APPENDIX

A. Descriptive Statistics

Let X be a sample with n observations, $x_1, x_2, ..., x_n$. We define the descriptive statistics of X.

The **sample mean** $\overline{x}$ is defined as the arithmetic average of the sample

$$\overline{x} = \frac{1}{n}\sum_{i=1}^{n} x_i.$$

The following measurements describe the spread of the sample.

The **sample variance** measures the average value of the squares of the difference between the values in the sample and the sample mean,

$$s^2 = \frac{1}{n-1}\sum_{i=1}^{n}(x_i - \overline{x})^2.$$

The **sample standard deviation** measures the spread of the observerations in the sample.

$$s = \sqrt{\frac{1}{n-1}\sum_{i=1}^{n}(x_i - \overline{x})^2}.$$

Let $0 < \alpha < 1$, we say that q is the $\alpha\%$ quantile if $100\alpha\%$ of the observations in the sample are less than it.

If the samples are ordered from smallest to largest, If the n is odd, then the **sample median** is defined as the value in position $(n+1)/2$, if n is even, then the median is defined as the average of the values in position $n/2$ and $n/2+1$ The sample median is also known as the 50% quantile, because its the observation in the observation in the sample that splits the data in two groups of the same size.

The **Gelman-Rubin potential scale reduction** $\widehat{R}$ [36] is a measurement used for evaluating the converge. The **number of effective samples of the posterior** n_{eff} represents the number of independent samples. For us to trust the mean estimates, we require at least 200 effective samples.

1) Tables: Tables A.XI, A.XII, A.XIII all contain the descriptive statistics of the accuracy for aggregated, datatype and manual effort respectively. From left to right, the columns contain, model name (Models), sample mean (Mean), sample standard deviation (SD), sample median (Median), 5% quantile (5%) and 95% quantile (95%). Tables A.XIV,A.XV,A.XVI,A.XVII,A.XVIII,A.XIX,A.XX A.XXI,A.XXII contains descriptive statistics of a_{alg}, b_{noise} and s. rom left to right the columns contain the of parameter name (Parameter), the mean of each estimate (Mean), the mean odds ratio of the parameters, n_{eff} and $\widehat{R}$.

2) Figures: The following figures illustrates HDP intervals for strength parameters. Figure A.13 for aggregated results, Figures A.14, A.15, A.16 for datatypes, and A.17, A.18, A.19, A.20, A.21 for manual effort.

Table A.XI
SUMMARY STATISTICS FOR THE ACCURACY AGGREGATED DATA

Model	Mean	SD	Median	5%	95%
centeredkernel	84.811	18.740	93.507	48.545	100.000
laplace	63.547	38.022	78.544	0.000	99.938
mean_shifted_laplace	63.991	37.973	80.559	0.000	99.926
poisson	83.266	20.161	91.800	43.589	100.000
poisson2	81.150	20.508	87.886	35.677	100.000
poissonbalanced	83.276	20.102	92.082	45.234	100.000
poissonmbo	87.078	16.449	93.568	57.681	100.000
poissonmbo_old	86.861	16.804	93.208	57.483	100.000
poissonmbobalanced	86.996	16.483	93.277	57.899	100.000
poissonvolume	83.255	20.155	92.194	42.830	100.000
randomwalk	86.755	16.245	93.011	57.799	100.000
sparselabelpropagation	87.542	16.037	93.861	58.110	100.000
wnll	63.765	37.928	78.827	0.000	99.929

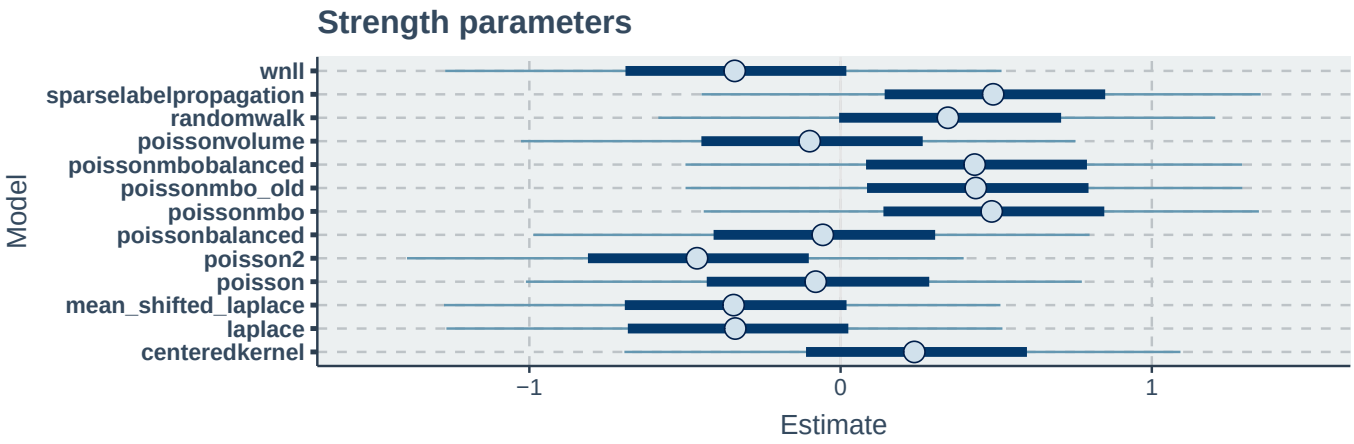

Figure A.13. The credible interval of the estimated strength parameters. The thick blue line correspond to 50% probability and the thin blue line represent the 90% probability.

