Appendix B

More Results

Difference of means					
Confidence					
Graph	1	2	3	4	5
1		-0.913	-1.087	2.22E-16	1.3478
2	0.913		-0.1739	0.913	2.2609
3	1.087	0.1739		1.087	2.4348
4	-2.22E-16	-0.913	-1.087		1.3478
5	-1.3478	-2.2609	-2.4348	-1.3478	

Table 5- **The difference of means related to the graphs confidence rates. The numbers are based on the users' self-reported confidence score. The highlighted boxes indicate significance.**

Means								
Confidence								
Graph	Mean	Std Deviation	t	p	Confidence	CI High	CI Low
1	3.4348	1.236788	15.5	<.0001	0.5054514	3.9402514	2.9293486
2	2.5217	1.238385	11.38	<.0001	0.506104	3.027804	2.015596
3	2.3478	1.027295	10.6	<.0001	0.4198359	2.7676359	1.9279641
4	3.4348	1.121123	15.5	<.0001	0.4581814	3.8929814	2.9766186
5	4.7826	0.518435	21.59	<.0001	0.2118743	4.9944743	4.5707257

Table 6- **The means of the confidence scores. Users were asked to rank how confident or not confident they were on a scale from 1 to 5 where 5 was the most confident.**

Ease of Use Direction							
Graph	Mean	Std Deviation	t	p	Confidence	CI High	CI Low
1	1.4348	0.945135	3.43	0.0009	0.3862586	1.8210586	1.0485414
2	5.9565	3.197702	14.23	<.0001	1.3068391	7.2633391	4.6496609
3	7.5652	2.23253	18.07	<.0001	0.912392	8.477592	6.652808
4	1.3913	1.269901	3.32	0.0013	0.518984	1.910284	0.872316
5	2.4348	1.561645	5.82	<.0001	0.6382142	3.0730142	1.7965858

Table 7- **The means of the ease of use scores. Users were asked to rank how easy or hard they found it to answer all the questions pertaining to the graph. Scores were on a scale from 1 to 10 where 10 was the most difficult.**

Ease of Use Magnitude								
Graph	Mean	Std Deviation		t	p	Confidence	CI High	CI Low
1	4.6818	2.625631		10.18	<.0001	1.0730449	5.7548449	3.6087551
2	6.4091	2.130484		13.94	<.0001	0.8706877	7.2797877	5.5384123
3	7	2.390457		15.23	<.0001	0.9769338	7.9769338	6.0230662
4	4.6818	2.317354		10.18	<.0001	0.947058	5.628858	3.734742
5	1.5909	0.854071		3.46	0.0008	0.3490424	1.9399424	1.2418576

Table 8- **The means of the ease of use scores. Users were asked to rank how easy or hard they found it to answer all the questions pertaining to the graph. Scores were on a scale from 1 to 10 where 10 was the most difficult.**

Accuracy Mag								
Graph	Mean	Std Deviation		t	p	Confidence	CI High	CI Low
1	1.7826	0.735868		11.45	<.0001	0.300735	2.083335	1.481865
2	2.1739	0.576208		13.97	<.0001	0.235485	2.409385	1.938415
3	1.5652	1.121123		10.06	<.0001	0.458181	2.023381	1.107019
4	2.1304	0.757049		13.69	<.0001	0.309391	2.439791	1.821009
5	2.913	0.288104		18.71	<.0001	0.117743	3.030743	2.795257

Table 9- **The means of accuracy by magnitude. Users were asked 3 questions on magnitude pertaining to the graph. Users could have between 0 and 3 correct answers.**

Graph	Mean	Std Deviation		t	p	Confidence	CI High	CI Low
1	3	0		21.59	<.0001	N/A	N/A	N/A
2	2.4348	0.945135		17.52	<.0001	0.386258573	2.821059	2.048541427
3	1.7391	1.096167		12.51	<.0001	0.447982144	2.187082	1.291117856
4	2.9565	0.208514		21.27	<.0001	0.085215825	3.041716	2.871284175
5	2.913	0.288104		20.96	<.0001	0.117742583	3.030743	2.795257417

Table 10- **The means of accuracy by direction. Users were asked 3 questions on direction pertaining to the graph. Users could have between 0 and 3 correct answers.**

T-Test	Graph 1	Graph 2	Graph 3	Graph 4	Graph 5
Bio-CS	0.749825	0.760428	0.680235	0.930004	0.103552
Bio-Other	0.303623	0.408202	0.119098	0.072129	0.373901

