[Speeding up the program using profiler](#)

Profile Summary
Generated 22-May-2018 14:29:07 using performance time.

Function Name	Calls	Total Time	Self Time*	Total Time Plot (dark band = self time)
sort_data	1	11258.449 s	103.582 s	
getframe	201	10571.173 s	3603.022 s	
Scatter.doUpdate	201	6324.390 s	6294.954 s	
graphics/private/alternateGetframe	201	633.032 s	0.083 s	
getframeWithDecorations	201	632.944 s	632.906 s	
scatter3	201	575.895 s	0.515 s	
newplot	201	574.349 s	0.844 s	
newplot>ObserveAxesNextPlot	201	573.448 s	0.045 s	
cla	201	573.404 s	0.064 s	
graphics/private/clo	201	573.259 s	573.259 s	
Scatter.Scatter>Scatter.set.MarkerHandle	201	28.217 s	28.217 s	
Scatter.getXYZDataExtents	201	10.682 s	1.074 s	

sort_data (Calls: 1, Time: 11258.449 s)

Generated 22-May-2018 14:33:14 using performance time.
script in file /home/eemaj/jborja/EE147_PROJECT/sort_data.m
[Copy to new window for comparing multiple runs](#)

Refresh

☑ Show parent functions   ☑ Show busy lines   ☑ Show child functions
☑ Show Code Analyzer results ☑ Show file coverage ☑ Show function listing

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Parents (calling functions)
No parent

Lines where the most time was spent

Line Number	Code	Calls	Total Time	% Time	Time Plot
[35](#)	`currentFrame = getframe(h);`	201	10571.191 s	93.9%	████████████
[30](#)	`scatter3(coordinate(:,1,i),coo...`	201	577.955 s	5.1%	▌
[11](#)	`load('data_new.mat')`	1	57.747 s	0.5%	⏐
[16](#)	`load('data_new.mat')`	1	39.182 s	0.3%	
[37](#)	`writeVideo(obj,currentFrame);`	201	7.246 s	0.1%	
All other lines			5.128 s	0.0%	
Totals			11258.449 s	100%	

Children (called functions)

Function Name	Function Type	Calls	Total Time	% Time	Time Plot
[getframe](#)	function	201	10571.173 s	93.9%	████████████
[scatter3](#)	function	201	575.895 s	5.1%	▌
[...VideoWriter>VideoWriter.writeVideo](#)	class method	201	7.242 s	0.1%	
[...ideoWriter>VideoWriter.VideoWriter](#)	class method	1	0.414 s	0.0%	
[view](#)	function	201	0.070 s	0.0%	
[daspect](#)	function	201	0.031 s	0.0%	
[close](#)	function	2	0.020 s	0.0%	
[initial](#)	function	1	0.017 s	0.0%	
[VideoWriter.VideoWriter>VideoWriter.open](#)	class method	1	0.006 s	0.0%	
Self time (built-ins, overhead, etc.)			103.582 s	0.9%	⏐
Totals			11258.449 s	100%	

Code Analyzer results

Line number	Message
2	Using CLEAR ALL usually decreases code performance and is often unnecessary.
14	Using CLEAR ALL usually decreases code performance and is often unnecessary.
38	Terminate statement with semicolon to suppress output (within a script).

Coverage results
Show coverage for parent directory

Total lines in function	43
Non-code lines (comments, blank lines)	15
Code lines (lines that can run)	28
Code lines that did run	26
Code lines that did not run	2
Coverage (did run/can run)	92.86 %

Function listing

Color highlight code according to time ▼

time	Calls	line	
0.08	1	2	clear all; close all; clc;
		3	
		4	%start time for the CPU
0.01	1	5	initial = cputime;
		6	
		7	%% change directory
< 0.01	1	8	cd('/home/eemaj/jborja/EE147_PROJECT')
		9	%% load data
		10	
57.75	1	11	load('data_new.mat')
		12	
		13	
0.03	1	14	close all; clear all; clc
		15	%%
39.18	1	16	load('data_new.mat')
		17	%%
		18	
0.18	1	19	h = figure;
0.53	1	20	obj = VideoWriter('3d_damage.avi');
< 0.01	1	21	open(obj);
< 0.01	1	22	for i = 300:500
		23	
0.17	201	24	color = damage(:,i);
< 0.01	201	25	for j = 1:atoms
1.09	20906814	26	if color(j,1) < .45
0.89	18026282	27	color(j) = .000001;
0.82	18026282	28	end
1.04	20906814	29	end

```
 577.95        201      30        scatter3(coordinate(:,1,i),coordinate(:,2,i),coordinate(:,3,i),color)
   0.04        201      31        daspect([1 1 1])
   0.07        201      32        view([70 50])
< 0.01        201      33        pos_h = [0 0 1362 687]; % Adjusted to indidual user's PC
   0.02        201      34        set(h,'Position',pos_h)
10571.19        201      35        currentFrame = getframe(h);
                         36
   7.25        201      37 writeVideo(obj,currentFrame);
   0.04        201      38 i    %Display i on Command Window
                         39
                         40
< 0.01        201      41 end
   0.09          1      42 cpu_final = cputime - initial;
                         43 fprintf('The cputime is %f \n \n',cpu_final);
                         44 close(obj);
```

getframe (Calls: 201, Time: 10571.173 s)

Generated 22-May-2018 14:40:08 using performance time.
function in file /usr/local/MATLAB/R2016b/toolbox/matlab/graphics/getframe.m
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Refresh

☑ Show parent functions   ☑ Show busy lines   ☑ Show child functions
☑ Show Code Analyzer results ☑ Show file coverage ☑ Show function listing

Parents (calling functions)

Function Name	Function Type	Calls
sort_data	script	201

Lines where the most time was spent

Line Number	Code	Calls	Total Time	% Time	Time Plot
53	drawnow;	201	9913.954 s	93.8%	▬▬▬▬▬
111	x = alternateGetframe(parentFi...	201	633.043 s	6.0%	▪
54	drawnow;	201	24.135 s	0.2%	
56	parentFig = ancestor(h, 'figur...	201	0.019 s	0.0%	
42	if isa(h,'matlab.ui.control.UI...	201	0.005 s	0.0%	
All other lines			0.015 s	0.0%	
Totals			10571.173 s	100%	

Children (called functions)

Function Name	Function Type	Calls	Total Time	% Time	Time Plot
Scatter.doUpdate	function	201	6324.390 s	59.8%	████████
graphics/private/alternateGetframe	function	201	633.032 s	6.0%	█
Scatter.getXYZDataExtents	function	201	10.682 s	0.1%	
Scatter.getColorAlphaDataExtents	function	201	0.046 s	0.0%	
Self time (built-ins, overhead, etc.)			3603.022 s	34.1%	█████
Totals			10571.173 s	100%	

Code Analyzer results
No Code Analyzer messages.

Coverage results
Show coverage for parent directory

Total lines in function	116
Non-code lines (comments, blank lines)	66
Code lines (lines that can run)	50
Code lines that did run	15
Code lines that did not run	35
Coverage (did run/can run)	30.00 %