

Feature	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
k=10	.557	.536	.487	.356	.266	.071	.129	.203	.325	.414	.125	.207	.286	.340	.324
k=20	.449	.460	.413	.314	.237	.048	.101	.171	.282	.376	.086	.165	.242	.298	.291
k=30	.393	.408	.379	.291	.189	.038	.082	.150	.255	.348	.070	.137	.215	.271	.245
k=40	.356	.372	.358	.276	.208	.031	.070	.135	.237	.327	.058	.118	.196	.255	.254
k=50	.332	.349	.339	.265	.200	.028	.063	.125	.225	.311	.051	.107	.182	.243	.243
k=60	.311	.328	.325	.256	.193	.026	.058	.115	.214	.299	.048	.098	.170	.233	.235
k=70	.300	.314	.311	.249	.187	.024	.053	.108	.205	.287	.045	.091	.160	.225	.227
k=80	.283	.299	.298	.241	.182	.022	.048	.100	.195	.276	.040	.083	.150	.216	.219
k=90	.266	.283	.287	.235	.176	.020	.045	.095	.190	.267	.038	.077	.143	.210	.212
k=100	.256	.272	.276	.228	.173	.019	.043	.090	.183	.261	.036	.074	.136	.203	.208

Feature	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
k=10	.593	.578	.511	.391	.294	.072	.138	.222	.352	.450	.128	.223	.310	.370	.356
k=20	.476	.483	.449	.348	.263	.048	.101	.180	.304	.403	.086	.167	.256	.324	.319
k=30	.424	.435	.418	.323	.244	.039	.083	.158	.275	.372	.072	.140	.229	.297	.295
k=40	.385	.397	.389	.306	.231	.033	.072	.140	.255	.347	.061	.123	.206	.278	.277
k=50	.360	.367	.366	.295	.222	.030	.064	.128	.239	.331	.056	.109	.190	.264	.266
k=60	.342	.347	.345	.286	.214	.028	.058	.117	.229	.315	.052	.099	.174	.254	.255
k=70	.327	.331	.331	.278	.209	.026	.054	.110	.218	.304	.049	.093	.165	.244	.248
k=80	.315	.320	.318	.270	.204	.025	.051	.103	.208	.294	.046	.088	.156	.235	.241
k=90	.302	.308	.307	.264	.199	.024	.049	.097	.201	.286	.045	.085	.147	.228	.235
k=100	.291	.296	.297	.258	.196	.023	.047	.094	.193	.279	.043	.081	.143	.221	.230

News

And

Tweet Text

Feature		P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
	k=10	.247	.262	.236	.184	.140	.023	.050	.093	.160	.214	.043	.084	.133	.171	.169
	k=20	.185	.207	.197	.158	.122	.015	.035	.066	.134	.192	.028	.059	.099	.145	.149
	k=30	.149	.171	.170	.140	.111	.011	.027	.055	.115	.174	.021	.046	.083	.126	.135
News	k=40	.133	.154	.157	.130	.103	.009	.023	.048	.101	.160	.018	.040	.073	.114	.125
And	k=50	.118	.138	.147	.123	.098	.082	.020	.044	.091	.151	.097	.035	.067	.105	.119
Tweet	k=60	.114	.127	.136	.116	.095	.008	.018	.039	.084	.142	.015	.032	.061	.097	.114
Topic	k=70	.112	.119	.127	.110	.092	.072	.016	.036	.081	.135	.087	.028	.057	.093	.109
	k=80	.105	.112	.121	.106	.089	.007	.014	.032	.076	.128	.012	.025	.051	.088	.105
	k=90	.101	.111	.116	.102	.087	.006	.014	.031	.072	.122	.012	.025	.049	.084	.101
	k=100	.094	.107	.109	.097	.084	.006	.014	.029	.068	.116	.010	.025	.046	.080	.098

Table Annex 1. 1.Cosine Baseline Results (Precision, Recall and F-measure of both)

