 0.287 0.287 1 costsover concept Construct 9823 0.286 0.111 1 costSover concept Construct 53390 0.286 0.286 1 costSover complicates 53395 0.289 0.289 1 costSover complicates 53385 0.289 0.289 1 almodofmultipliers-savestats 488 0.283 0.021 1 almodofmultipliers-savestats 488 0.283 0.021 1 almodofmultipliers-savestats 488 0.283 0.021 1 almodofmultipliers-savestats 481 0.173 0.174 1 contractic Costs 183183 0.173 0.174 1 </td <td>canGetLinesearch</td> <td>138193</td> <td>0.471</td> <td>0.471</td> <td></td>	canGetLinesearch	138193	0.471	0.471	
SOP-saverlatis 9824 0.439 0.382 Image: Control of the control of	num2str>strvrcat	49115	0.471	0.185	
Schul 9823 0.352 0.352 0.362 presolver-forcingRedundaniConstr 9823 0.311 0.311 0.311 posisious 9823 0.287 0.287 0.287 striust 49115 0.286 0.111 0.001 presolver-emb/Rows 53390 0.285 0.285 0.281 canGetCost 53385 0.289 0.269 0.001 almbddmultoller-savestats 488 0.263 0.021 0.001 shpush-shrighdifferation 49115 0.174 0.174 0.001 checkbounds 9823 0.173 0.173 0.174 0.001 checkbounds 9823 0.148 0.148 0.148 0.148 checkbounds 9823 0.148 0.148 0.148 0.148 polimilibriprivate/dashfboundsOrVars 9823 0.148 0.149 0.109 almbddmultibler-complementaryPowerViolation 489 0.121 0.005 0.001 almbddmultibler-complementaryPowerViolation </td <td>SQP>manifoldPowerViolation</td> <td>9824</td> <td>0.457</td> <td>0.117</td> <td></td>	SQP>manifoldPowerViolation	9824	0.457	0.117	
Designate	SQP>savestats	9824	0.439	0.382	
bostsohve 9823 0.287 0.287 0.281 striust 48115 0.286 0.111 0.000 geGiobalDefaults 53990 0.285 0.285 0.285 preschese_combt/Rows 9823 0.271 0.271 0.000 almbddmulliolier_savestats 488 0.289 0.029 0.000 shriust=striustOnchar 48115 0.174 0.174 0.174 checkbounds 9823 0.173 0.173 0.179 libfigs=@KIX 138193 0.150 0.150 0.000 contmilibrion/atericlassifyBoundsOn/vars 9823 0.148 0.148 0.014 outimilibrion/atericlassifyBoundsOn/vars 9823 0.132 0.132 0.000 edfactory>@(Xistrucif M. zerosifk.k). Uri. zerosifk.k). Vri. zero	schur	9823	0.352	0.352	
stitust 49115 0.286 0.111 getGlobalDefaults 53390 0.285 0.285 pressubre-permotyRows 9823 0.271 0.271 canGetCost 53386 0.269 0.289 almbddmultplere-savestats 488 0.263 0.021 stribus-britischOrchar 49115 0.174 0.174 checkbounds 9823 0.173 0.173 0.173 checkbounds 9823 0.148 0.149 0.174 checkbounds 9823 0.148 0.149 0.174 checkbounds 9823 0.148 0.149 0.174 checkbounds 9823 0.148 0.149 0.144 commuteKKTErnoForGPLP 9823 0.134 0.149 0.149 potimibliprivate(dasalfyBoundsOnVars 9823 0.132 0.132 0.132 almbddmultiplier-@cxicompotementaryPowerViolation 489 0.116 0.099 0.109 global printeral (allegal) 9823 0.109 0.109	presolve>forcingRedundantConstr	9823	0.311	0.311	
Part	postsolve	9823	0.287	0.287	
