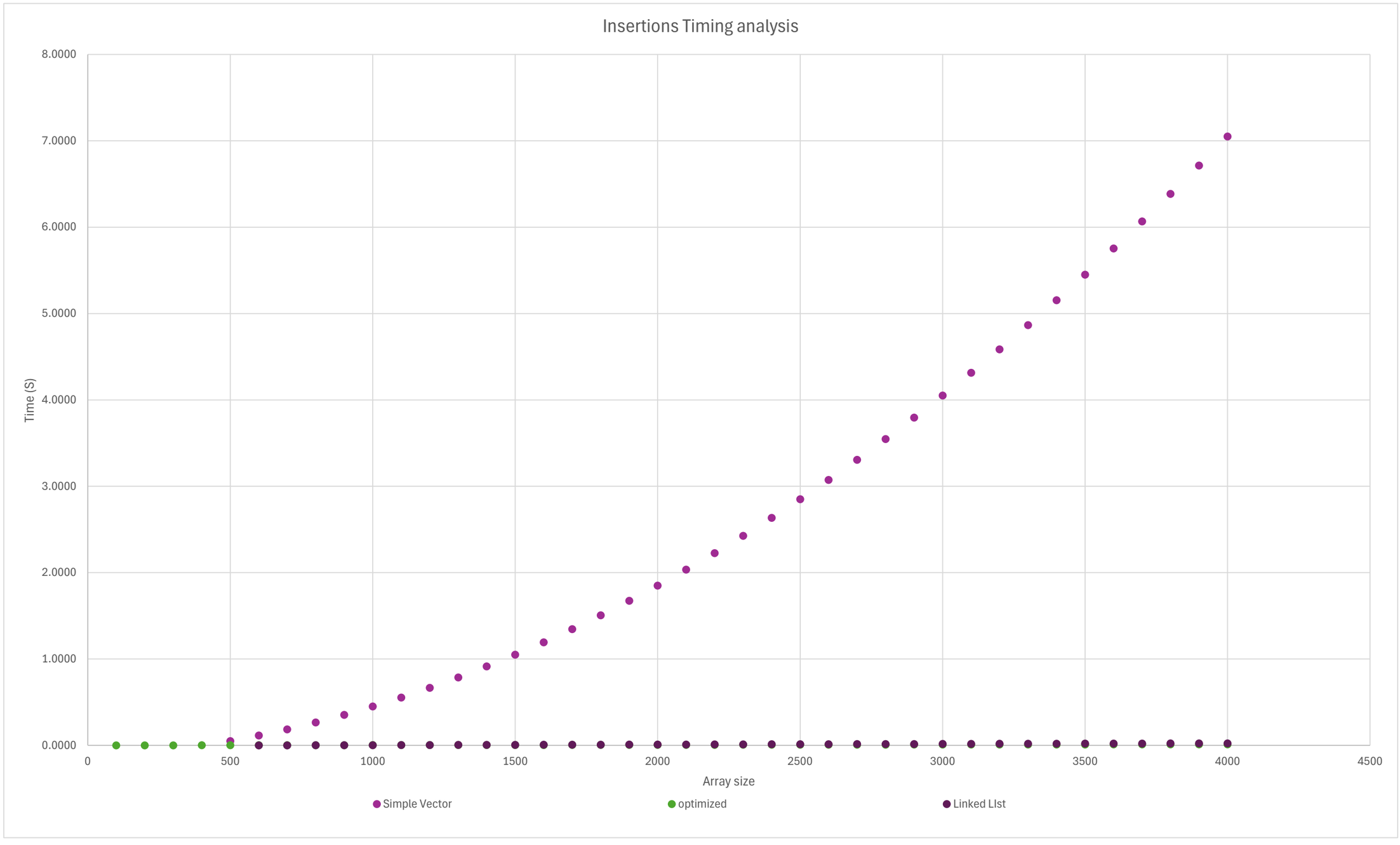
			simplevector push	Optimized	with Linked List	f(n) Big0(n^2)	f(n) BigO(n)	f(n) BigO(1)	fit f(n)			+Delta Above			
r^0	Size(n)	r^2	time(s)	Time(s)	Time (s)	cs2	Co2	Cl3	simplevector	Optimized	with Linked List	simplevector	Optimized	with Linked List	
1	100	10000	0.0000	0.0000	0.0000	0.0040	0.0003	0.0000	-0.1260	0.0002	-0.0035	-0.1300	0.0002	-0.0035	
1	200	40000	0.0310	0.0000	0.0000	0.0160	0.0006	0.0000	-0.0940	0.0005	-0.0028	-0.1100	0.0005	-0.0028	simplevector push
1	300	90000	0.0310	0.0000	0.0000	0.0360	0.0009	0.0000	-0.0540	0.0008	-0.0021	-0.0900	0.0008	-0.0021	f(n) = c0*x^0 + c1*x^1 + c2*x^2
1	400	160000	0.0780	0.0000	0.0000	0.0640	0.0012	0.0000	-0.0060	0.0011	-0.0014	-0.0700	0.0011	-0.0014	f(n) = c0*r^0 + c1*r^1 + c2*r^2
1	500	250000	0.0940	0.0000	0.0000	0.1000	0.0015	0.0000	0.0500	0.0014	-0.0007	-0.0500	0.0014	-0.0007	
1	600	360000	0.1720	0.0000	0.0000	0.1440	0.0018	0.0000	0.1140	0.0017	0.0000	-0.0300	0.0017	0.0000	c0 = -0.15
1	700	490000	0.2190	0.0000	0.0000	0.1960	0.0021	0.0000	0.1860	0.0020	0.0007	-0.0100	0.0020	0.0007	c1 = 0.0002
1	800	640000	0.2810	0.0000	0.0000	0.2560	0.0024	0.0000	0.2660	0.0023	0.0014	0.0100	0.0023	0.0014	c2 = 4.00E-07
1	900	810000	0.3440	0.0160	0.0000	0.3240	0.0027	0.0000	0.3540	0.0026	0.0021	0.0300	-0.0134	0.0021	
1	1000	1000000	0.4370	0.0000	0.0000	0.4000	0.0030	0.0000	0.4500	0.0029	0.0028	0.0500	0.0029	0.0028	
1	1100	1210000	0.5150	0.0000	0.0160	0.4840	0.0033	0.0000	0.5540	0.0032	0.0035	0.0700	0.0032	-0.0125	optimized Simple Vector using arrays
1	1200	1440000	0.6410	0.0150	0.0000	0.5760	0.0036	0.0000	0.6660	0.0035	0.0042	0.0900	-0.0115	0.0042	f(n) =c0 *x^0 + c1 *x^1
