NIST Suite Tables of Results for SBSeg 2023

Leonardo Oliveira

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Table 1: Results for each parameter configuration of "preliminar1" survey in [da Cruz et al. 2021] data set

	Test / α	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
$M = 1$	Frequency	0.015	0.818	0.251	0.251	0.479	0.917	0.917	0.705	1.000	1.000	0.577
	Block Frequency	0.220	0.071	0.479	0.479	0.479	0.917	0.917	0.705	1.000	1.000	0.577
	Run	**0.000**	**0.000**	**0.002**	**0.002**	0.046	0.029	0.029	0.016	**0.003**	**0.003**	0.081
	Run (Longest run of ones)	**0.010**	0.140	**0.060**	0.060	0.107	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
	Serial	0.247	**0.000**	0.499	0.499	0.499	0.499	0.499	0.499	**0.000**	**0.000**	0.499
		0.314	**0.009**	0.498	0.498	0.498	0.498	0.498	0.498	**0.498**	**0.498**	0.498
	Entropy	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	Cum. Sums (Forward)	0.026	0.269	0.444	0.444	0.737	0.691	0.691	0.513	0.601	0.601	0.529
	Cum. Sums (Backward)	0.030	0.411	0.302	0.302	0.223	0.596	0.596	0.853	0.601	0.601	0.976
	Input length	375	302	194	194	128	**93**	**93**	**63**	**46**	**46**	**29**
$M = 2$	Frequency	0.030	0.527	0.382	0.429	0.429	0.446	0.292	0.446	0.500	0.446	0.869
	Block Frequency	0.368	0.182	0.052	0.111	0.111	0.446	0.292	0.446	0.500	0.446	0.869
	Run	**0.000**	0.019	0.409	0.222	0.222	0.528	0.990	0.399	0.458	0.708	0.413
	Run (Longest run of ones)	0.985	0.340	0.181	0.161	0.161	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
	Serial	0.086	0.046	**0.000**	0.499	0.499	0.499	0.499	0.499	0.499	0.499	0.499
		0.685	0.498	**0.051**	0.498	0.498	0.498	0.498	0.498	0.498	0.498	0.498
	Entropy	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	Cum. Sums (Forward)	0.052	0.169	0.213	0.266	0.266	0.364	0.320	0.408	0.355	**0.000**	0.278
	Cum. Sums (Backward)	0.060	0.548	0.683	0.604	0.604	0.762	0.483	0.733	0.807	0.711	1.000
	Input length	374	303	221	160	160	110	**73**	**62**	**55**	**43**	**37**
$M = 3$	Frequency	**0.006**	0.687	0.841	0.323	0.867	0.792	0.770	0.662	0.622	0.599	0.655
	Block Frequency	0.265	0.458	0.479	0.052	1.000	0.724	0.770	0.662	0.622	0.599	0.655
	Run	**0.000**	**0.000**	**0.001**	**0.002**	0.012	0.043	**0.008**	0.084	0.228	0.122	0.027
	Run (Longest run of ones)	**0.006**	0.138	0.169	0.334	0.687	0.213	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
	Serial	**0.000**	0.046	0.872	0.931	0.965	0.977	0.993	0.499	0.499	0.499	0.499
		0.073	0.724	0.789	0.852	0.899	0.920	0.999	0.498	0.498	0.498	0.498
	Entropy	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	Cum. Sums (Forward)	**0.007**	0.704	0.691	0.080	0.307	0.318	0.286	0.203	0.129	1.000	0.272
	Cum. Sums (Backward)	0.012	0.373	0.513	0.507	0.416	0.503	0.482	0.459	0.351	0.297	1.000
	Input length	373	303	225	173	142	129	105	**84**	**66**	**58**	**45**
$M = 4$	Frequency	0.213	0.365	0.127	0.376	0.678	0.510	0.841	0.518	0.907	0.796	0.376
	Block Frequency	1.000	0.032	**0.003**	0.021	0.596	0.510	0.841	0.518	0.907	0.796	0.376
	Run	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	0.004	0.009	0.011	0.026	0.020	0.022
	Run (Longest run of ones)	0.297	0.017	0.056	0.524	**0.003**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
	Serial	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	0.499	0.499	0.999	0.499	0.499
		0.000	**0.000**	**0.000**	**0.162**	**0.106**	**0.946**	0.999	0.999	0.994	0.498	0.498
	Entropy	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	Cum. Sums (Forward)	0.323	0.054	**0.006**	0.037	0.112	0.061	0.178	0.322	0.203	0.141	1.000
	Cum. Sums (Backward)	0.174	0.385	0.222	0.280	0.270	0.264	0.115	0.081	0.158	0.243	0.476
	Input length	372	312	227	184	145	113	100	**86**	**73**	**60**	**46**

Table 2: Results for each parameter configuration of "preliminar2" survey in [da Cruz et al. 2021] data set