presolve-emptyRows 9823 0.271 0.271 eanGetCost almodomutolitic-savestats 488 0.263 0.021 striust-britustOnChar 49115 0.174 0.174 checktounds 49115 0.174 0.173 0.173 checktounds 49115 0.174 0.174 checktounds 49115 0.174 0.173 0.173 checktounds 49115 0.174 0.174 checktounds 49115 0.174 0.175 checktounds 49115 0.174 0.174 checktounds 49115 0.174 0.175 checktounds 49115 0.173 0.173 checktounds 49115 0.184 0.184 checktounds 49115 0.184 0.184 checktounds 49115 0.184 0.184 checktounds 49115 0.184 0.184 checktounds 49115 0.194 0.195 checktounds 4923 0.194 0.197 checktounds 4924 0.194 0.005 checktounds 499 0.116 0.009 checktoundementaryPower/tolation 499 0.109 checktoundementaryPower/tolation 499 0.109 checktoundementaryPower/tolation 499 0.006 checktoundementaryPower/tolation 499 0.006 checktoundementaryPower/tolation 499 0.006 checktoundementaryPower/tolation 499 0.006 checktoundementaryPower/tolation 499 0.007 checktoundementaryPower/tolation 499 0.007 checktoundementaryPower/tolation 499 0.007 checktoundementaryPower/tolation 499 0.002 checktoundementaryPower/tolation 499 0.002 checktoundementaryPower/tolation 499 0.002 checktoundementaryPower/tolation 490 0.004 checktoundementaryPower/tolation 490 0.00	strjust	49115	0.286	0.111	
canGelCost 53385 0.269 0.269 almbddmultiolier≥savestats 488 0.263 0.021 strjust≥strjustOnChar 49115 0.174 0.174 checkbounds 9823 0.173 0.173 lbfgs≥@(t)t 388193 0.150 0.150 computeKKTErnorForQPLP 9823 0.148 0.148 continutiofurvate/dassifyBoundsOnVars 9823 0.132 0.107 edfactory=@(X)struct(M:zeros(k,k), Up:zeros(m,k), Vp:zeros(m,k) 9823 0.132 0.132 edfactory=@(X)struct(M:zeros(k,k), Up:zeros(m,k), Vp:zeros(m,k), pp:zeros(m,k) 9823 0.132 0.132 edfactory=@(X)struct(M:zeros(k,k), Up:zeros(m,k), Vp:zeros(m,k), pp:zeros(m,k) 9823 0.132 0.132 edfactory=@(X)struct(M:zeros(k,k), Up:zeros(m,k), Vp:zeros(m,k), pp:zeros(m,k) 9823 0.121 0.005 edfactory=@(X)struct(M:zeros(k,k), Up:zeros(m,k), Vp:zeros(m,k), pp:zeros(m,k) 9823 0.112 0.005 edfactory=@(X)struct(M:zeros(k,k), Up:zeros(m,k), Vp:zeros(m,k), pp:zeros(m,k) 9823 0.110 0.110 edfactory=@(X)struct(M:zeros(k,k), Up:zero	<u>getGlobalDefaults</u>	53390	0.285	0.285	
almbiddmultiplier≥savestats 488 0.263 0.021 0.174 0.175 0.1	presolve>emptyRows	9823	0.271	0.271	
striust>striustOnChar 49115 0.174 0.173 checkbounds 9823 0.173 0.173 cbgse_@(t)k 138193 0.150 0.150 computeKKTEmorForQPLP 9823 0.148 0.148 optimitik/nivate/classifyBoundsQnVars 9823 0.134 0.107 edfactory_@(X)structfM_zeros(k,k)_Up_zeros(m,k)_Vp_zeros(m,k) 9823 0.132 0.132 almbddmultiplier_@(x)complementaryPowerViolation 489 0.121 0.005 0.009 almbddmultiplier_complementaryPowerViolation 489 0.116 0.009 0.009 siopidarsesH_unwrapInternalOptions 9823 0.100 0.110 0.001 siopidarsesH_unwrapInternalOptions 9823 0.025 0.062 0.002 SQP>musposiPowerViolation 9823 0.023 0.033 0.003 canGetHessian 9823 0.027 0.027 0.002 sinceficeLiesario/DeverViolation 489 0.025 0.008 0.002 presolve=Year LinearColumnSingletons 9823 0.025 0.	canGetCost	53385	0.269	0.269	