1	1300	1690000	0.7650	0.0000	0.0000	0.6760	0.0039	0.0000	0.7860	0.0038	0.0049	0.1100	0.0038	0.0049	f(n) =c0 *r^0 + c1 *r^1
1	1400	1960000	0.8910	0.0000	0.0150	0.7840	0.0042	0.0000	0.9140	0.0041	0.0056	0.1300	0.0041	-0.0094	
1	1500	2250000	1.1870	0.0000	0.0000	0.9000	0.0045	0.0000	1.0500	0.0044	0.0063	0.1500	0.0044	0.0063	c0 = -8.00E-05
1	1600	2560000	1.3600	0.0160	0.0160	1.0240	0.0048	0.0000	1.1940	0.0047	0.0070	0.1700	-0.0113	-0.0090	c1= 3.00E-06
1	1700	2890000	1.2810	0.0000	0.0000	1.1560	0.0051	0.0000	1.3460	0.0050	0.0077	0.1900	0.0050	0.0077	
1	1800	3240000	1.5000	0.0000	0.0160	1.2960	0.0054	0.0000	1.5060	0.0053	0.0084	0.2100	0.0053	-0.0076	implemented with a Linked List
1	1900	3610000	1.6410	0.0150	0.0000	1.4440	0.0057	0.0000	1.6740	0.0056	0.0091	0.2300	-0.0094	0.0091	f(n) =c0 *x^0 + c1 *x^1
1	2000	4000000	2.0320	0.0000	0.0150	1.6000	0.0060	0.0000	1.8500	0.0059	0.0098	0.2500	0.0059	-0.0052	f(n) =c0 *r^0 + c1 *r^1
1	2100	4410000	1.9360	0.0000	0.0000	1.7640	0.0063	0.0000	2.0340	0.0062	0.0105	0.2700	0.0062	0.0105	
1	2200	4840000	2.1410	0.0160	0.0160	1.9360	0.0066	0.0000	2.2260	0.0065	0.0112	0.2900	-0.0095	-0.0048	c0 = -0.0042
1	2300	5290000	2.3130	0.0160	0.0160	2.1160	0.0069	0.0000	2.4260	0.0068	0.0119	0.3100	-0.0092	-0.0041	c1= 7.00E-06
1	2400	5760000	2.9990	0.0000	0.0000	2.3040	0.0072	0.0000	2.6340	0.0071	0.0126	0.3300	0.0071	0.0126	
1	2500	6250000	2.9850	0.0150	0.0000	2.5000	0.0075	0.0000	2.8500	0.0074	0.0133	0.3500	-0.0076	0.0133	
1	2600	6760000	3.0310	0.0000	0.0160	2.7040	0.0078	0.0000	3.0740	0.0077	0.0140	0.3700	0.0077	-0.0020	