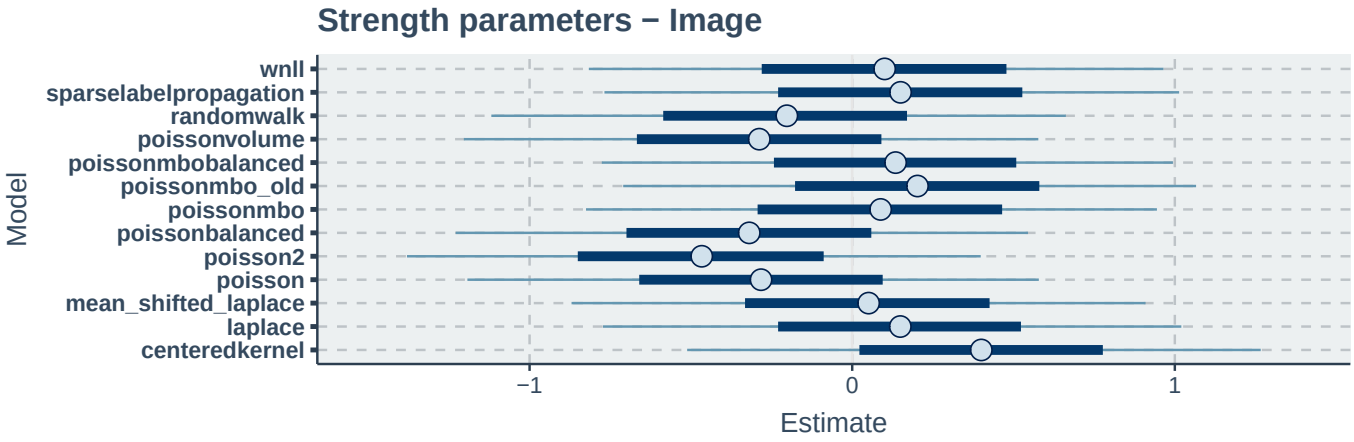

Figure A.14. Boxplot illustrating the accuracy of all algorithms of image datatype

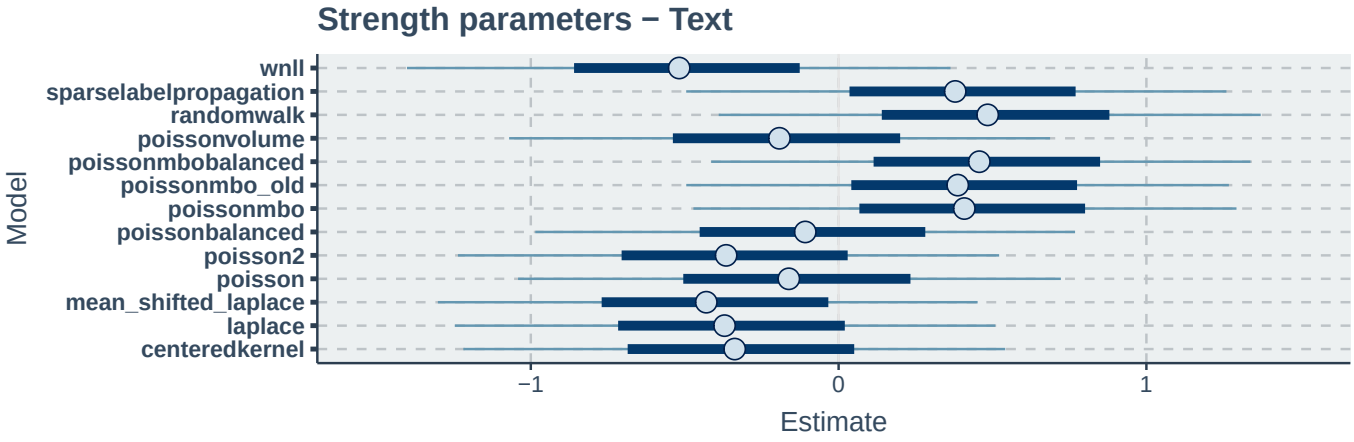

Figure A.15. Boxplot illustrating the accuracy of all algorithms of text datatype

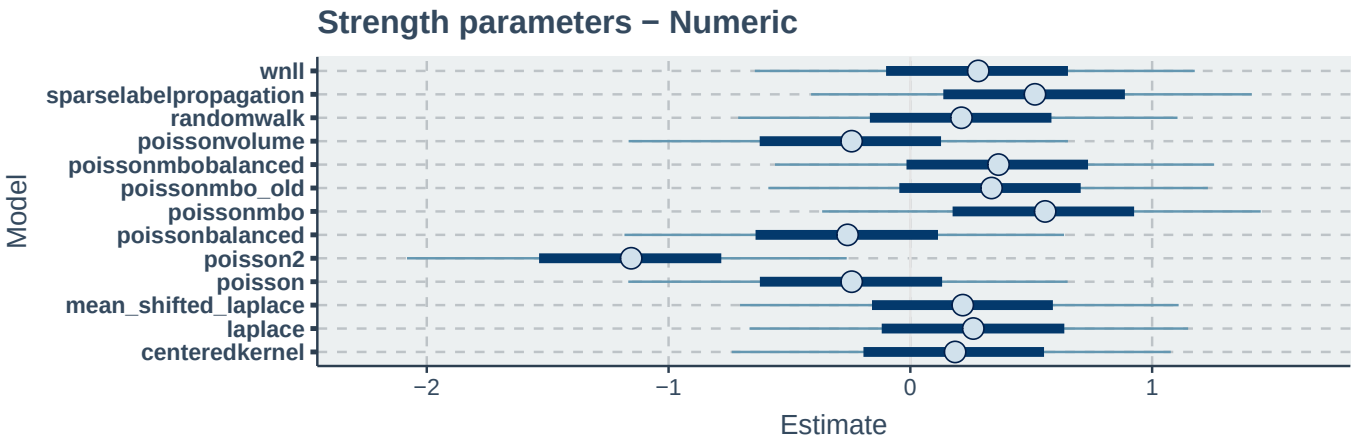

Figure A.16. Boxplot illustrating the accuracy of all algorithms of numeric datatype