Feature		S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
	k=10	.530	.683	.802	.899	.918	.827	.145	.501	.329
	k=20	.388	.559	.712	.848	.904	.833	.109	.468	.241
	k=30	.341	.509	.662	.810	.887	.836	.094	.453	.222
	k=40	.325	.471	.619	.785	.866	.838	.085	.444	.210
News	k=50	.313	.452	.598	.766	.847	.839	.078	.436	.198
All	k=60	.305	.425	.569	.741	.833	.840	.074	.430	.195
	k=70	.291	.420	.562	.733	.827	.840	.071	.427	.197
	k=80	.275	.397	.547	.719	.817	.841	.068	.423	.184
	k=90	.268	.394	.538	.709	.804	.841	.066	.420	.183
	k=100	.279	.396	.533	.701	.801	.841	.064	.418	.188

Feature		S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
	k=10	.576	.717	.824	.897	.907	.821	.158	.512	.338
	k=20	.445	.600	.742	.868	.907	.826	.120	.477	.256
	k=30	.395	.560	.696	.830	.888	.830	.104	.462	.238
	k=40	.377	.536	.670	.805	.873	.831	.095	.454	.231
News	k=50	.353	.509	.652	.789	.859	.832	.088	.446	.217
Entity	k=60	.341	.490	.639	.778	.853	.832	.084	.441	.216
	k=70	.327	.475	.623	.765	.840	.832	.079	.436	.208
	k=80	.326	.467	.610	.756	.837	.832	.076	.432	.211
	k=90	.310	.462	.598	.749	.828	.832	.073	.429	.205
	k=100	.302	.439	.591	.744	.823	.833	.071	.426	.194

Feature		S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
	k=10	.510	.677	.805	.895	.912	.825	.142	.496	.293
	k=20	.369	.547	.711	.849	.906	.831	.108	.466	.227
	k=30	.332	.503	.666	.810	.884	.832	.093	.451	.213
	k=40	.316	.471	.621	.786	.868	.835	.084	.442	.198
News	k=50	.306	.448	.599	.770	.856	.835	.078	.435	.192
Text	k=60	.284	.418	.566	.747	.837	.837	.074	.429	.182
	k=70	.285	.421	.558	.731	.823	.837	.071	.426	.183
	k=80	.282	.412	.546	.721	.815	.837	.068	.422	.178
	k=90	.270	.399	.532	.702	.801	.837	.066	.420	.176
	k=100	.275	.405	.534	.694	.801	.837	.064	.417	.178

Feature		S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
	k=10	.093	.199	.305	.410	.499	.713	.016	.321	.061
	k=20	.053	.129	.276	.436	.538	.717	.015	.322	.047
	k=30	.044	.105	.230	.426	.549	.721	.015	.323	.045
	k=40	.036	.083	.181	.393	.546	.725	.014	.322	.039
News	k=50	.038	.082	.154	.372	.542	.727	.014	.322	.038
Topic	k=60	.042	.081	.156	.347	.533	.728	.014	.322	.041
	k=70	.003	.069	.136	.302	.513	.730	.013	.321	.037
	k=80	.035	.074	.125	.284	.493	.731	.013	.321	.036
	k=90	.031	.066	.112	.258	.461	.732	.014	.321	.032
	k=100	.032	.075	.115	.261	.449	.734	.014	.322	.032

Feature		S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
	k=10	.801	.874	.916	.931	.934	.870	.375	.656	.508
	k=20	.685	.788	.879	.924	.932	.874	.306	.611	.416
	k=30	.617	.737	.852	.915	.932	.876	.269	.587	.368
	k=40	.563	.698	.813	.901	.928	.877	.243	.568	.346
Tweet	k=50	.544	.660	.788	.888	.921	.878	.226	.555	.336
All	k=60	.519	.628	.758	.872	.916	.878	.212	.544	.323
	k=70	.495	.612	.736	.866	.913	.879	.201	.536	.319
	k=80	.488	.597	.717	.853	.906	.879	.192	.529	.311
	k=90	.474	.585	.706	.847	.903	.879	.184	.522	.306
	k=100	.464	.568	.699	.837	.901	.878	.178	.517	.302