Table 11- **The t-values of user confidence. Biologists' (bio) scores were compared to the scores of computer scientists (CS) and people of other majors (other) no significance was found.**

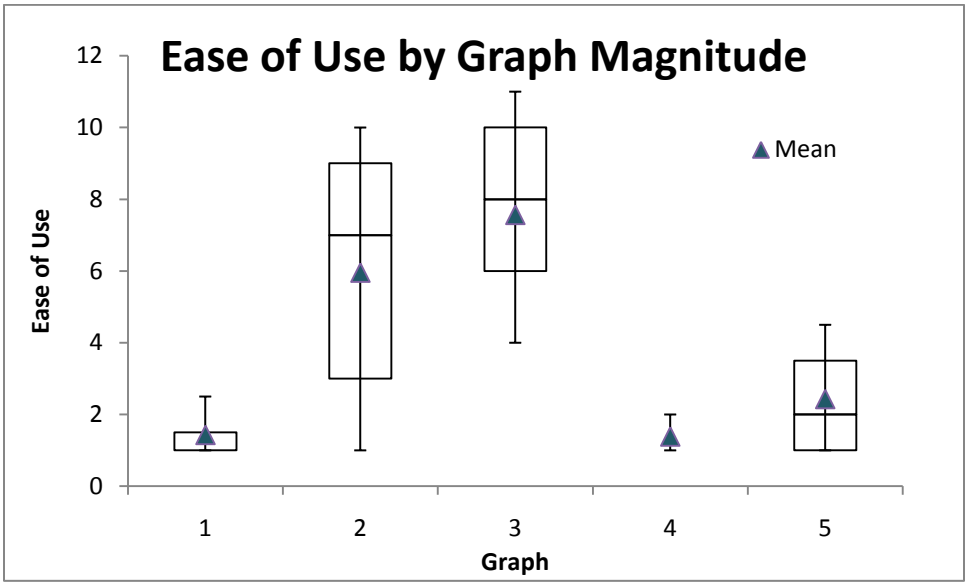

Figure 9 The average self-reported score of the ease of use in magnitude. Each user was asked to rate how easy or difficult they found it to answer the questions pertaining to magnitude. Answers were scored from 1 to 10, with 10 being the most difficult. Both the mean and median are shown.

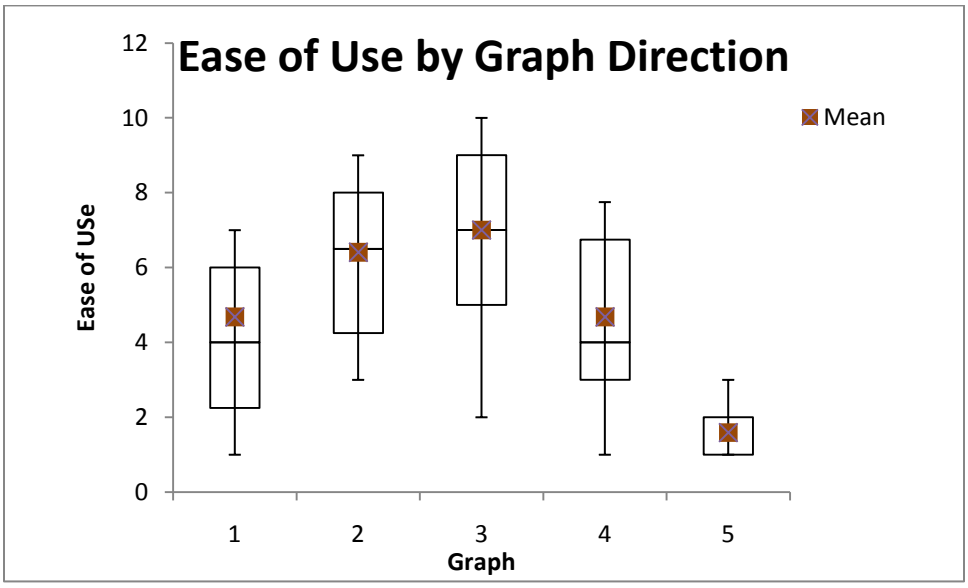

Figure 10 The average self-reported score of the ease of use in direction. Each user was asked to rate how easy or difficult they found it to answer the questions pertaining to direction. Answers were scored from 1 to 10, with 10 being the most difficult. Both the mean and median are shown.