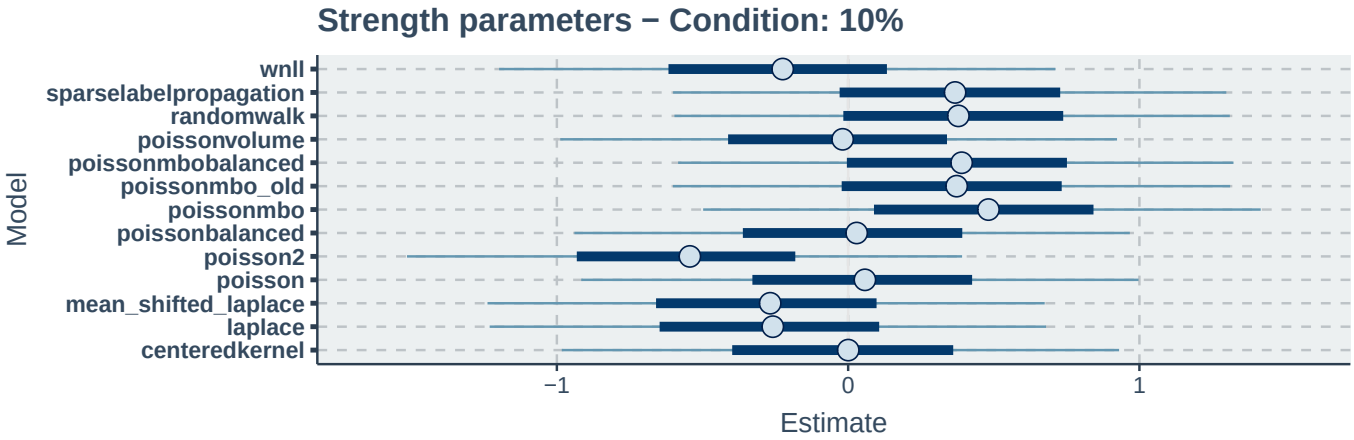

Figure A.17. The credible interval of the estimated strength parameters of the algorithms with 10% available labels. The thick blue line correspond to 50% probability and the thin blue line represent the 90% probability.

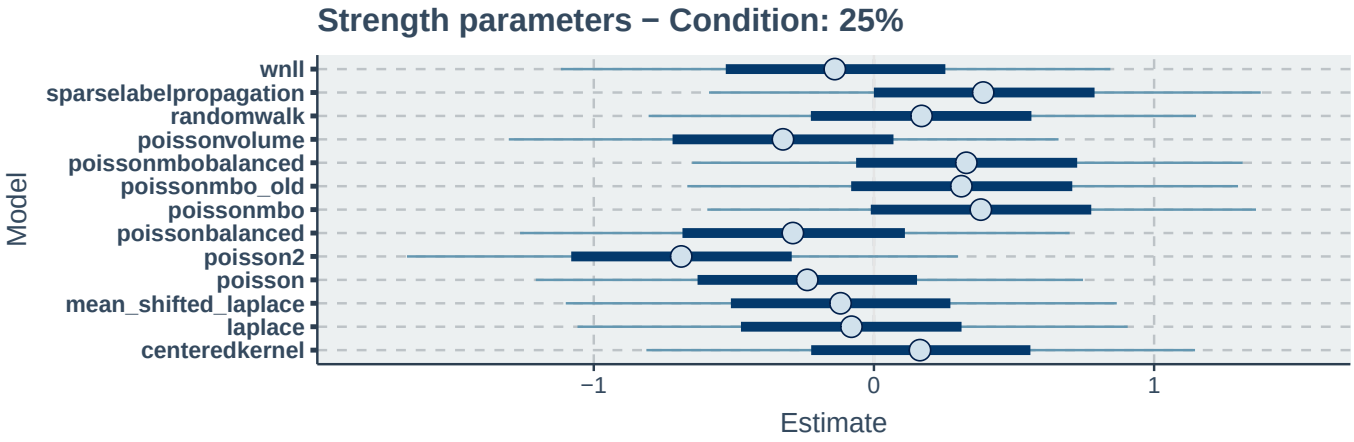

Figure A.18. The credible interval of the estimated strength parameters of the algorithms with 10% available labels. The thick blue line correspond to 50% probability and the thin blue line represent the 90% probability.

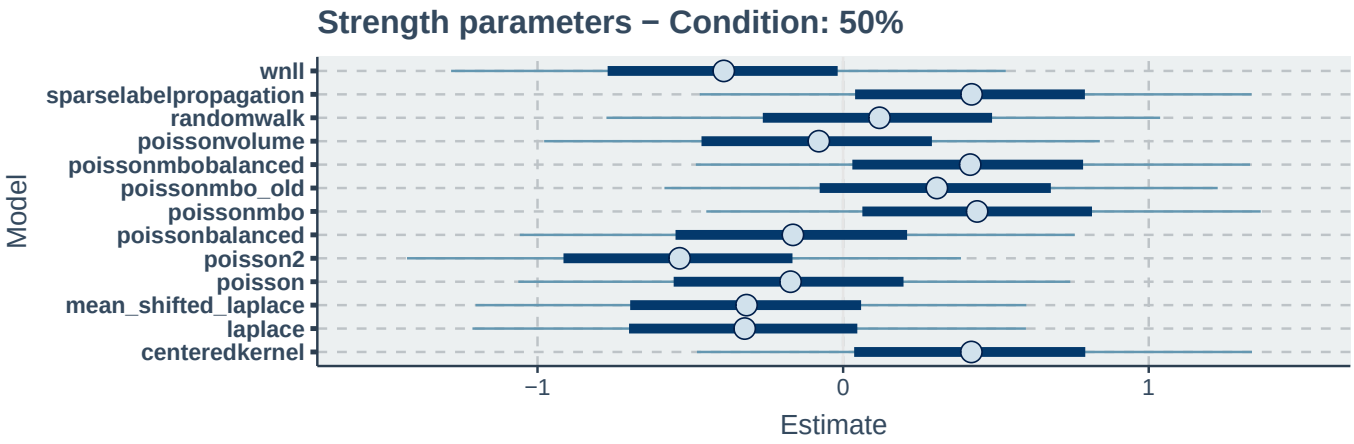

Figure A.19. The credible interval of the estimated strength parameters of the algorithms with 50% available labels. The thick blue line correspond to 50% probability and the thin blue line represent the 90% probability.