checkbounds 9823 0.173 0.173 db/gs_@(U) 138193 0.150 0.150 computeKKTErrorForQPLP 9823 0.148 0.148 optimilb/private/classifyBounds/OnVars 9823 0.134 0.107 edfactory=@(X)struct/fM*zeros(k.k), Up/.zeros(m.k), Vp/.zeros(m.k) 9823 0.132 0.132 almbddmultiplier=@(X)complementaryPowerViolation 489 0.116 0.039 almbddmultiplier=complementaryPowerViolation 489 0.110 0.110 canGetGradient 53385 0.110 0.110 soptimargdbl 9823 0.062 0.062 soptimargdbl 9823 0.062 0.062 soptimib/private/classifyBounds/OnVars>equalFloat 9823 0.025 0.045 almbddmultiplier-manifoldPowerViolation 489 0.025 0.008 presolve>free_linearColumnSingletons 9823 0.027 0.027 almbddmultiplier-manifoldPowerViolation 489 0.025 0.026 presolve>infeatigRHS 9823 0.023 0.022 <tr< td=""><td>almbddmultiplier>savestats</td><td>488</td><td>0.263</td><td>0.021</td><td></td></tr<>	almbddmultiplier>savestats	488	0.263	0.021	
Midgs@(Ith)	strjust>strjustOnChar	49115	0.174	0.174	
computeKKErorForOPLP 9823 0.148 0.148 optimility/crivate/classifyBoundsOnVars 9823 0.134 0.107 edfactory=@(X)struct(M.zeros(k.k).Upf.zeros(m.k).Vpf.zeros(n.k)) 9823 0.132 0.132 almbddmultiplier>@(x)complementaryPowerViolation 489 0.161 0.039 0.005 almbddmultiplier>complementaryPowerViolation 489 0.116 0.039 0.001 canGetGradient 53385 0.110 0.110 0.110 isoptimarydbl 9823 0.062 0.062 SQP=nusposiPowerViolation 9823 0.062 0.062 canGetHessian 9823 0.033 0.033 optimilib/private/classifyBoundsOnVars>equalFloat 9823 0.027 0.027 almbddmultiplier>manifoldPowerViolation 489 0.025 0.008 presolve>free LinearColumSingletons 9823 0.025 0.002 presolve>infiniteRHS 1964 0.025 0.022 dmwrite 1 0.020 0.001 presolve>infiniteRHs 1 <td< td=""><td>checkbounds</td><td>9823</td><td>0.173</td><td>0.173</td><td></td></td<>	checkbounds	9823	0.173	0.173	
optimility/private/classifyBoundsOnVars 9823 0.134 0.107 edfactory=@(X)struct(M:zeros(k.k).Up/zeros(n.k)) 9823 0.132 0.132 almbddmultiplier=@(x)complementaryPowerViolation 489 0.121 0.005 almbddmultiplier-complementaryPowerViolation 489 0.116 0.039 canGetGradient 53385 0.110 0.110 isoptimargdbl 9823 0.062 0.062 SQP>musposiPowerViolation 9823 0.062 0.062 SQP>musposiPowerViolation 9823 0.033 0.033 optimilib/private/classifyBoundsOnVars>equalFloat 9823 0.027 0.027 almbddmultiplier=manifoldPowerViolation 489 0.025 0.008 presolve=freeLinearColumnSingletons 9823 0.025 0.008 presolve=freeLinearColumnSingletons 9823 0.025 0.025 presolve=fixVarsEqBnds 9823 0.022 0.022 fixedrankembeddedfactory=@()(m+n-k)*k 19646 0.022 0.022 dmwrite 1 0.019 0.004	<u>rlbfgs>@(t)t</u>	138193	0.150	0.150	
edfactory>@(X)struct('M' zeros(k.k), 'Up'.zeros(m.k), 'Vp'.zeros(n.k)) 9823 0.132 0.132 almbddmultiplier≥@(x)complementaryPowertViolation 489 0.116 0.039 almbddmultiplier≥complementaryPowertViolation 489 0.116 0.039 canGetGradient 53385 0.110 0.110 isoptimargdbl 9823 0.062 0.062 SQP>musposiPowerViolation 9823 0.062 0.062 SQP>musposiPowerViolation 9823 0.033 0.033 optimilib/private/classifyBoundsOnVars≥equalFloat 9823 0.027 0.027 almbddmultiplier>manifoldPowerViolation 489 0.025 0.008 presolve≥freeLinearColumnSingletons 9823 0.025 0.008 presolve≥freeLinearColumnSingletons 9823 0.025 0.025 fixedrankembeddedfactory≥@()(m+n-k)*'k 19646 0.022 0.022 presolve≥fixVarsEqBnds 9823 0.022 0.022 dmwrite 1 0.019 0.004 dmwrite≥parseinput 1 0.016 0.016 <td>computeKKTErrorForQPLP</td> <td>9823</td> <td>0.148</td> <td>0.148</td> <td></td>	computeKKTErrorForQPLP	9823	0.148	0.148	