Feature		S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
	k=10	.012	.020	.043	.134	.258	.705	.010	.305	.015
	k=20	.012	.021	.044	.134	.258	.705	.010	.305	.016
	k=30	.012	.020	.044	.134	.258	.705	.010	.305	.015
	k=40	.012	.020	.004	.134	.258	.705	.010	.305	.015
Tweet	k=50	.012	.021	.043	.133	.258	.705	.010	.305	.015
Entity	k=60	.012	.020	.004	.134	.257	.705	.010	.305	.015
	k=70	.012	.020	.043	.133	.258	.705	.010	.305	.151
	k=80	.012	.020	.044	.135	.259	.705	.010	.305	.015
	k=90	.012	.020	.042	.134	.257	.705	.010	.305	.015
	k=100	.012	.020	.043	.133	.258	.705	.010	.305	.015

Feature		S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
	k=10	.805	.878	.917	.932	.934	.870	.377	.657	.511
	k=20	.692	.797	.880	.926	.935	.875	.309	.613	.412
	k=30	.626	.743	.851	.915	.934	.877	.272	.589	.371
	k=40	.574	.704	.819	.904	.928	.878	.248	.571	.351
Tweet	k=50	.548	.668	.796	.891	.921	.878	.230	.558	.334
Text	k=60	.525	.636	.766	.875	.919	.878	.215	.547	.329
	k=70	.502	.616	.745	.872	.915	.879	.205	.539	.314
	k=80	.492	.602	.727	.863	.910	.879	.196	.532	.310
	k=90	.491	.604	.714	.853	.903	.879	.189	.527	.309
	k=100	.481	.591	.703	.842	.899	.879	.182	.521	.304

Feature		S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
	k=10	.012	.020	.044	.134	.257	.705	.010	.305	.015
	k=20	.012	.020	.043	.133	.256	.705	.010	.305	.015
	k=30	.012	.020	.043	.133	.258	.705	.010	.305	.015
	k=40	.012	.020	.043	.133	.257	.705	.010	.305	.015
Tweet	k=50	.012	.020	.043	.134	.257	.705	.010	.031	.015
Topic	k=60	.012	.021	.044	.134	.258	.705	.010	.305	.015
	k=70	.012	.020	.044	.133	.257	.705	.010	.305	.015
	k=80	.012	.020	.044	.133	.256	.705	.010	.305	.015
	k=90	.118	.020	.044	.133	.258	.705	.010	.305	.015
	k=100	.012	.020	.044	.134	.258	.705	.010	.305	.015

Feature		S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
	k=10	.758	.838	.894	.929	.933	.865	.326	.627	.497
	k=20	.627	.740	.839	.910	.932	.871	.264	.584	.411
	k=30	.581	.689	.799	.891	.925	.873	.234	.562	.376
News	k=40	.547	.656	.766	.881	.919	.875	.213	.546	.357
And	k=50	.526	.627	.742	.863	.909	.875	.199	.534	.350
Tweet	k=60	.517	.612	.718	.846	.903	.876	.187	.526	.341
All	k=70	.507	.608	.710	.835	.900	.876	.178	.518	.331
	k=80	.490	.593	.698	.824	.891	.877	.170	.512	.328
	k=90	.485	.588	.689	.813	.886	.876	.164	.505	.319
	k=100	.473	.570	.677	.804	.873	.876	.159	.501	.320

Feature		S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
	k=10	.748	.827	.887	.920	.923	.844	.286	.603	.472
	k=20	.634	.756	.841	.906	.921	.850	.234	.566	.401
	k=30	.573	.707	.805	.885	.921	.852	.206	.544	.360
News	k=40	.531	.651	.775	.867	.910	.853	.189	.530	.334
And	k=50	.508	.626	.750	.856	.906	.854	.176	.519	.318
Tweet	k=60	.482	.605	.732	.843	.900	.854	.166	.511	.303
Entity	k=70	.474	.591	.715	.835	.889	.855	.158	.504	.299
	k=80	.453	.573	.700	.824	.881	.855	.150	.496	.291
	k=90	.432	.554	.685	.814	.873	.854	.144	.491	.276
	k=100	.423	.542	.667	.802	.870	.854	.139	.486	.271