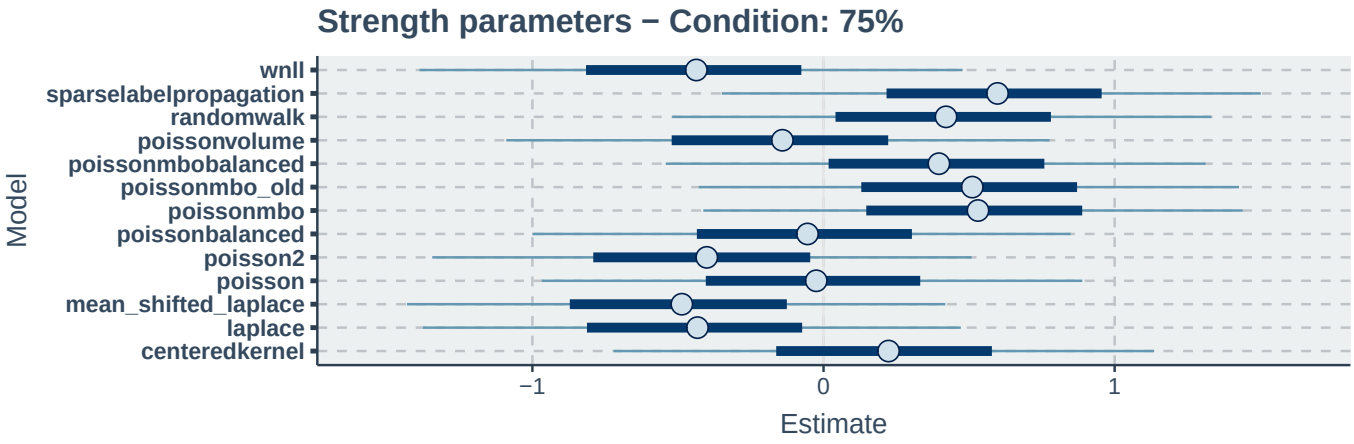

Figure A.20. The credible interval of the estimated strength parameters of the algorithms with 75% available labels. The thick blue line correspond to 50% probability and the thin blue line represent the 90% probability.

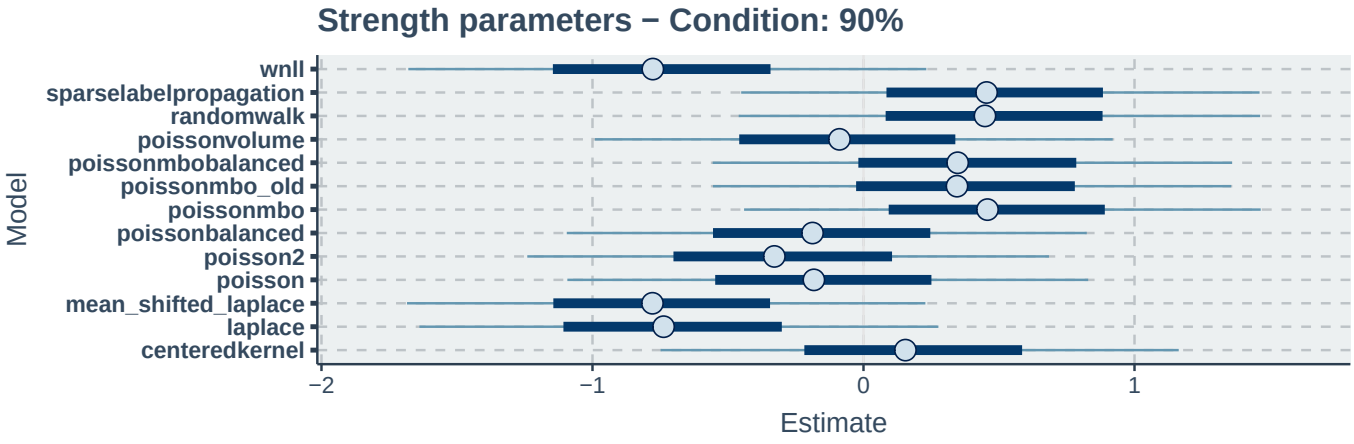

Figure A.21. The credible interval of the estimated strength parameters of the algorithms with 90% available labels. The thick blue line correspond to 50% probability and the thin blue line represent the 90% probability.