	Test / α	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
$M = 1$	Frequency	**0.000**	0.812	0.880	0.738	0.890	0.419	0.931	0.365	0.560	0.732	0.903
	Block Frequency	**0.000**	0.996	0.786	0.596	0.860	0.596	0.724	0.365	0.560	0.732	0.903
	Run	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.002**	**0.003**	0.029	0.271
	Run (Longest run of ones)	0.025	0.015	0.091	0.214	0.088	**0.003**	0.089	**0.000**	**0.000**	**0.000**	**0.000**
	Serial	0.647	0.876	0.499	0.499	0.499	0.917	0.499	0.499	0.499	0.499	0.499
		0.393	0.658	0.676	0.499	0.499	0.499	0.914	0.499	0.499	0.499	0.499
	Entropy	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	Cum. Sums (Forward)	**0.000**	1.000	0.894	0.983	1.000	0.807	0.955	0.717	0.912	0.909	0.953
	Cum. Sums (Backward)	**0.000**	0.971	0.977	0.995	0.999	0.739	0.987	0.349	0.487	0.972	0.872
	Input length	675	443	395	223	210	185	133	122	106	**77**	**67**
$M = 2$	Frequency	**0.000**	0.184	0.650	0.681	0.398	0.883	0.875	0.051	0.703	0.686	0.655
	Block Frequency	**0.002**	0.647	0.958	0.732	0.596	0.860	1.000	0.022	0.703	0.686	0.655
	Run	**0.000**	0.007	**0.001**	**0.002**	0.035	0.556	0.639	0.530	0.333	0.533	0.358
	Run (Longest run of ones)	**0.000**	0.571	0.146	0.013	0.050	0.119	0.043	0.098	**0.000**	**0.000**	**0.000**
	Serial	0.029	0.985	0.742	0.499	0.806	0.499	0.499	0.499	0.499	0.499	0.499
		0.054	1.000	0.821	0.106	0.937	0.499	0.499	0.499	0.499	0.499	0.499
	Entropy	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	Cum. Sums (Forward)	**0.000**	0.312	0.956	0.794	0.774	0.963	0.978	0.044	0.847	0.531	0.728
	Cum. Sums (Backward)	**0.000**	0.199	0.762	0.964	0.537	0.998	0.995	0.084	0.971	0.892	0.975
	Input length	674	477	393	289	237	184	162	139	110	**98**	**80**
$M = 3$	Frequency	**0.005**	0.216	0.215	0.606	0.213	0.528	0.374	0.936	0.069	0.521	0.028
	Block Frequency	0.031	0.701	0.527	0.925	0.386	0.377	0.596	0.724	0.052	0.521	0.028
	Run	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.002**	0.090	0.054	0.180	0.014
	Run (Longest run of ones)	**0.000**	0.016	0.026	0.031	**0.001**	0.133	0.012	0.308	**0.002**	**0.000**	**0.000**
	Serial	0.647	0.691	0.499	**0.006**	**0.002**	0.499	0.499	0.953	0.953	0.985	0.998
		0.704	0.856	0.685	**0.038**	**0.081**	0.186	0.499	0.991	0.991	0.999	0.977
	Entropy	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	Cum. Sums (Forward)	**0.003**	0.400	0.242	0.943	0.239	0.839	0.415	0.973	0.075	0.622	1.000
	Cum. Sums (Backward)	**0.009**	0.370	0.429	0.813	0.270	0.839	0.595	0.993	0.137	0.707	1.000
	Input length	673	512	374	305	258	203	182	153	133	119	**91**
$M = 4$	Frequency	0.105	0.067	0.651	0.743	0.419	0.480	0.562	0.562	0.674	1.000	0.424
	Block Frequency	0.115	0.321	0.337	0.883	0.816	0.860	0.596	0.596	0.596	1.000	0.424
	Run	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.003**	**0.001**
	Run (Longest run of ones)	**0.000**	**0.000**	**0.000**	**0.002**	**0.008**	0.016	0.034	0.034	0.097	0.169	**0.000**
	Serial	**0.000**	**0.000**	0.098	**0.000**	**0.025**	0.854	**0.499**	**0.499**	0.499	0.499	0.499
		0.016	**0.000**	0.676	**0.294**	**0.003**	0.228	**0.000**	**0.000**	0.100	0.499	0.499
	Entropy	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	Cum. Sums (Forward)	0.128	0.065	0.578	0.980	0.635	0.724	0.682	0.682	0.916	0.655	0.629
	Cum. Sums (Backward)	0.090	0.121	0.670	0.928	0.751	0.724	0.817	0.817	0.545	0.655	0.387
	Input length	672	524	395	336	259	243	190	190	141	128	100

Table 3: Results for each parameter configuration of "coleta" survey in [da Cruz et al. 2021] data set