1	2700	7290000	4.0000	0.0160	0.0150	2.9160	0.0081	0.0000	3.3060	0.0080	0.0147	0.3900	-0.0080	-0.0003	
1	2800	7840000	4.6570	0.0000	0.0160	3.1360	0.0084	0.0000	3.5460	0.0083	0.0154	0.4100	0.0083	-0.0006	
1	2900	8410000	4.9370	0.0160	0.0160	3.3640	0.0087	0.0000	3.7940	0.0086	0.0161	0.4300	-0.0074	0.0001	
1	3000	9000000	5.3590	0.0150	0.0150	3.6000	0.0090	0.0000	4.0500	0.0089	0.0168	0.4500	-0.0061	0.0018	
1	3100	9610000	5.6410	0.0000	0.0310	3.8440	0.0093	0.0000	4.3140	0.0092	0.0175	0.4700	0.0092	-0.0135	
1	3200	10240000	4.6880	0.0160	0.0160	4.0960	0.0096	0.0000	4.5860	0.0095	0.0182	0.4900	-0.0065	0.0022	
1	3300	10890000	4.7970	0.0150	0.0150	4.3560	0.0099	0.0000	4.8660	0.0098	0.0189	0.5100	-0.0052	0.0039	
1	3400	11560000	4.9830	0.0160	0.0310	4.6240	0.0102	0.0000	5.1540	0.0101	0.0196	0.5300	-0.0059	-0.0114	
1	3500	12250000	5.9540	0.0160	0.0160	4.9000	0.0105	0.0000	5.4500	0.0104	0.0203	0.5500	-0.0056	0.0043	
1	3600	12960000	6.4530	0.0000	0.0160	5.1840	0.0108	0.0000	5.7540	0.0107	0.0210	0.5700	0.0107	0.0050	
1	3700	13690000	6.9530	0.0150	0.0310	5.4760	0.0111	0.0000	6.0660	0.0110	0.0217	0.5900	-0.0040	-0.0093	
1	3800	14440000	7.4210	0.0160	0.0310	5.7760	0.0114	0.0000	6.3860	0.0113	0.0224	0.6100	-0.0047	-0.0086	
1	3900	15210000	7.0160	0.0160	0.0160	6.0840	0.0117	0.0000	6.7140	0.0116	0.0231	0.6300	-0.0044	0.0071	
1	4000	16000000	7.2340	0.0000	0.0310	6.4000	0.0120	0.0000	7.0500	0.0119	0.0238	0.6500	0.0119	-0.0072	


Insertions Timing analysis
Time (S)
8.0000
7.0000
6.0000
5.0000
4.0000
3.0000
2.0000
1.0000
0.0000
0
500
1000
1500
2000
2500
3000
3500
4000
4500
Array size
Simple Vector
optimized
Linked LIst