Table A.XII
SUMMARY STATISTICS FOR THE ACCURACY AGGREGATED DATA

Model	Mean	SD	Median	5%	95%
10% labels available					
centeredkernel	81.233	17.586	83.393	56.777	100.000
laplace	55.813	37.672	67.327	0.000	99.814
mean_shifted_laplace	55.174	37.807	67.327	0.000	99.814
poisson	81.169	18.336	86.249	50.963	100.000
poisson2	77.586	20.17	75.475	48.146	100.000
poissonbalanced	81.149	18.383	86.020	50.787	100.000
poissonmbo	83.338	16.415	87.068	58.098	100.000
poissonmbo_old	83.439	16.150	86.592	57.957	100.000
poissonmbobalanced	83.413	16.203	86.986	58.102	100.000
poissonvolume	81.067	18.361	85.773	51.223	100.000
randomwalk	83.427	16.164	87.439	58.110	100.000
sparselabelpropagation	82.978	16.779	86.865	57.236	100.000
wnll	55.686	37.791	67.327	0.000	99.814
25% labels available					
centeredkernel	87.166	11.999	92.147	69.730	100.000
laplace	72.369	34.048	83.475	0.000	99.926
mean_shifted_laplace	72.395	34.075	84.615	0.000	99.852
poisson	86.457	12.579	91.101	66.487	100.000
poisson2	84.819	12.172	83.682	67.854	100.000
poissonbalanced	86.446	12.634	91.672	66.844	100.000
poissonmbo	89.441	10.366	92.982	69.730	100.000
poissonmbo_old	89.225	10.466	93.019	69.890	100.000
poissonmbobalanced	89.236	10.522	92.964	69.730	100.000
poissonvolume	86.138	12.627	89.886	67.028	100.000
randomwalk	88.752	10.874	92.879	69.890	100.000
sparselabelpropagation	88.780	10.964	92.726	69.745	100.000
wnll	72.343	34.068	82.749	0.000	99.852
50% labels available					
centeredkernel	92.839	8.996	96.842	76.836	100.000
laplace	72.095	38.026	92.008	0.000	99.870
mean_shifted_laplace	72.307	38.074	91.346	0.000	99.949
poisson	91.607	10.236	95.182	67.327	100.000
poisson2	90.470	11.133	93.953	66.639	100.000
poissonbalanced	91.598	10.147	95.674	67.381	100.000
poissonmbo	92.995	9.277	97.403	71.719	100.000
poissonmbo_old	92.941	9.131	97.491	75.000	100.000
poissonmbobalanced	93.003	9.358	97.366	68.651	100.000
poissonvolume	91.766	10.115	95.789	67.558	100.000
randomwalk	91.959	10.277	96.842	66.801	100.000
sparselabelpropagation	94.264	7.317	96.431	78.108	100.000
wnll	71.909	38.036	91.970	0.000	99.957
75% labels available					
centeredkernel	86.703	15.228	93.079	59.997	100.000
laplace	65.847	36.664	78.444	0.000	99.995
mean_shifted_laplace	67.575	36.234	81.078	0.000	99.989
poisson	85.006	16.289	92.600	59.728	100.000
poisson2	83.167	16.291	87.412	59.493	100.000
poissonbalanced	84.580	16.911	92.720	51.538	100.000
poissonmbo	89.012	13.438	93.470	60.564	100.000
poissonmbo_old	88.995	13.152	93.400	61.115	100.000
poissonmbobalanced	88.933	13.451	94.318	61.220	100.000
poissonvolume	84.702	16.662	92.958	58.346	100.000
randomwalk	88.853	13.312	93.369	61.082	100.000
sparselabelpropagation	89.568	12.851	94.193	62.500	100.000
wnll	66.842	36.316	79.902	0.000	99.989
90% labels available					
centeredkernel	76.112	28.864	91.414	27.476	100.000
laplace	51.611	39.035	58.804	0.000	99.933
mean_shifted_laplace	52.503	38.950	59.130	0.000	99.914
poisson	72.092	31.012	90.200	23.077	100.000
poisson2	69.708	30.295	76.316	26.912	100.000
poissonbalanced	72.605	30.668	90.300	26.614	100.000
poissonmbo	80.605	24.763	91.500	27.689	100.000
poissonmbo_old	79.705	26.065	91.733	27.137	100.000
poissonmbobalanced	80.395	24.891	91.414	28.689	100.000
poissonvolume	72.600	30.973	90.300	20.962	100.000
randomwalk	80.782	24.063	91.429	33.129	100.000
sparselabelpropagation	82.120	23.838	91.114	30.623	100.000
wnll	52.048	38.843	59.022	0.000	99.917

Table A.XIII
SUMMARY STATISTICS FOR THE ACCURACY AGGREGATED DATA

Model	Mean	SD	Median	5%	95%
Image					
centeredkernel	99.579	1.289	100.000	98.378	100.000
laplace	47.769	49.549	0.000	0.000	99.977
mean_shifted_laplace	48.674	49.499	0.000	0.000	99.971
poisson	99.489	1.495	100.000	97.281	100.000
poisson2	99.414	1.533	100.000	96.557	100.000
poissonbalanced	99.489	1.465	100.000	97.345	100.000
poissonmbo	99.552	1.339	100.000	98.359	100.000
poissonmbo_old	99.569	1.308	100.000	98.364	100.000
poissonmbobalanced	99.553	1.328	100.000	98.327	100.000
poissonvolume	99.477	1.495	100.000	97.331	100.000
randomwalk	99.525	1.368	100.000	97.976	100.000
sparselabelpropagation	99.545	1.419	100.000	98.268	100.000
wnll	48.233	49.537	0.000	0.000	99.983
Numeric					
centeredkernel	81.695	19.320	88.118	37.104	100.000
laplace	84.311	16.683	89.758	53.238	99.926
mean_shifted_laplace	84.456	16.593	89.773	51.299	99.926
poisson	81.178	17.727	84.393	42.857	100.000
poisson2	73.291	19.881	75.394	32.416	100.000
poissonbalanced	81.179	17.414	84.211	46.723	100.000
poissonmbo	84.956	15.797	89.665	55.783	100.000
poissonmbo_old	84.467	16.200	88.604	54.597	100.000
poissonmbobalanced	84.688	15.780	89.474	56.558	100.000
poissonvolume	81.388	17.381	83.650	45.636	100.000
randomwalk	84.635	13.928	87.719	60.396	100.000
sparselabelpropagation	85.103	16.022	90.075	55.278	100.000
wnll	84.520	16.209	89.415	53.808	99.853
Text					
centeredkernel	73.157	17.774	72.498	31.188	96.663
laplace	58.561	30.067	66.536	0.000	94.309
mean_shifted_laplace	58.843	30.432	67.284	0.000	95.074
poisson	69.131	20.892	68.391	30.096	95.866
poisson2	70.744	19.008	69.847	33.277	96.063
poissonbalanced	69.159	21.006	68.902	33.105	96.270
poissonmbo	76.726	17.141	80.788	36.056	97.550
poissonmbo_old	76.546	17.608	80.704	35.820	97.509
poissonmbobalanced	76.746	17.231	80.642	35.110	97.511
poissonvolume	68.899	21.034	68.750	33.124	95.973
randomwalk	76.105	17.761	78.205	36.279	97.548
sparselabelpropagation	77.978	16.492	81.762	56.187	96.450
wnll	58.543	30.084	66.896	0.000	94.892