M	Test / α	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
$M = 1$	Frequency	**0.002**	0.601	0.636	0.636	0.815	0.631	0.686	0.762	0.762	0.573	0.530
	Block Frequency	0.753	0.992	0.972	0.972	0.986	0.638	0.960	0.824	0.824	0.596	0.377
	Run	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
	Run (Longest run of ones)	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	0.012	0.012	0.197	0.801
	Serial	**0.001**	0.057	0.038	0.038	0.126	0.018	0.798	0.026	0.026	0.978	0.499
		0.083	0.093	0.200	0.200	0.418	0.688	0.981	0.322	0.322	0.999	0.499
	Entropy	0.039	0.814	0.999	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000
	Cum. Sums (Forward)	**0.004**	0.906	0.833	0.833	0.991	0.700	0.694	0.763	0.763	0.571	0.586
	Cum. Sums (Backward)	**0.003**	0.937	0.953	0.953	0.999	0.896	0.906	0.977	0.977	0.857	0.898
	Input length	2087	1774	1291	1291	893	733	612	394	394	255	205
$M = 2$	Frequency	**0.007**	0.437	0.625	0.544	0.594	0.394	0.832	1.000	0.874	0.903	0.898
	Block Frequency	0.299	0.869	0.959	0.932	0.751	0.271	0.365	0.880	0.969	0.984	0.860
	Run	**0.000**	0.011	0.962	0.326	0.217	0.039	0.082	0.251	0.791	0.902	0.897
	Run (Longest run of ones)	**0.000**	**0.000**	**0.003**	0.011	0.034	0.075	0.426	0.418	0.588	0.757	0.289
	Serial	0.089	0.100	0.223	0.922	0.498	0.240	0.322	0.691	0.500	0.499	0.499
		0.271	0.157	0.824	0.629	0.038	0.894	0.165	0.760	0.306	0.499	0.499
	Entropy	0.142	0.462	0.972	0.999	0.999	0.999	1.000	1.000	1.000	1.000	1.000
	Cum. Sums (Forward)	**0.010**	0.514	0.947	0.851	0.855	0.499	0.978	0.923	0.995	0.919	0.968
	Cum. Sums (Backward)	**0.008**	0.834	0.894	0.769	0.828	0.414	0.847	0.923	0.999	0.979	0.997
	Input length	2086	1799	1360	1086	1015	727	557	512	359	270	242
$M = 3$	Frequency	**0.001**	0.284	0.578	0.902	0.902	0.772	0.965	0.965	0.715	0.522	0.403
	Block Frequency	0.224	0.883	0.967	0.410	0.410	0.952	0.997	0.997	0.820	0.860	0.860
	Run	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	0.171	0.692	0.692	0.953	0.681	0.663
	Run (Longest run of ones)	**0.000**	**0.000**	**0.003**	0.023	0.023	0.060	0.720	0.720	0.273	0.660	0.356
	Serial	**0.000**	0.835	0.024	**0.000**	**0.000**	0.500	0.840	0.840	0.760	0.500	0.500
		0.000	0.837	0.081	**0.043**	**0.043**	0.405	0.961	0.961	0.500	0.498	0.498
	Entropy	0.136	0.292	0.659	0.999	0.999	0.999	1.000	1.000	1.000	1.000	1.000
	Cum. Sums (Forward)	**0.001**	0.505	0.796	0.992	0.992	0.907	0.985	0.985	0.783	0.894	0.507
	Cum. Sums (Backward)	**0.001**	0.383	0.697	0.950	0.950	0.931	0.993	0.993	0.874	0.842	0.640
	Input length	2085	1840	1425	1048	1048	766	517	517	367	244	173
$M = 4$	Frequency	**0.004**	0.778	0.810	0.443	0.443	0.254	0.240	0.402	0.402	0.640	0.679
	Block Frequency	0.132	0.998	0.996	0.809	0.809	0.304	0.248	0.158	0.158	0.969	0.724
	Run	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.005**	**0.005**	**0.002**	0.055
	Run (Longest run of ones)	**0.000**	**0.000**	**0.000**	0.052	0.052	0.015	0.349	0.076	0.076	0.383	0.017
	Serial	**0.000**	0.992	**0.000**	**0.027**	**0.027**	**0.000**	0.673	0.499	0.499	0.190	0.499
		0.217	0.999	**0.000**	**0.003**	**0.003**	**0.000**	0.973	0.329	0.329	0.498	0.498
	Entropy	0.026	0.135	0.982	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	Cum. Sums (Forward)	**0.007**	0.837	0.998	0.731	0.731	0.351	0.386	0.641	0.641	0.849	0.948
	Cum. Sums (Backward)	**0.005**	0.974	0.975	0.438	0.438	0.351	0.284	0.252	0.252	0.743	0.948
	Input length	2084	1816	1409	1061	1061	788	568	411	411	292	210

Table 4: Results for each parameter configuration of "estatica1" survey in our data set