Feature		S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
	k=10	.762	.842	.899	.928	.933	.866	.329	.630	.502
	k=20	.638	.743	.844	.914	.934	.872	.267	.587	.414
	k=30	.583	.692	.806	.899	.928	.875	.238	.565	.377
News	k=40	.550	.659	.767	.881	.915	.876	.216	.548	.362
And	k=50	.527	.632	.748	.864	.910	.876	.202	.537	.353
Tweet	k=60	.517	.615	.727	.853	.904	.877	.190	.527	.339
Text	k=70	.508	.604	.712	.840	.899	.877	.181	.520	.331
	k=80	.500	.595	.707	.828	.889	.877	.173	.514	.324
	k=90	.490	.588	.686	.819	.886	.877	.167	.508	.323
	k=100	.476	.575	.682	.811	.880	.877	.162	.503	.317

Feature		S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
	k=10	.408	.549	.703	.826	.855	.772	.098	.442	.240
	k=20	.319	.443	.582	.774	.846	.781	.081	.425	.184
	k=30	.283	.393	.518	.716	.819	.785	.071	.414	.160
News	k=40	.254	.367	.480	.676	.802	.788	.066	.408	.150
And	k=50	.231	.344	.461	.637	.783	.791	.062	.404	.142
Tweet	k=60	.226	.330	.443	.608	.759	.793	.059	.400	.144
Topic	k=70	.221	.315	.435	.596	.739	.794	.056	.396	.140
	k=80	.207	.303	.423	.582	.722	.795	.053	.393	.132
	k=90	.204	.302	.415	.572	.712	.795	.052	.391	.130
	k=100	.196	.298	.403	.567	.698	.796	.049	.389	.126

Table Annex 1. 2. Cosine Baseline Results (Ranking-based measures)

Feature	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
k=10	.304	.317	.284	.220	.168	.032	.074	.129	.221	.301	.058	.120	.177	.221	.215
k=20	.198	.217	.221	.178	.140	.018	.045	.094	.177	.255	.032	.074	.132	.178	.181
k=30	.164	.180	.187	.157	.126	.014	.034	.077	.153	.227	.026	.058	.109	.155	.162
k=40	.147	.160	.170	.146	.116	.012	.292	.066	.140	.208	.023	.207	.095	.143	.149
News	.134	.143	.154	.137	.110	.010	.025	.057	.130	.195	.019	.043	.084	.134	.141
All	.131	.136	.143	.130	.105	.010	.022	.052	.119	.183	.018	.038	.076	.124	.134
k=70	.122	.128	.133	.126	.102	.009	.021	.048	.112	.176	.017	.036	.071	.119	.129
k=80	.117	.121	.125	.120	.099	.008	.019	.044	.105	.170	.016	.033	.065	.112	.125
k=90	.114	.120	.125	.117	.097	.008	.018	.042	.101	.164	.015	.032	.062	.108	.122
k=100	.117	.119	.123	.114	.096	.008	.018	.041	.097	.159	.015	.031	.061	.105	.119

Feature	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
k=10	.345	.347	.304	.232	.177	.040	.084	.137	.231	.311	.072	.135	.189	.231	.225
k=20	.235	.258	.241	.190	.148	.024	.056	.104	.189	.268	.044	.092	.145	.190	.191
k=30	.185	.214	.211	.169	.133	.019	.045	.088	.165	.240	.034	.074	.124	.167	.171
k=40	.180	.196	.192	.157	.125	.017	.040	.078	.150	.223	.031	.066	.111	.154	.160
News k=50	.159	.177	.178	.150	.119	.014	.034	.071	.141	.210	.025	.057	.101	.145	.152
Entity k=60	.155	.167	.168	.143	.114	.013	.032	.067	.134	.201	.024	.053	.095	.138	.146
k=70	.147	.159	.160	.137	.111	.012	.029	.061	.127	.192	.022	.049	.089	.132	.140
k=80	.141	.147	.153	.132	.108	.011	.026	.057	.121	.186	.020	.044	.083	.127	.136
k=90	.136	.144	.147	.129	.105	.010	.025	.055	.117	.180	.019	.043	.080	.122	.133
k=100	.124	.134	.142	.125	.102	.010	.023	.053	.113	.175	.018	.040	.077	.119	.129