Table A.XIV
ESTIMATED PARAMETERS OF THE INVERSE LOGIT MODEL FOR AGGREGATED DATA

Parameter	Mean	OR.Mean	n_{eff}	$\widehat{R}$
a_centeredkernel	0.323	1.381	704.515	1.008
a_laplace	0.282	1.326	695.539	1.008
a_mean_shifted_laplace	0.254	1.289	709.772	1.008
a_poisson	0.153	1.165	699.738	1.008
a_poisson2	-0.470	0.625	700.028	1.008
a_poissonbalanced	0.103	1.108	696.868	1.008
a_poissonmbo	0.720	2.054	700.926	1.008
a_poissonmbo_old	0.572	1.772	692.109	1.009
a_poissonmbobalanced	0.677	1.968	691.343	1.009
a_poissonvolume	0.141	1.152	703.880	1.008
a_randomwalk	0.638	1.893	694.506	1.008
a_sparselabelpropagation	0.842	2.321	698.446	1.008
a_wnll	0.188	1.207	702.986	1.008
b_centeredkernel	-1.713	0.180	12313.943	1.000
b_laplace	-1.730	0.177	10686.764	1.000
b_mean_shifted_laplace	-1.666	0.189	10204.055	1.000
b_poisson	-1.743	0.175	11601.933	1.000
b_poisson2	-1.591	0.204	11418.623	1.000
b_poissonbalanced	-1.702	0.182	9915.078	1.000
b_poissonmbo	-1.914	0.148	7388.807	1.000
b_poissonmbo_old	-1.928	0.145	11322.511	1.000
b_poissonmbobalanced	-1.892	0.151	9246.354	1.000
b_poissonvolume	-1.721	0.179	10634.814	1.000
b_randomwalk	-2.026	0.132	11804.084	1.000
b_sparselabelpropagation	-1.879	0.153	10378.166	1.000
b_wnll	-1.688	0.185	11673.173	1.000
s	2.590	13.334	831.072	1.003

Table A.XV
ESTIMATED PARAMETERS OF THE INVERSE LOGIT MODEL FOR IMAGE DATA

Parameter	Mean	OR.Mean	n_{eff}	$\widehat{R}$
a_centeredkernel	8.226	3735.216	3090.514	1.001
a_laplace	7.606	2010.952	4368.767	1.000
a_mean_shifted_laplace	4.691	108.930	3033.036	1.001
a_poisson	8.299	4019.048	3590.157	1.000
a_poisson2	8.226	3738.408	3157.185	1.000
a_poissonbalanced	8.252	3837.098	3639.010	1.001
a_poissonmbo	8.226	3735.736	2348.278	1.001
a_poissonmbo_old	8.158	3489.973	2694.494	1.001
a_poissonmbobalanced	8.259	3862.406	2290.591	1.002
a_poissonvolume	8.265	3887.367	2615.526	1.001
a_randomwalk	8.242	3798.297	3920.952	1.000
a_sparselabelpropagation	8.169	3531.157	3357.880	1.001
a_wnll	5.459	234.830	3428.687	1.000
b_centeredkernel	-3.670	0.025	3050.585	1.001
b_laplace	-3.729	0.024	4310.673	1.000
b_mean_shifted_laplace	-2.574	0.076	3431.378	1.001
b_poisson	-3.853	0.021	3620.375	1.000
b_poisson2	-3.932	0.020	3191.296	1.000
b_poissonbalanced	-3.912	0.020	3632.680	1.001
b_poissonmbo	-3.905	0.020	2336.588	1.001
b_poissonmbo_old	-3.940	0.019	2695.296	1.001
b_poissonmbobalanced	-4.007	0.018	2262.748	1.001
b_poissonvolume	-3.843	0.021	2630.078	1.001
b_randomwalk	-4.004	0.018	3928.982	1.000
b_sparselabelpropagation	-3.790	0.023	3391.451	1.000
b_wnll	-2.908	0.055	3262.676	1.000
s	0.235	1.265	1729.386	1.002

Table A.XVI
ESTIMATED PARAMETERS OF THE INVERSE LOGIT MODEL FOR TEXT DATA

Parameter	Mean	OR.Mean	n_{eff}	$\widehat{R}$
a_centeredkernel	-1.454	0.234	388.610	1.008
a_laplace	-1.902	0.149	406.958	1.008
a_mean_shifted_laplace	-1.842	0.159	401.908	1.008
a_poisson	-1.496	0.224	394.433	1.008
a_poisson2	-1.322	0.267	389.700	1.008
a_poissonbalanced	-1.452	0.234	387.553	1.008
a_poissonmbo	-0.866	0.421	387.908	1.008
a_poissonmbo_old	-1.026	0.358	386.568	1.008
a_poissonmbobalanced	-0.981	0.375	384.108	1.008
a_poissonvolume	-1.529	0.217	399.650	1.008
a_randomwalk	-0.803	0.448	392.119	1.008
a_sparselabelpropagation	-0.740	0.477	390.005	1.008
a_wnll	-1.936	0.144	400.359	1.008
b_centeredkernel	-0.851	0.427	10391.902	1.000
b_laplace	-0.709	0.492	9284.027	1.000
b_mean_shifted_laplace	-0.625	0.535	7255.258	1.000
b_poisson	-0.806	0.447	14224.974	1.000
b_poisson2	-1.003	0.367	8942.023	1.000
b_poissonbalanced	-0.763	0.466	9988.819	1.000
b_poissonmbo	-0.915	0.401	7097.817	1.000
b_poissonmbo_old	-0.962	0.382	7292.305	1.000
b_poissonmbobalanced	-0.924	0.397	6117.961	1.001
b_poissonvolume	-0.824	0.439	7936.773	1.000
b_randomwalk	-1.178	0.308	9590.113	1.000
b_sparselabelpropagation	-0.979	0.376	11384.404	1.001
b_wnll	-0.896	0.408	7428.442	1.000
s	1.540	4.664	1024.601	1.000