M	Test / α	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
M = 1	Frequency	0.016	0.731	0.831	0.690	0.553	0.928	0.849	0.829	0.642	1.000	0.466
	Block Frequency	0.142	0.668	0.320	0.860	1.000	0.928	0.849	0.829	0.642	1.000	0.466
	Run	**0.000**	**0.000**	**0.000**	**0.000**	**0.002**	**0.000**	**0.001**	**0.000**	0.034	0.018	0.046
	Run (Longest run of ones)	**0.001**	**0.005**	0.028	0.550	0.574	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
	Serial	0.847	0.891	0.072	0.499	0.921	0.499	0.499	0.499	**0.000**	0.499	0.499
		0.927	0.960	0.020	0.499	0.840	0.068	0.499	0.018	**0.499**	0.499	0.499
	Entropy	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	Cum. Sums (Forward)	0.028	0.907	0.901	0.996	0.962	0.997	0.994	0.854	0.899	0.985	0.875
	Cum. Sums (Backward)	0.028	0.869	0.901	0.922	0.471	0.980	0.994	0.982	0.996	0.985	0.750
	Input length	500	415	350	226	182	121	110	**86**	**74**	**58**	**47**
M = 2	Frequency	0.028	0.764	0.498	0.498	0.225	0.225	0.069	0.069	0.241	0.241	0.096
	Block Frequency	0.167	0.984	0.731	0.732	0.157	0.157	0.069	0.069	0.241	0.241	0.096
	Run	0.236	0.314	**0.005**	**0.005**	0.237	0.237	0.308	0.308	0.396	0.396	0.616
	Run (Longest run of ones)	0.182	0.229	0.088	0.088	0.538	0.538	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
	Serial	0.848	0.739	0.499	0.499	**0.001**	**0.002**	0.499	0.499	0.499	0.499	0.499
		0.765	0.498	0.916	0.916	**0.150**	**0.149**	0.049	0.049	0.499	0.499	0.499
	Entropy	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	Cum. Sums (Forward)	0.035	0.978	0.532	0.532	0.259	0.259	0.055	0.055	0.304	0.304	1.000
	Cum. Sums (Backward)	0.050	0.997	0.913	0.913	0.450	0.450	0.138	0.138	0.386	0.386	1.000
	Input length	499	398	263	263	174	174	109	109	**59**	**59**	**36**
M = 3	Frequency	0.016	0.881	0.725	0.949	0.940	0.622	0.778	0.499	0.497	0.628	0.366
	Block Frequency	0.230	0.553	0.588	0.724	0.724	0.377	0.778	0.499	0.497	0.628	0.366
	Run	**0.000**	**0.006**	0.994	0.652	0.153	0.727	0.931	0.525	0.861	0.606	0.049
	Run (Longest run of ones)	0.081	**0.002**	0.578	**0.009**	0.605	0.981	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
	Serial	**0.001**	**0.001**	0.499	0.499	0.499	0.499	0.499	0.499	0.499	0.499	0.499
		0.138	**0.183**	0.499	0.499	0.499	0.499	0.499	0.499	0.499	0.499	0.499
	Entropy	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	Cum. Sums (Forward)	0.021	0.859	0.847	0.968	0.997	0.642	0.856	0.572	0.821	0.956	0.721
	Cum. Sums (Backward)	0.021	0.959	0.999	0.935	1.000	0.927	0.995	0.838	0.821	0.876	0.580
	Input length	498	401	290	241	177	148	113	107	**78**	**68**	**44**
M = 4	Frequency	0.243	0.299	0.373	0.373	0.555	0.737	0.525	0.756	0.359	0.768	0.369
	Block Frequency	0.847	0.824	0.636	0.636	0.112	0.480	0.525	0.756	0.359	0.768	0.369
	Run	**0.001**	0.029	0.055	0.055	0.389	0.859	0.160	0.249	0.574	0.777	0.739
	Run (Longest run of ones)	0.146	0.565	0.618	0.618	0.665	0.515	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
	Serial	**0.000**	0.895	0.183	0.183	0.082	0.499	0.499	0.499	0.499	0.499	0.499
		0.882	0.499	0.499	0.499	0.499	0.102	0.499	0.499	0.499	0.499	0.499
	Entropy	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	Cum. Sums (Forward)	0.415	0.510	0.468	0.468	0.210	0.359	0.345	0.691	0.414	0.868	0.728
	Cum. Sums (Backward)	0.415	0.510	0.516	0.516	0.600	0.623	0.798	0.947	0.502	0.868	0.561
	Input length	459	409	283	283	184	142	121	**93**	**76**	**46**	**31**

Table 5: Results for each parameter configuration of "estatica2" survey in our data set