almbddmultiplier≥@(x)complementaryPowerViolation (x.rho.lambdas) 489 0.121 0.005 almbddmultiplier≥complementaryPowerViolation 489 0.116 0.039 canGetGradient 53385 0.110 0.110 isoptimargdbl 9823 0.002 0.062 SQP>musposiPowerViolation 9824 0.045 0.045 canGetHessian 9823 0.033 0.033 optimilibrjorivate/classifyBoundsOnVars>equalFloat 9823 0.027 0.027 almbddmultiplier>manifoldPowerViolation 489 0.025 0.008 0.008 presolve*ree_linearColumnSingletons 9823 0.025 0.025 0.025 fixedrankembeddeddfactory>@()(m+n-k)*k 19646 0.022 0.022 0.022 presolve*inivtarsEoBnds 9823 0.022 0.022 0.022 dimwrite 1 0.020 0.001 0.004 presolve*singletonlegs 9823 0.018 0.018 0.016 presolve*singletonlegs 9823 0.016 0.016 0.016 <t< td=""><td>optimlib/private/classifyBoundsOnVars</td><td>9823</td><td>0.134</td><td>0.107</td><td></td></t<>	optimlib/private/classifyBoundsOnVars	9823	0.134	0.107	
ambddmultiplier>complementaryPowerViolation 489 0.116 0.039 canGetGradient 53385 0.110 0.110 isoptimargdbl 9823 0.109 0.109 iggpdense≥i_unwrapInternalOptions 9823 0.062 0.062 SQP>musposiPowerViolation 9824 0.045 0.045 canGetHssian 9823 0.033 0.033 optimibiprivate/classifyBoundsOnVars>equalFloat 9823 0.027 0.027 ambddmultiplier>manifoldPowerViolation 489 0.025 0.008 pressolve>freeLinearColumnSingletons 9823 0.023 0.023 ixedrankembeddedfactory≥@(/(m+n-k)*k 19646 0.022 0.022 ixedrankembeddedfactory≥@(/(m+n-k)*k 19646 0.022 0.022 imwrite 1 0.020 0.001 imwrite parseinput 1 0.019 0.004 imwrite>presolve>inconstrVars 9823 0.016 0.016 immrite presolve>singletoninegs 9823 0.016 0.016 immrite cell.ismember 1 0.015 0.009 immrite 1 0.015 0.009 immrite 1 0.015 0.009 immrite 0.016 immrite 0.016 0.016 immrite 0.016 0.016 immrite 0.016 0.009 immrite 0.016 0.009	$\underline{edfactory} \geq \underline{@(X)}\underline{struct('M',zeros(k,k),'Up',zeros(m,k),'Vp',zeros(n,k))}$	9823	0.132	0.132	
canGetGradient 53385 0.110 0.110 110 isoptimargdbl 9823 0.109 0.109 0.109 ipgpdense≥i_unwrapInternalOptions 9823 0.062 0.062 0.062 SQP>musposiPowerViolation 9824 0.045 0.045 0.045 canGetHessian 9823 0.033 0.033 0.033 optimilb/private/classifyBoundsOnVars>equalFloat 9823 0.027 0.027 0.027 almbddmultiplier>manifoldPowerViolation 489 0.025 0.008 0.004 presolve>freeLinearColumnSingletons 9823 0.025 0.025 0.025 presolve>infiniteRHS 9823 0.023 0.023 0.023 fixedrankembeddedfactorys@(r)(m+n-k)*k 19646 0.022 0.022 0.022 presolve>fixVarsEqBnds 9823 0.022 0.022 0.022 dlmwrite>parseinput 1 0.019 0.004 0.018 presolve>ingletonInegs 9823 0.016 0.016 0.016 functionNameClashChec	almbddmultiplier>@(x)complementaryPowerViolation(x,rho,lambdas)	489	0.121	0.005	