Table A.XVII
ESTIMATED PARAMETERS OF THE INVERSE LOGIT MODEL FOR NUMERIC DATA

Parameter	Mean	OR.Mean	n_{eff}	$\widehat{R}$
a_centeredkernel	-0.225	0.799	429.567	1.010
a_laplace	0.146	1.157	433.252	1.009
a_mean_shifted_laplace	0.081	1.085	418.344	1.010
a_poisson	-0.598	0.550	415.806	1.010
a_poisson2	-2.396	0.091	430.805	1.009
a_poissonbalanced	-0.772	0.462	436.692	1.010
a_poissonmbo	0.062	1.064	422.014	1.010
a_poissonmbo_old	-0.104	0.901	428.668	1.010
a_poissonmbobalanced	0.106	1.112	413.901	1.010
a_poissonvolume	-0.604	0.547	432.684	1.009
a_randomwalk	-0.223	0.800	416.458	1.010
a_sparselabelpropagation	0.206	1.228	426.388	1.010
a_wnll	0.001	1.001	414.882	1.010
b_centeredkernel	-1.448	0.235	7605.750	1.000
b_laplace	-1.652	0.192	9148.817	1.000
b_mean_shifted_laplace	-1.694	0.184	8834.989	1.000
b_poisson	-1.402	0.246	8196.091	1.000
b_poisson2	-0.749	0.473	11767.954	1.000
b_poissonbalanced	-1.242	0.289	11329.245	1.000
b_poissonmbo	-1.594	0.203	9246.894	1.000
b_poissonmbo_old	-1.567	0.209	5557.617	1.001
b_poissonmbobalanced	-1.472	0.229	5621.187	1.001
b_poissonvolume	-1.320	0.267	8934.852	1.000
b_randomwalk	-1.591	0.204	7665.451	1.000
b_sparselabelpropagation	-1.487	0.226	7179.380	1.001
b_wnll	-1.524	0.218	11205.458	1.000
s	2.757	15.749	327.218	1.016

Table A.XVIII
ESTIMATED PARAMETERS OF THE INVERSE LOGIT MODEL WHEN HAVING 10% OF AVAILABLE LABELS

Parameter	Mean	OR.Mean	n_{eff}	$\widehat{R}$
a_centeredkernel	-0.254	0.775	779.584	1.003
a_laplace	-0.354	0.702	873.305	1.003
a_mean_shifted_laplace	-0.672	0.511	844.840	1.003
a_poisson	-0.324	0.723	793.481	1.003
a_poisson2	-1.472	0.229	753.297	1.003
a_poissonbalanced	-0.327	0.721	821.361	1.003
a_poissonmbo	-0.250	0.779	817.052	1.003
a_poissonmbo_old	-0.463	0.630	784.795	1.003
a_poissonmbobalanced	-0.323	0.724	788.945	1.002
a_poissonvolume	-0.323	0.724	796.945	1.003
a_randomwalk	-0.178	0.837	798.842	1.003
a_sparselabelpropagation	-0.182	0.834	787.449	1.002
a_wnll	-0.768	0.464	839.798	1.003
b_centeredkernel	-1.665	0.189	8667.428	1.001
b_laplace	-1.612	0.199	7042.689	1.000
b_mean_shifted_laplace	-1.586	0.205	7007.332	1.000
b_poisson	-1.641	0.194	7441.032	1.000
b_poisson2	-1.437	0.238	6808.986	1.000
b_poissonbalanced	-1.576	0.207	9005.802	1.000
b_poissonmbo	-1.667	0.189	7113.325	1.000
b_poissonmbo_old	-1.673	0.188	7642.807	1.000
b_poissonmbobalanced	-1.720	0.179	7271.886	1.000
b_poissonvolume	-1.643	0.193	6770.011	1.000
b_randomwalk	-1.865	0.155	7823.042	1.000
b_sparselabelpropagation	-1.690	0.185	7518.793	1.000
b_wnll	-1.274	0.280	9654.630	1.000
s	3.109	22.393	1073.593	1.005

Table A.XX
ESTIMATED PARAMETERS OF THE INVERSE LOGIT MODEL WHEN HAVING 50% OF AVAILABLE LABELS

Parameter	Mean	OR.Mean	n_{eff}	$\widehat{R}$
a_centeredkernel	1.073	2.925	910.268	1.001
a_laplace	1.371	3.939	987.516	1.001
a_mean_shifted_laplace	1.594	4.924	911.723	1.001
a_poisson	0.810	2.249	910.522	1.001
a_poisson2	-0.091	0.913	882.162	1.002
a_poissonbalanced	0.565	1.759	916.596	1.001
a_poissonmbo	1.844	6.324	921.461	1.001
a_poissonmbo_old	1.626	5.084	965.818	1.001
a_poissonmbobalanced	1.916	6.793	906.694	1.001
a_poissonvolume	0.876	2.401	933.547	1.001
a_randomwalk	1.137	3.118	877.777	1.001
a_sparselabelpropagation	3.078	21.721	933.928	1.001
a_wnll	1.442	4.229	970.725	1.001
b_centeredkernel	-2.088	0.124	9890.437	1.000
b_laplace	-2.196	0.111	9388.486	1.000
b_mean_shifted_laplace	-2.271	0.103	8463.966	1.000
b_poisson	-2.085	0.124	8193.398	1.000
b_poisson2	-2.051	0.129	9221.631	1.000
b_poissonbalanced	-2.055	0.128	8569.824	1.000
b_poissonmbo	-2.431	0.088	8689.602	1.000
b_poissonmbo_old	-2.356	0.095	8873.729	1.000
b_poissonmbobalanced	-2.334	0.097	7135.659	1.000
b_poissonvolume	-2.023	0.132	7552.449	1.000
b_randomwalk	-2.302	0.100	7489.467	1.000
b_sparselabelpropagation	-2.722	0.066	7506.287	1.000
b_wnll	-2.351	0.095	8018.946	1.000
s	3.135	22.998	1148.295	1.003