	Test / α	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
$M=1$	Frequency	**0.000**	0.601	0.601	0.560	0.560	0.627	0.829	0.633	0.633	0.869	0.869
	Block Frequency	**0.000**	0.816	0.816	0.724	0.724	0.724	0.829	0.633	0.633	0.869	0.869
	Run	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.001**	0.015	0.015	0.625	0.625
	Run (Longest run of ones)	0.032	**0.003**	**0.003**	0.016	0.016	0.048	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
	Serial	0.126 / 0.208	0.757 / 0.309	0.757 / 0.310	0.997 / 0.998	0.997 / 0.998	**0.000** / **0.117**	0.499 / 0.499	0.499 / 0.499	0.499 / 0.499	0.499 / 0.499	0.499 / 0.499
	Entropy	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	Cum. Sums (Forward)	**0.000**	0.829	0.829	0.966	0.966	0.993	0.998	0.960	0.960	1.000	1.000
	Cum. Sums (Backward)	**0.000**	0.912	0.912	0.813	0.813	0.874	0.933	0.670	0.670	0.992	0.992
	Input length	446	366	366	188	188	152	**86**	**70**	**70**	**37**	**37**
$M=2$	Frequency	**0.000**	0.792	0.444	0.706	0.929	0.929	0.276	0.276	0.248	0.724	0.532
	Block Frequency	**0.001**	0.855	0.535	0.596	0.929	0.929	0.276	0.276	0.248	0.724	0.532
	Run	**0.000**	**0.000**	**0.000**	**0.000**	**0.003**	**0.003**	0.120	0.120	0.048	0.031	0.897
	Run (Longest run of ones)	**0.001**	**0.006**	0.088	0.420	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
	Serial	**0.001** / **0.077**	0.239 / 0.158	0.812 / 0.499	0.499 / 0.499	0.499 / 0.078	0.499 / 0.078	0.499 / 0.499	0.499 / 0.499	0.499 / 0.499	0.499 / 0.499	0.499 / 0.499
	Entropy	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	Cum. Sums (Forward)	**0.000**	0.995	0.478	0.786	0.984	0.984	0.347	0.347	0.388	0.892	0.592
	Cum. Sums (Backward)	**0.000**	0.995	0.794	0.997	0.984	0.984	0.441	0.441	0.388	0.984	0.592
	Input length	506	361	289	175	127	127	**54**	**54**	**48**	**32**	**23**
$M=3$	Frequency	**0.000**	0.712	0.559	0.592	0.741	0.741	1.000	1.000	0.258	1.000	0.732
	Block Frequency	**0.005**	0.925	0.869	0.289	0.724	0.724	1.000	1.000	0.258	1.000	0.732
	Run	0.830	0.152	0.283	0.017	0.020	0.020	0.020	0.020	0.178	0.217	0.037
	Run (Longest run of ones)	**0.000**	**0.006**	0.056	0.413	0.016	0.016	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
	Serial	0.499 / 0.037	0.017 / 0.157	0.810 / 0.731	0.933 / 0.983	0.499 / 0.499	0.499 / 0.499	**0.499** / **0.008**	**0.499** / **0.008**	0.499 / 0.499	0.499 / 0.499	0.499 / 0.499
	Entropy	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	Cum. Sums (Forward)	**0.000**	0.995	0.965	0.566	0.790	0.790	0.967	0.967	0.315	0.950	0.604
	Cum. Sums (Backward)	**0.000**	0.999	0.849	0.906	0.924	0.924	0.967	0.967	0.406	0.950	0.908
	Input length	505	359	292	171	146	146	**74**	**74**	**50**	**42**	**34**
$M=4$	Frequency	**0.000**	0.793	0.906	1.000	0.505	0.505	0.232	0.232	0.116	0.237	0.083
	Block Frequency	**0.000**	0.883	0.855	1.000	0.289	0.289	0.232	0.232	0.116	0.237	0.083
	Run	**0.000**	0.497	0.556	0.130	0.123	0.123	0.034	0.034	0.084	**0.004**	0.194
	Run (Longest run of ones)	**0.000**	0.265	0.220	0.227	0.012	0.012	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
	Serial	**0.000** / **0.000**	0.499 / 0.024	0.499 / 0.499	0.499 / 0.499	0.499 / 0.499	0.499 / 0.499	0.499 / 0.499	0.499 / 0.499	**0.499** / **0.000**	**0.499** / **0.000**	0.499 / 0.499
	Entropy	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	Cum. Sums (Forward)	**0.000**	1.000	0.995	0.984	0.629	0.629	0.303	0.303	1.000	1.000	1.000
	Cum. Sums (Backward)	**0.000**	0.969	0.999	0.984	0.858	0.858	0.303	0.303	1.000	0.353	1.000
	Input length	504	363	288	174	144	144	**70**	**70**	**49**	**35**	**27**

Table 6: Results for each parameter configuration of "estatica3" survey in our data set

Test / α	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
Frequency	**0.008**	0.436	0.525	0.657	0.799	0.859	0.850	0.225	0.691	0.674	0.257
Block Frequency	0.100	0.855	0.677	0.860	0.724	0.859	0.850	0.225	0.691	0.674	0.257
Run	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	0.025
Run (Longest run of ones)	**0.000**	**0.000**	**0.000**	**0.000**	0.251	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
Serial	**0.000**	**0.000**	**0.000**	**0.000**	0.033	0.499	0.499	0.499	0.499	0.499	0.499
	0.000	**0.000**	**0.000**	**0.000**	0.499	0.499	0.499	0.004	0.499	0.499	0.499
Entropy	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Cum. Sums (Forward)	0.014	0.690	0.857	0.900	0.913	1.000	0.973	0.364	0.984	0.975	0.372
Cum. Sums (Backward)	0.014	0.690	0.494	0.734	0.989	0.983	0.853	0.291	0.697	0.778	0.372
Input length	495	371	299	249	139	126	112	**68**	**57**	**51**	**28**
Frequency	0.654	0.509	0.291	0.694	0.593	0.593	0.399	0.399	0.216	0.139	0.157
Block Frequency	0.675	0.732	0.495	0.860	0.593	0.593	0.399	0.399	0.216	0.139	0.157
Run	0.209	0.216	0.060	0.131	0.070	0.070	0.154	0.154	0.228	0.577	1.000
Run (Longest run of ones)	**0.000**	0.050	**0.002**	0.818	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
Serial	0.972	0.010	0.499	0.499	0.979	0.979	0.499	0.499	0.499	0.499	0.499
	0.965	0.137	0.499	0.499	0.998	0.998	0.499	0.499	0.499	0.499	0.499
Entropy	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Cum. Sums (Forward)	0.817	0.740	0.428	0.943	0.947	0.947	0.776	0.776	0.432	0.278	0.315
Cum. Sums (Backward)	0.679	0.540	0.579	0.607	0.493	0.493	0.297	0.297	1.000	1.000	1.000
Input length	403	330	259	161	126	126	**69**	**69**	**53**	**37**	**32**
Frequency	0.163	0.442	0.222	0.706	0.686	0.930	0.393	0.393	0.691	1.000	0.835
Block Frequency	0.553	0.570	0.368	0.480	0.724	0.860	0.393	0.393	0.691	1.000	0.835
Run	**0.000**	**0.000**	**0.000**	0.320	0.121	0.134	**0.007**	**0.007**	0.044	0.144	0.292
Run (Longest run of ones)	**0.000**	0.024	0.710	0.456	0.510	0.782	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
Serial	**0.000**	**0.000**	0.943	0.499	0.499	0.499	0.499	0.499	0.499	0.499	0.499
	0.000	**0.000**	0.998	0.151	0.499	0.499	0.499	0.499	0.499	0.499	0.499
Entropy	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Cum. Sums (Forward)	0.325	0.702	0.330	0.786	0.933	0.998	0.764	0.764	0.820	0.713	1.000
Cum. Sums (Backward)	0.191	0.609	0.330	0.997	0.993	1.000	0.358	0.358	0.466	0.713	0.592
Input length	493	381	324	175	153	129	**67**	**67**	**57**	**30**	**23**
Frequency	**0.003**	0.915	1.000	0.521	0.263	0.482	1.000	0.606	1.000	0.746	0.853
Block Frequency	0.015	0.325	0.969	1.000	0.289	0.482	1.000	0.606	1.000	0.746	0.853
Run	0.969	0.915	0.904	0.166	0.745	0.289	0.663	0.628	0.064	0.108	0.356
Run (Longest run of ones)	0.031	0.556	0.455	0.308	0.471	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
Serial	0.499	0.499	0.499	0.903	0.499	0.499	0.499	0.499	0.499	0.499	0.499
	0.968	0.499	0.499	0.499	0.499	0.499	0.499	0.499	0.499	0.499	0.499
Entropy	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Cum. Sums (Forward)	**0.004**	0.901	0.957	0.829	0.243	0.383	0.646	0.837	0.434	0.289	0.877
Cum. Sums (Backward)	**0.003**	0.813	0.957	0.352	0.393	0.895	0.646	0.393	0.434	0.511	0.698
Input length	492	350	274	197	135	**99**	**84**	**60**	**42**	**38**	**29**