Soptimargdbl 9823 0.109 0.109 0.109 Ipgpdense>i_unwrapInternalOptions 9823 0.062 0.062 SQP>musposiPowerViolation 9824 0.045 0.045 CanGetHessian 9823 0.033 0.033 Optimilib/private/classifyBoundsOnVars>equalFloat 9823 0.027 0.027 Imbddmultiplier>manifoldPowerViolation 489 0.025 0.008 presolve>freeLinearColumnSingletons 9823 0.025 0.025 presolve>infiniteRHS 9823 0.023 0.023 fixedrankembeddedfactory≥@()(m+n-k)*k 19646 0.022 0.022 presolve>fixedrankembeddedfactory>@()(m+n-k)*k 19646 0.022 0.022 dlmwrite 1 0.020 0.001 dlmwrite>parseinput 1 0.019 0.004 presolve>ingletonIneqs 9823 0.016 0.016 presolve>singletonIneqs 9823 0.016 0.016 functionNameClashCheck 9823 0.016 0.016 presolve>singletonEqs 9823 0.016 0.009 presolve>singletonEqs 9823 0.014 0.019 presolve>singletonEqs 9823 0.016 0.009 presolve>singletonEqs 9823 0.016 0.009 presolve>singletonEqs 9823 0.014 0.014	almbddmultiplier>complementaryPowerViolation	489	0.116	0.039	
ipgpdense>i_unwrapInternalOptions 9823 0.062 0.062 SQP>musposiPowerViolation 9824 0.045 0.045 canGetHessian 9823 0.033 0.033 optimlib/private/classifyBoundsOnVars>equalFloat 9823 0.027 0.027 almbddmultiplier>manifoldPowerViolation 489 0.025 0.008 presolve>freeLinearColumnSingletons 9823 0.025 0.025 presolve>infiniteRHS 9823 0.023 0.023 fixedrankembeddedfactory>@()(m+n-k)*k 19646 0.022 0.022 gresolve>fixVarsEqBnds 9823 0.022 0.022 dlmwrite 1 0.019 0.004 dlmwrite>parseinput 1 0.019 0.004 presolve>unconstrVars 9823 0.018 0.018 presolve>singletonIneqs 9823 0.016 0.016 functionNameClashCheck 9823 0.016 0.016 cell ismember 1 0.015 0.009 presolve>singletonEqs 9823 0.014	canGetGradient	53385	0.110	0.110	
SQP>musposiPowerViolation 9824 0.045 0.045 canGetHessian 9823 0.033 0.033 optimilib/private/classifyBoundsOnVars>equalFloat 9823 0.027 0.027 almbddmultiplier>manifoldPowerViolation 489 0.025 0.008 presolve>freeLinearColumnSingletons 9823 0.025 0.025 presolve>infiniteRHS 9823 0.023 0.023 fixedrankembeddedfactory>@()(m+n-k)*k 19646 0.022 0.022 presolve>fixVarsEqBnds 9823 0.022 0.022 dlmwrite 1 0.020 0.001 dlmwrite>parseinput 1 0.019 0.004 presolve>unconstrVars 9823 0.018 0.018 presolve>singletonlnegs 9823 0.016 0.016 functionNameClashCheck 9823 0.016 0.016 cell ismember 1 0.015 0.009 presolve>singletonEgs 9823 0.014 0.014	isoptimargdbl	9823	0.109	0.109	
canGetHessian 9823 0.033 0.033 optimlib/private/classifyBoundsOnVars>equalFloat 9823 0.027 0.027 almbddmultiplier>manifoldPowerViolation 489 0.025 0.008 presolve>freeLinearColumnSingletons 9823 0.025 0.025 presolve>infiniteRHS 9823 0.023 0.023 fixedrankembeddedfactory>@()(m+n-k)*k 19646 0.022 0.022 presolve>fixVarsEqBnds 9823 0.022 0.022 dlmwrite 1 0.020 0.001 dlmwrite>parseinput 1 0.019 0.004 presolve>unconstrVars 9823 0.018 0.018 presolve>singletonlnegs 9823 0.016 0.016 functionNameClashCheck 9823 0.016 0.016 cell.ismember 1 0.015 0.009 presolve>singletonEqs 9823 0.014 0.014	ipqpdense>i_unwrapInternalOptions	9823	0.062	0.062	