Table A.XIX
ESTIMATED PARAMETERS OF THE INVERSE LOGIT MODEL WHEN HAVING 25% OF AVAILABLE LABELS

Parameter	Mean	OR Mean	n_{eff}	$\widehat{R}$
a_centeredkernel	-0.270	0.764	653.207	1.002
a_laplace	0.570	1.768	654.864	1.002
a_mean_shifted_laplace	0.311	1.364	672.839	1.001
a_poisson	-0.499	0.607	647.910	1.001
a_poisson2	-1.313	0.269	633.972	1.002
a_poissonbalanced	-0.574	0.563	638.920	1.002
a_poissonmbo	1.367	3.922	680.607	1.002
a_poissonmbo_old	0.846	2.330	647.559	1.002
a_poissonmbobalanced	1.292	3.638	642.056	1.001
a_poissonvolume	-0.647	0.523	658.757	1.002
a_randomwalk	0.926	2.525	638.336	1.002
a_sparselabelpropagation	1.153	3.168	670.767	1.002
a_wnll	0.404	1.498	653.149	1.002
b_centeredkernel	-1.692	0.184	6948.891	1.000
b_laplace	-2.397	0.091	7528.165	1.000
b_mean_shifted_laplace	-2.038	0.130	6412.071	1.000
b_poisson	-1.911	0.148	7068.210	1.000
b_poisson2	-1.542	0.214	8189.207	1.000
b_poissonbalanced	-1.835	0.160	7708.906	1.000
b_poissonmbo	-2.479	0.084	6421.991	1.000
b_poissonmbo_old	-2.484	0.083	6353.535	1.000
b_poissonmbobalanced	-2.334	0.097	6869.441	1.000
b_poissonvolume	-1.765	0.171	6665.552	1.000
b_randomwalk	-2.603	0.074	6291.734	1.000
b_sparselabelpropagation	-2.166	0.115	5727.958	1.000
b_wnll	-2.124	0.120	6731.097	1.001
s	3.728	41.616	1154.709	1.001

Table A.XXI
ESTIMATED PARAMETERS OF THE INVERSE LOGIT MODEL WHEN HAVING 75% OF AVAILABLE LABELS

Parameter	Mean	OR.Mean	n_{eff}	$\widehat{R}$
a_centeredkernel	0.493	1.637	702.683	1.007
a_laplace	0.377	1.458	707.281	1.006
a_mean_shifted_laplace	0.618	1.855	722.773	1.006
a_poisson	-0.058	0.944	725.772	1.007
a_poisson2	-0.962	0.382	701.259	1.007
a_poissonbalanced	-0.059	0.942	716.808	1.008
a_poissonmbo	1.630	5.105	695.013	1.007
a_poissonmbo_old	1.284	3.611	710.041	1.007
a_poissonmbobalanced	1.400	4.055	702.463	1.007
a_poissonvolume	0.009	1.009	718.208	1.008
a_randomwalk	1.574	4.824	705.747	1.006
a_sparselabelpropagation	1.631	5.108	691.306	1.007
a_wnll	0.382	1.465	724.048	1.006
b_centeredkernel	-2.246	0.106	7164.311	1.000
b_laplace	-1.976	0.139	6908.095	1.000
b_mean_shifted_laplace	-1.800	0.165	7670.668	1.000
b_poisson	-2.060	0.128	7361.244	1.000
b_poisson2	-1.539	0.215	6980.412	1.000
b_poissonbalanced	-1.839	0.159	8417.561	1.000
b_poissonmbo	-2.498	0.082	6912.454	1.000
b_poissonmbo_old	-2.248	0.106	7635.792	1.000
b_poissonmbobalanced	-2.423	0.089	7176.228	1.000
b_poissonvolume	-2.084	0.124	7390.189	1.000
b_randomwalk	-2.806	0.060	7301.945	1.000
b_sparselabelpropagation	-2.445	0.087	6907.517	1.000
b_wnll	-2.188	0.112	5711.759	1.000
s	3.276	26.457	968.431	1.005

Table A.XXII
ESTIMATED PARAMETERS OF THE INVERSE LOGIT MODEL WHEN HAVING 90% OF AVAILABLE LABELS

Parameter	Mean	OR.Mean	n_{eff}	$\widehat{R}$
a_centeredkernel	0.343	1.409	802.953	1.007
a_laplace	-0.112	0.894	829.139	1.006
a_mean_shifted_laplace	-0.365	0.694	846.277	1.007
a_poisson	0.001	1.001	813.383	1.008
a_poisson2	-0.811	0.444	812.403	1.009
a_poissonbalanced	-0.062	0.940	814.115	1.007
a_poissonmbo	0.207	1.230	768.141	1.008
a_poissonmbo_old	0.291	1.337	800.959	1.009
a_poissonmbobalanced	0.205	1.228	811.720	1.007
a_poissonvolume	-0.135	0.874	812.687	1.008
a_randomwalk	0.633	1.884	814.736	1.007
a_sparselabelpropagation	0.219	1.245	818.412	1.006
a_wnll	-0.469	0.626	848.209	1.007
b_centeredkernel	-1.869	0.154	7711.254	1.000
b_laplace	-1.614	0.199	9929.694	1.000
b_mean_shifted_laplace	-1.741	0.175	8052.302	1.000
b_poisson	-1.788	0.167	9811.605	1.000
b_poisson2	-1.689	0.185	6459.582	1.000
b_poissonbalanced	-1.886	0.152	9879.303	1.000
b_poissonmbo	-1.893	0.151	8783.242	1.000
b_poissonmbo_old	-2.185	0.112	7012.193	1.000
b_poissonmbobalanced	-2.028	0.132	8507.623	1.000
b_poissonvolume	-1.817	0.163	8659.477	1.000
b_randomwalk	-2.034	0.131	8406.667	1.000
b_sparselabelpropagation	-1.938	0.144	8637.927	1.000
b_wnll	-1.557	0.211	8215.369	1.000
s	3.388	29.607	1035.012	1.008