The four row-groups correspond to $M = 1$, $M = 2$, $M = 3$, and $M = 4$ respectively.

Table 7: Results for each parameter configuration of "lenta" survey in our data set

	Test / α	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
$M=1$	Frequency	0.157	0.662	0.647	0.807	0.780	0.307	0.140	0.574	0.831	0.910	0.662
	Block Frequency	0.313	0.697	0.677	0.882	0.596	0.480	0.216	0.574	0.831	0.910	0.662
	Run	**0.000**	**0.000**	**0.000**	**0.000**	**0.003**	0.015	0.010	**0.000**	**0.003**	0.018	0.861
	Run (Longest run of ones)	0.076	**0.005**	**0.005**	**0.002**	0.132	0.035	0.099	**0.000**	**0.000**	**0.000**	**0.000**
	Serial	**0.000**	**0.000**	**0.000**	0.170	0.893	0.499	0.973	0.499	0.499	0.499	0.499
		0.000	**0.000**	**0.119**	0.249	0.961	0.499	0.997	0.499	0.499	0.499	0.499
	Entropy	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	Cum. Sums (Forward)	0.185	0.912	0.944	0.953	0.782	0.610	0.281	0.974	0.983	0.915	0.289
	Cum. Sums (Backward)	0.288	0.793	0.655	0.764	0.976	0.378	0.199	0.688	0.861	0.974	0.611
	Input length	510	425	306	268	206	188	133	114	**88**	**79**	**47**
$M=2$	Frequency	0.084	0.388	0.474	0.399	0.463	0.265	0.432	0.136	0.035	0.515	0.527
	Block Frequency	0.377	0.719	0.404	0.561	0.596	0.377	0.377	0.136	0.035	0.515	0.527
	Run	0.592	0.876	0.334	0.107	0.241	0.367	0.622	0.491	0.863	0.852	0.180
	Run (Longest run of ones)	**0.005**	**0.002**	**0.004**	0.048	0.128	0.548	0.889	**0.000**	**0.000**	**0.000**	**0.000**
	Serial	0.843	0.499	0.781	0.823	0.499	0.499	0.499	0.995	0.499	0.499	0.499
		0.857	0.019	0.865	0.906	0.499	0.499	0.084	1.000	0.499	0.499	0.499
	Entropy	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	Cum. Sums (Forward)	0.125	0.622	0.539	0.663	0.754	0.406	0.665	0.147	1.000	0.712	0.823
	Cum. Sums (Backward)	0.092	0.622	0.790	0.663	0.629	0.465	0.665	0.271	0.070	0.593	0.535
	Input length	509	434	329	276	225	158	131	101	**90**	**59**	**40**
$M=3$	Frequency	0.183	0.887	0.913	1.000	0.746	0.762	0.762	0.593	0.604	0.659	0.891
	Block Frequency	0.493	1.000	0.925	0.495	0.860	0.596	0.596	0.593	0.604	0.659	0.891
	Run	0.185	0.200	0.662	0.905	0.954	0.452	0.452	0.358	0.895	0.674	0.215
	Run (Longest run of ones)	**0.001**	0.539	**0.005**	0.110	0.245	0.595	0.595	**0.000**	**0.000**	**0.000**	**0.000**
	Serial	**0.000**	0.717	0.499	0.180	0.499	0.499	0.499	0.499	0.499	0.499	0.499
		0.017	0.499	0.499	0.499	0.499	0.149	0.149	0.499	0.499	0.499	0.499
	Entropy	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	Cum. Sums (Forward)	0.220	0.951	0.958	0.615	0.987	0.784	0.784	0.947	0.947	0.978	0.907
	Cum. Sums (Backward)	0.184	0.995	0.889	0.615	0.778	0.910	0.910	0.947	0.878	0.738	0.979
	Input length	508	445	334	280	239	174	174	126	**93**	**82**	**53**
$M=4$	Frequency	0.100	1.000	1.000	0.757	0.404	0.826	0.861	0.851	0.833	1.000	0.706
	Block Frequency	0.064	0.704	0.767	0.527	0.112	0.377	0.724	0.851	0.833	1.000	0.706
	Run	**0.000**	**0.000**	**0.006**	**0.004**	**0.009**	0.049	0.294	0.135	0.035	0.099	0.105
	Run (Longest run of ones)	**0.000**	0.171	0.424	0.132	**0.004**	0.457	0.178	**0.000**	**0.000**	**0.000**	**0.000**
	Serial	0.844	0.876	0.499	0.499	0.499	0.499	0.499	0.499	0.499	0.499	0.499
		0.499	0.890	0.841	0.755	0.499	0.499	0.499	0.499	0.499	0.499	0.499
	Entropy	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	Cum. Sums (Forward)	0.082	0.888	0.825	0.754	0.191	0.608	0.377	0.320	0.412	0.477	0.415
	Cum. Sums (Backward)	0.091	0.888	0.825	0.478	0.605	0.427	0.507	0.446	0.280	0.477	0.513
	Input length	507	444	362	261	243	187	130	114	**90**	**72**	**63**

