

1 Detailed results

Table 1 shows the results of our experiments in details. For each SELM, the table shows the classification results in terms of precision, recall, and MCC of each class. Moreover, the table shows the average results for each SELM and the total average of all SELMs.

Table 1: Results of all SELMs using test data and the ground truth.

Models	Classes	test data			Ground truth		
		Precision	Recall	MCC	Precision	Recall	MCC
Model a	National politics	0.74	0.60	0.61	0.74	0.52	0.65
	International politics	0.74	0.93	0.79	0.70	0.92	0.76
	Economy	0.72	0.75	0.68	0.71	0.80	0.70
	Sports	0.95	0.88	0.90	0.92	0.88	0.88
	Crime / justice	0.76	0.88	0.78	0.72	0.82	0.72
	Human interests	0.91	0.73	0.78	0.92	0.70	0.77
	Average	0.80	0.80	0.76	0.79	0.77	0.75
Model b	National politics	0.39	0.44	0.30	0.62	0.58	0.52
	International politics	0.46	0.62	0.45	0.65	0.74	0.63
	Economy	0.69	0.58	0.55	0.77	0.80	0.74
	Sports	0.90	0.88	0.87	0.94	0.90	0.90
	Crime / justice	0.55	0.68	0.50	0.58	0.74	0.57
	Human interests	0.76	0.41	0.51	0.91	0.58	0.69
	Average	0.63	0.60	0.53	0.75	0.72	0.68
Model c	National politics	0.60	0.68	0.56	0.65	0.60	0.55
	International politics	0.64	0.74	0.62	0.65	0.88	0.70
	Economy	0.82	0.76	0.74	0.74	0.70	0.67
	Sports	0.91	0.84	0.85	0.95	0.84	0.88
	Crime / justice	0.80	0.80	0.76	0.77	0.72	0.69
	Human interests	0.80	0.69	0.70	0.85	0.82	0.81
	Average	0.76	0.75	0.71	0.77	0.76	0.72
Total average		0.73	0.72	0.66	0.77	0.75	0.71

Figure 1 indicates the average ranks of all SELMs and CM, where the best model receives rank one, and the second-best model receives rank two, and so on. As shown, with all assessment methods (i.e precision, recall, and MCC), CM obtained the best results with a significant difference than all the other SELMs.

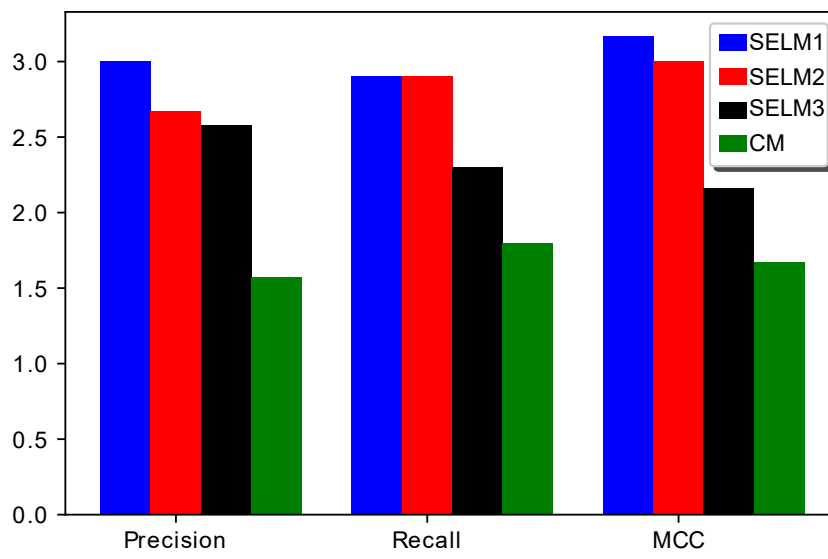


Fig. 1: Average ranks of the SELMs and the CM using all classes. SELM1, SELM2, and SELM3 represent the first, second, and third SELMs, respectively.