optimilib/private/classifyBoundsOnVars>equalFloat 9823 0.027 0.027 almbddmultiplier>manifoldPowerViolation 489 0.025 0.008 presolve>freeLinearColumnSingletons 9823 0.025 0.025 presolve>infiniteRHS 9823 0.023 0.023 fixedrankembeddedfactory>@()(m+n-k)*k 19646 0.022 0.022 presolve>fixVarsEqBnds 9823 0.022 0.022 dlmwrite 1 0.020 0.001 dlmwrite>parseinput 1 0.019 0.004 presolve>unconstrVars 9823 0.018 0.018 presolve>singletonIneqs 9823 0.016 0.016 functionNameClashCheck 9823 0.016 0.016 cell.ismember 1 0.015 0.009 presolve>singletonEqs 9823 0.014 0.014	SQP>musposiPowerViolation	9824	0.045	0.045	
almbddmultiplier>manifoldPowerViolation 489 0.025 0.008 presolve>freeLinearColumnSingletons 9823 0.025 0.025 presolve>infiniteRHS 9823 0.023 0.023 fixedrankembeddedfactory>@()(m+n-k)*k 19646 0.022 0.022 presolve>fixVarsEqBnds 9823 0.022 0.022 dlmwrite 1 0.020 0.001 dlmwrite>parseinput 1 0.019 0.004 presolve>unconstrVars 9823 0.018 0.018 presolve>singletonlnegs 9823 0.016 0.016 functionNameClashCheck 9823 0.016 0.016 cell.ismember 1 0.015 0.009 presolve>singletonEqs 9823 0.014 0.014	canGetHessian	9823	0.033	0.033	
presolve>freeLinearColumnSingletons 9823 0.025 0.025 presolve>infiniteRHS 9823 0.023 0.023 fixedrankembeddedfactory>@()(m+n-k)*k 19646 0.022 0.022 presolve>fixVarsEqBnds 9823 0.022 0.022 dlmwrite 1 0.020 0.001 dlmwrite>parseinput 1 0.019 0.004 presolve>unconstrVars 9823 0.018 0.018 presolve>singletonIneqs 9823 0.016 0.016 functionNameClashCheck 9823 0.016 0.016 cell.ismember 1 0.015 0.009 presolve>singletonEqs 9823 0.014 0.014	optimlib/private/classifyBoundsOnVars>equalFloat	9823	0.027	0.027	
presolve>infiniteRHS 9823 0.023 0.023 fixedrankembeddedfactory>@()(m+n-k)*k 19646 0.022 0.022 presolve>fixVarsEqBnds 9823 0.022 0.022 dlmwrite 1 0.020 0.001 dlmwrite>parseinput 1 0.019 0.004 presolve>unconstrVars 9823 0.018 0.018 presolve>singletonlneqs 9823 0.016 0.016 functionNameClashCheck 9823 0.016 0.016 cell.ismember 1 0.015 0.009 presolve>singletonEqs 9823 0.014 0.014	almbddmultiplier>manifoldPowerViolation	489	0.025	0.008	
fixedrankembeddedfactory>@()(m+n-k)*k 19646 0.022 0.022 presolve>fixVarsEqBnds 9823 0.022 0.022 dlmwrite 1 0.020 0.001 dlmwrite>parseinput 1 0.019 0.004 presolve>unconstrVars 9823 0.018 0.018 presolve>singletonlneqs 9823 0.016 0.016 functionNameClashCheck 9823 0.016 0.016 cell.ismember 1 0.015 0.009 presolve>singletonEqs 9823 0.014 0.014	presolve>freeLinearColumnSingletons	9823	0.025	0.025	
presolve>fixVarsEqBnds 9823 0.022 0.022 dlmwrite 1 0.020 0.001 dlmwrite>parseinput 1 0.019 0.004 presolve>unconstrVars 9823 0.018 0.018 presolve>singletonIneqs 9823 0.016 0.016 functionNameClashCheck 9823 0.016 0.016 cell.ismember 1 0.015 0.009 presolve>singletonEqs 9823 0.014 0.014	presolve>infiniteRHS	9823	0.023	0.023	
dlmwrite 1 0.020 0.001 dlmwrite>parseinput 1 0.019 0.004 presolve>unconstrVars 9823 0.018 0.018 presolve>singletonIneqs 9823 0.016 0.016 functionNameClashCheck 9823 0.016 0.016 cell.ismember 1 0.015 0.009 presolve>singletonEqs 9823 0.014 0.014	fixedrankembeddedfactory>@()(m+n-k)*k	19646	0.022	0.022	