Table 8: Results for each parameter configuration of "rapida" survey in our data set

	Test / α	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
$M=1$	Frequency	**0.005**	0.865	0.890	0.942	0.856	0.856	0.486	0.486	0.889	0.889	0.724
	Block Frequency	0.045	0.939	1.000	0.724	0.856	0.856	0.486	0.486	0.889	0.889	0.724
	Run	**0.000**	**0.000**	**0.000**	**0.001**	0.011	0.011	0.321	0.321	0.482	0.482	0.149
	Run (Longest run of ones)	**0.000**	0.017	0.690	0.082	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
	Serial	0.696	0.207	0.891	0.499	0.499	0.499	0.499	0.499	0.499	0.499	0.499
		0.999	0.877	0.960	0.172	0.499	0.499	0.499	0.499	0.499	0.499	0.499
	Entropy	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	Cum. Sums (Forward)	**0.008**	0.989	1.000	0.998	0.879	0.879	0.489	0.490	0.897	0.897	0.984
	Cum. Sums (Backward)	**0.008**	1.000	0.993	1.000	0.981	0.981	0.802	0.802	0.975	0.975	0.742
	Input length	497	313	208	191	122	122	**74**	**74**	**51**	**51**	**32**
$M=2$	Frequency	**0.001**	0.915	0.272	0.272	0.866	0.860	0.920	0.651	0.651	0.896	0.492
	Block Frequency	**0.007**	0.985	0.289	0.289	0.860	0.860	0.920	0.651	0.651	0.896	0.492
	Run	0.654	0.831	0.109	0.109	0.397	0.594	0.762	0.667	0.667	0.898	0.838
	Run (Longest run of ones)	**0.000**	**0.007**	0.207	0.207	0.452	0.929	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
	Serial	0.499	0.499	0.499	0.499	0.499	0.499	0.499	0.499	0.499	0.499	0.499
		0.986	0.153	0.196	0.196	0.098	0.499	0.499	0.499	0.499	0.499	0.499
	Entropy	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	Cum. Sums (Forward)	**0.001**	0.984	0.432	0.432	0.914	0.819	0.999	0.912	0.912	0.987	0.667
	Cum. Sums (Backward)	**0.001**	0.999	0.432	0.432	0.990	0.655	0.999	0.717	0.717	0.931	0.793
	Input length	496	354	212	212	140	128	**99**	**78**	**78**	**59**	**53**
$M=3$	Frequency	**0.001**	0.674	0.583	0.570	0.672	0.626	0.758	0.522	0.251	0.109	0.297
	Block Frequency	0.023	0.495	0.596	0.596	0.860	0.626	0.758	0.522	0.251	0.109	0.297
	Run	0.497	0.841	0.799	0.869	0.454	0.293	0.614	0.304	0.311	0.631	0.770
	Run (Longest run of ones)	0.281	0.800	0.530	0.320	0.790	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
	Serial	0.697	0.239	0.499	0.499	0.499	0.499	0.499	0.499	0.499	0.499	0.499
		0.642	0.308	0.196	0.499	0.499	0.499	0.499	0.499	0.499	0.499	0.499
	Entropy	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	Cum. Sums (Forward)	**0.003**	0.968	0.729	0.767	0.613	0.651	0.606	0.570	0.502	0.165	0.359
	Cum. Sums (Backward)	**0.003**	0.778	0.602	0.570	0.913	0.832	0.884	0.861	0.337	0.123	0.359
	Input length	495	362	212	198	139	105	**95**	**88**	**76**	**56**	**45**
$M=4$	Frequency	**0.000**	0.832	0.946	0.831	0.622	0.201	0.297	0.518	0.819	0.900	0.593
	Block Frequency	**0.002**	0.755	0.860	0.596	0.860	0.201	0.297	0.518	0.819	0.900	0.593
	Run	0.021	0.168	0.026	0.013	0.144	0.015	0.013	0.034	0.109	0.258	0.192
	Run (Longest run of ones)	0.019	0.368	0.725	0.215	0.187	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
	Serial	0.697	0.926	0.879	0.499	0.499	0.499	0.499	0.499	**0.499**	0.499	0.499
		0.642	0.938	0.795	0.499	0.499	0.499	0.499	0.499	**0.009**	0.499	0.499
	Entropy	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	Cum. Sums (Forward)	**0.000**	0.904	0.915	0.829	0.795	0.342	0.434	0.757	0.812	0.853	0.813
	Cum. Sums (Backward)	**0.000**	0.904	0.864	0.632	0.377	0.136	0.213	0.391	0.906	0.739	0.568
	Input length	494	354	219	197	148	120	111	**86**	**76**	**63**	**56**

