

Table I  
DESCRIPTIVE STATISTICS FOR OUR REPRODUCTION OF KURTANOVIĆ AND MAALEJ’S APPROACH FOR THE FOUR CLASSIFIER TARGETS: F, Q, ONLYF, ONLYQ.

(a) Top 500 features

Test set	F				Q				OnlyF				OnlyQ			
	Prec	Rec	F1	AUC	Prec	Rec	F1	AUC	Prec	Rec	F1	AUC	Prec	Rec	F1	AUC
PROMISE train	0.978	0.987	0.982	0.99	0.990	0.992	0.989	1.00	0.987	0.974	0.986	1.00	0.977	0.970	0.974	0.99
PROMISE test	0.770	0.770	0.783	0.86	0.840	0.881	0.815	0.89	0.759	0.759	0.834	0.90	0.829	0.778	0.803	0.85
PROMISE k-fold	0.749	0.681	0.710	0.80	0.764	0.851	0.803	0.81	0.729	0.621	0.666	0.81	0.719	0.772	0.741	0.80
PROMISE p-fold	0.723	0.601	0.651	0.77	0.716	0.893	0.789	0.77	0.679	0.446	0.518	0.77	0.683	0.740	0.706	0.78
Industry (macro-avg)	0.831	0.635	0.655	0.70	0.554	0.562	0.642	0.62	0.611	0.445	0.579	0.60	0.454	0.590	0.723	0.72
Industry (std-dev)	±.17	±.18	±.11	±.07	±.21	±.12	±.08	±.07	±.25	±.17	±.11	±.06	±.28	±.20	±.08	±.09
ESA Euclid	0.468	0.484	0.589	0.59	0.928	0.735	0.712	0.61	0.160	0.348	0.758	0.55	0.699	0.552	0.585	0.61
Helpdesk	0.884	0.909	0.826	0.66	0.583	0.412	0.738	0.71	0.760	0.785	0.674	0.69	0.367	0.379	0.785	0.75
User mgmt	0.833	0.556	0.724	0.77	0.208	0.600	0.514	0.56	0.837	0.363	0.420	0.57	0.685	0.680	0.681	0.78
Dronology	1.000	0.521	0.536	0.74	0.469	0.536	0.691	0.66	0.714	0.515	0.515	0.60	0.080	1.000	0.763	0.84
ReqView	0.955	0.560	0.598	0.72	0.500	0.375	0.632	0.61	0.690	0.537	0.563	0.62	0.389	0.636	0.828	0.72
Leeds library	0.714	0.909	0.765	0.80	0.706	0.590	0.529	0.48	0.300	0.261	0.635	0.50	0.846	0.550	0.741	0.75
WASP	0.966	0.509	0.548	0.63	0.481	0.684	0.677	0.69	0.812	0.310	0.484	0.64	0.111	0.333	0.677	0.56

(b) Top 100 features

Test set	F				Q				OnlyF				OnlyQ			
	Prec	Rec	F1	AUC	Prec	Rec	F1	AUC	Prec	Rec	F1	AUC	Prec	Rec	F1	AUC
PROMISE train	0.886	0.877	0.883	0.94	0.934	0.958	0.933	0.96	0.923	0.839	0.915	0.97	0.857	0.874	0.869	0.94
PROMISE test	0.768	0.716	0.764	0.84	0.879	0.861	0.834	0.88	0.778	0.648	0.815	0.91	0.773	0.716	0.745	0.82
PROMISE k-fold	0.782	0.741	0.759	0.84	0.807	0.885	0.842	0.87	0.802	0.565	0.655	0.87	0.758	0.794	0.772	0.83
PROMISE p-fold	0.791	0.669	0.721	0.82	0.743	0.899	0.809	0.84	0.780	0.412	0.525	0.84	0.730	0.788	0.756	0.83
Industry (macro-avg)	0.823	0.764	0.757	0.79	0.571	0.531	0.633	0.63	0.633	0.483	0.627	0.64	0.577	0.542	0.780	0.78
Industry (std-dev)	±.18	±.13	±.09	±.09	±.22	±.10	±.09	±.08	±.31	±.20	±.10	±.10	±.28	±.17	±.12	±.09
ESA Euclid	0.479	0.505	0.597	0.63	0.908	0.659	0.636	0.57	0.106	0.217	0.746	0.57	0.670	0.455	0.534	0.60
Helpdesk	0.873	0.916	0.820	0.80	0.714	0.392	0.773	0.75	0.767	0.760	0.669	0.60	0.818	0.310	0.872	0.88
User mgmt	0.850	0.722	0.799	0.87	0.239	0.640	0.565	0.68	0.911	0.451	0.514	0.69	0.796	0.852	0.815	0.86
Dronology	1.000	0.777	0.784	0.87	0.636	0.500	0.773	0.67	0.757	0.412	0.495	0.66	0.056	0.500	0.814	0.73
ReqView	0.983	0.787	0.805	0.90	0.433	0.406	0.586	0.65	0.773	0.630	0.655	0.69	0.571	0.727	0.897	0.84
Leeds library	0.647	0.750	0.659	0.73	0.692	0.590	0.518	0.49	0.208	0.217	0.565	0.46	0.857	0.450	0.706	0.78
WASP	0.823	0.764	0.757	0.79	0.370	0.526	0.581	0.61	0.906	0.690	0.742	0.78	0.273	0.500	0.823	0.78