

APPENDIX A: SOURCE CODE ANALYSIS FROM OSTRICH BENCHMARK ALGORITHMS

Nqueens			Crc		Lud	
Metric	C	JS	C	JavaScript	C	JavaScript
Program length	2157	1640	761	4721	1538	2398
Program vocabulary	149	127	132	2148	409	407
Estimated length	963,83	761,25	821,22	23433,2	3386,52	3280,16
Purity ratio	0,45	0,46	1,08	4,96	2,2	1,37
Volume	15571,75	11461,44	5360,78	52255,7	13343,62	20787,99
Difficulty	181,88	245,45	85,69	26,92	50,04	79,51
Program effort (10 ⁵)	28,32	28,13	4,59	14,07	6,68	16,53
Time to program (h)	43,71	43,41	7,09	21,71	7,09	25,51
Cyclomatic complexity	31,5	32,8	32,7	12	49,5	14,7
Nw			Bfs		Hmm	
Metric	C	JS	C	JavaScript	C	JavaScript
Program length	4331	3286	1350	983	4865	3560
Program vocabulary	211	163	118	121	225	180
Estimated length	1492,38	1038,08	707,44	717,19	1615,38	1195,1
Purity ratio	0,34	0,32	0,52	0,73	0,33	0,34
Volume	33440,08	24147,92	9291,57	6801,24	38014,05	26671
Difficulty	279,6	407,28	163,54	131,37	279,81	256,54
Program effort (10 ⁵)	93,50	98,35	15,20	8,94	106,	68,42
Time to program (h)	144,29	151,78	23,45	13,79	164,15	105,59
Cyclomatic complexity	28,5	11	39,5	33,5	17,4	11
Page-rank			Lavand		Spmv	
Metric	C	JS	C	JavaScript	C	JavaScript
Program length	11224	10863	2197	1715	545	1820
Program vocabulary	1601	1574	175	145	117	196
Estimated length	16788,39	16362,62	1192,96	909,31	707,74	1322,01
Purity ratio	1,5	1,51	0,54	0,53	1,3	0,73
Volume	119476,76	115367,45	16370,31	12313,54	3744,35	13858,77
Difficulty	126,9	99,82	128,38	158,27	60,69	138,81
Program effort (10 ⁵)	1516,12	115,15	21,02	19,49	2,27	19,24
Time to program (h)	233,97	177,71	32,43	30,07	3,51	3,51
Cyclomatic complexity	21,8	10,4	73,3	9,3	28	10,5
Fft			Srad		Back-propagation	
Metric	C	JS	C	JavaScript	C	JavaScript
Program length	1395	1102	1507	1101	1970	1333
Program vocabulary	106	109	127	121	145	152
Estimated length	633,17	632,91	798,75	722,76	942,69	967,24
Purity ratio	0,45	0,57	0,53	0,66	0,48	0,73
Volume	9385,45	7458,54	10531,95	7617,67	14144,42	9661,49
Difficulty	117,49	118,16	105,9	115,71	138,3	108,06
Program effort (10 ⁵)	11,03	8,81	11,15	8,81	19,56	10,44
Time to program (h)	17,02	13,6	17,21	13,6	30,19	16,11
Cyclomatic complexity	14	10,2	143	11	15,1	9,5