dlmwrite>parseinput 1 0.019 0.004 presolve>unconstrVars 9823 0.018 0.018 presolve>singletonIneqs 9823 0.016 0.016 functionNameClashCheck 9823 0.016 0.016 cell.ismember 1 0.015 0.009 presolve>singletonEqs 9823 0.014 0.014	presolve>fixVarsEqBnds	9823	0.022	0.022	
presolve>unconstrVars 9823 0.018 0.018 presolve>singletonIneqs 9823 0.016 0.016 functionNameClashCheck 9823 0.016 0.016 cell.ismember 1 0.015 0.009 presolve>singletonEqs 9823 0.014 0.014	dlmwrite	1	0.020	0.001	
presolve>singletonIneqs 9823 0.016 0.016 functionNameClashCheck 9823 0.016 0.016 cell.ismember 1 0.015 0.009 presolve>singletonEqs 9823 0.014 0.014	dlmwrite>parseinput	1	0.019	0.004	
functionNameClashCheck 9823 0.016 0.016 cell.ismember 1 0.015 0.009 presolve>singletonEqs 9823 0.014 0.014	presolve>unconstrVars	9823	0.018	0.018	
cell.ismember 1 0.015 0.009 presolve>singletonEqs 9823 0.014 0.014	presolve>singletonIneqs	9823	0.016	0.016	
presolve>singletonEqs 9823 0.014 0.014	functionNameClashCheck	9823	0.016	0.016	
	<u>cell.ismember</u>	1	0.015	0.009	
presolve>dbltnEqualities 9823 0.014 0.014	presolve>singletonEqs	9823	0.014	0.014	
	presolve>dbltnEqualities	9823	0.014	0.014	

<u>optimset</u>	1	0.008	0.007	
fixedrankembeddedfactory>random	6	0.007	0.002	
close	1	0.006	0.001	
RandStream.RandStream>getMethodNames	1	0.005	0.005	
close>safegetchildren	1	0.005	0.002	
constraintsdetail	6	0.005	0.005	
stiefelfactory>@()qr_unique(randn(n,p,k,array_type))	12	0.005	0.002	
<u>fixedrankembeddedfactory</u>	1	0.005	0.003	
almbddmultiplier>maxabsLagrangemultipliers	488	0.005	0.005	
cell.unique	2	0.004	0.002	
allchild	1	0.004	0.003	
<u>qr_unique</u>	12	0.003	0.003	
nthroot	7	0.003	0.003	
ismember	1	0.002	0.000	
stiefelfactory	2	0.001	0.001	
cell.unique>celluniqueR2012a	2	0.001	0.001	
ismember>ismemberR2012a	1	0.001	0.000	
straint_fixedrank_equality_nonneg_lowrankcompletion>check_rank	4	0.001	0.001	
RandStream.RandStream>RandStream	1	0.001	0.001	
optimfun/private/uselargeoptimstruct	1	0.001	0.001	
ismember>ismemberBuiltinTypes	1	0.001	0.001	
randsample	1	0.001	0.001	
raint_fixedrank_equality_nonneg_lowrankcompletion>egradzerofun	84	0.001	0.001	
constraint_fixedrank_equality_nonneg_lowrankcompletion>zerofun	210	0.000	0.000	
mpower	6	0.000	0.000	
allchild>getchildren	1	0.000	0.000	
partialMatchString	2	0.000	0.000	
optimset>checkfield	1	0.000	0.000	
close>getEmptyHandleList	1	0.000	0.000	
RandStream.RandStream>RandStream.delete	1	0.000	0.000	
RandStream.RandStream>getargs	1	0.000	0.000	
RandStream.randperm	1	0.000	0.000	
RandStream.RandStream>RandStream.algName	1	0.000	0.000	
allchild>@()set(rootobj,'ShowHiddenHandles',Temp)	1	0.000	0.000	
cellstr	1	0.000	0.000	
dlmwrite>setdlm	1	0.000	0.000	
uitools/private/allchildRootHelper	1	0.000	0.000	
optimset>displayType	1	0.000	0.000	
close>checkfigs	1	0.000	0.000	
close>request_close	1	0.000	0.000	
optimfun/private/optimoptiongetfields	1	0.000	0.000	
optimset>onDeprecationPathOptionCheck	1	0.000	0.000	
webwindowmanager>webwindowmanager.delete	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.