Table 9: Results for each parameter configuration of "Simka2022-P0" survey in [Simka and Polak 2022] data set

	Test / α	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
M = 1	Frequency	**0.000**	1.000	1.000	1.000	1.000	0.180	0.180	0.180	0.564	1.000	1.000
	Block Frequency	**0.000**	1.000	1.000	1.000	1.000	0.180	0.180	0.180	0.564	1.000	1.000
	Run	**0.000**	0.018	0.018	0.018	0.018	0.050	0.050	0.050	0.387	0.157	0.157
	Run (Longest run of ones)	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
	Serial	**0.000** **0.000**	0.499 0.499	0.499 0.499	0.499 0.499	0.499 0.499	**0.000** **0.000**	**0.000** **0.000**	**0.000** **0.000**	0.499 0.499	0.499 0.499	0.499 0.499
	Entropy	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	Cum. Sums (Forward)	1.000	0.909	0.909	0.909	0.909	1.000	1.000	1.000	1.000	1.000	1.000
	Cum. Sums (Backward)	1.000	0.909	0.909	0.909	0.909	1.000	1.000	1.000	1.000	1.000	1.000
	Input length	199	**18**	**18**	**18**	**18**	**5**	**5**	**5**	**3**	**2**	**2**
M = 2	Frequency	**0.000**	1.000	1.000	1.000	0.366	0.366	1.000	1.000	1.000	1.000	1.000
	Block Frequency	**0.000**	1.000	1.000	1.000	0.366	0.366	1.000	1.000	1.000	1.000	1.000
	Run	**0.000**	0.450	0.450	0.450	0.554	0.554	0.480	1.000	1.000	1.000	1.000
	Run (Longest run of ones)	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
	Serial	**0.000** **0.000**	0.499 0.499	0.499 0.499	0.499 0.499	**0.000** **0.000**	**0.000** **0.000**	**0.000** **0.000**	**0.000** **0.000**	**0.000** **0.000**	**0.000** **0.000**	**0.000** **0.000**
	Entropy	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	Cum. Sums (Forward)	1.000	0.513	0.513	0.513	1.000	1.000	0.925	1.000	1.000	1.000	1.000
	Cum. Sums (Backward)	1.000	0.513	0.513	0.513	1.000	1.000	0.925	1.000	1.000	1.000	1.000
	Input length	198	**28**	**28**	**28**	**11**	**11**	**8**	**4**	**4**	**4**	**4**
M = 3	Frequency	**0.000**	0.868	0.868	0.868	0.197	1.000	1.000	1.000	1.000	1.000	1.000
	Block Frequency	**0.000**	0.868	0.868	0.868	0.197	1.000	1.000	1.000	1.000	1.000	1.000
	Run	**0.000**	0.615	0.615	0.615	0.847	1.000	1.000	1.000	1.000	1.000	0.414
	Run (Longest run of ones)	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
	Serial	**0.000** **0.000**	0.499 0.499	0.499 0.499	0.499 0.499	0.499 0.499	**0.000** **0.000**	**0.000** **0.000**	**0.000** **0.000**	**0.000** **0.000**	**0.000** **0.000**	**0.000** **0.000**
	Entropy	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	Cum. Sums (Forward)	1.000	0.779	0.779	0.779	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	Cum. Sums (Backward)	1.000	0.618	0.618	0.618	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	Input length	197	**35**	**35**	**35**	**15**	**10**	**10**	**8**	**8**	**8**	**6**
M = 4	Frequency	**0.000**	0.763	0.763	0.763	0.617	0.617	0.439	0.763	0.763	1.000	0.480
	Block Frequency	**0.000**	0.763	0.763	0.763	0.617	0.617	0.439	0.763	0.763	1.000	0.480
	Run	**0.000**	0.036	0.036	0.036	0.341	0.341	0.519	0.376	0.376	0.527	0.187
	Run (Longest run of ones)	**0.002**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
	Serial	**0.000** **0.000**	0.499 0.499	0.499 0.499	0.499 0.499	0.499 0.499	0.499 0.499	0.499 0.499	**0.000** **0.000**	**0.000** **0.000**	**0.000** **0.000**	**0.000** **0.000**
	Entropy	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	Cum. Sums (Forward)	1.000	0.580	0.580	0.580	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	Cum. Sums (Backward)	1.000	0.855	0.855	0.855	0.632	0.632	1.000	1.000	1.000	1.000	1.000
	Input length	196	**44**	**44**	**44**	**16**	**16**	**15**	**11**	**11**	**10**	**8**