Feature	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
k=10	.280	.308	.279	.218	.168	.030	.073	.127	.222	.299	.055	.118	.174	.220	.215
k=20	.177	.203	.215	.178	.140	.017	.044	.093	.178	.257	.031	.073	.130	.178	.182
k=30	.155	.172	.185	.156	.125	.013	.034	.077	.154	.229	.025	.057	.109	.155	.162
k=40	.144	.155	.666	.145	.116	.012	.029	.067	.141	.209	.023	.049	.122	.143	.149
k=50	.131	.144	.156	.136	.110	.011	.025	.060	.129	.196	.019	.043	.087	.133	.141
k=60	.120	.134	.141	.131	.105	.010	.024	.053	.122	.185	.018	.040	.077	.126	.134
k=70	.122	.130	.134	.125	.102	.009	.022	.050	.114	.178	.017	.038	.073	.119	.129
k=80	.118	.127	.131	.121	.099	.009	.021	.048	.107	.171	.016	.036	.070	.114	.125
k=90	.114	.123	.128	.118	.097	.009	.020	.045	.104	.166	.016	.034	.067	.110	.122
k=100	.111	.118	.124	.114	.096	.008	.019	.043	.099	.162	.015	.033	.064	.106	.120

Feature	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
k=10	.032	.053	.049	.033	.025	.003	.009	.016	.023	.032	.006	.015	.024	.027	.028
k=20	.018	.036	.043	.036	.028	.002	.007	.015	.028	.039	.003	.011	.022	.031	.032
k=30	.015	.028	.035	.034	.029	.001	.005	.012	.028	.042	.002	.009	.018	.031	.034
k=40	.012	.021	.026	.029	.269	.001	.004	.010	.026	.041	.002	.007	.014	.027	.071
k=50	.013	.020	.022	.026	.026	.001	.004	.008	.024	.042	.002	.006	.012	.025	.032
k=60	.014	.019	.021	.024	.025	.001	.003	.007	.022	.040	.002	.006	.011	.023	.031
k=70	.011	.017	.019	.021	.024	.001	.003	.006	.019	.039	.001	.005	.010	.020	.030
k=80	.011	.017	.017	.019	.022	.001	.003	.006	.017	.036	.001	.005	.009	.018	.028
k=90	.010	.016	.015	.018	.020	.001	.003	.005	.016	.034	.001	.005	.008	.017	.025
k=100	.011	.018	.016	.019	.021	.001	.003	.005	.016	.034	.001	.005	.008	.017	.026

Feature	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
k=10	.632	.615	.547	.421	.316	.084	.157	.248	.382	.479	.148	.250	.342	.401	.381
k=20	.513	.526	.482	.375	.284	.058	.122	.208	.337	.436	.104	.199	.290	.355	.344
k=30	.445	.468	.446	.347	.264	.046	.101	.185	.307	.408	.084	.166	.261	.326	.321
k=40	.397	.423	.416	.327	.248	.039	.087	.164	.285	.382	.071	.144	.235	.304	.301
k=50	.371	.389	.389	.314	.238	.035	.076	.149	.269	.363	.064	.127	.215	.289	.287
k=60	.346	.364	.366	.301	.229	.032	.070	.137	.254	.349	.059	.117	.199	.276	.277
k=70	.327	.343	.344	.290	.221	.029	.065	.124	.242	.336	.053	.109	.182	.264	.267
k=80	.317	.329	.327	.283	.216	.028	.061	.116	.233	.325	.052	.102	.171	.255	.259
k=90	.304	.315	.318	.275	.211	.026	.057	.111	.224	.316	.049	.097	.165	.247	.253
k=100	.292	.302	.306	.270	.207	.024	.053	.105	.217	.308	.045	.091	.156	.241	.247

Feature	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
k=10	.005	.005	.005	.006	.009	.000	.001	.001	.004	.010	.001	.001	.002	.005	.009
k=20	.005	.005	.005	.006	.009	.000	.001	.001	.004	.010	.001	.001	.002	.005	.009
k=30	.005	.005	.005	.006	.009	.000	.001	.001	.004	.010	.001	.001	.002	.005	.009
k=40	.005	.005	.005	.006	.009	.000	.001	.001	.004	.010	.001	.001	.002	.005	.009
k=50	.005	.005	.005	.006	.009	.000	.001	.001	.004	.010	.001	.001	.002	.005	.009
k=60	.005	.005	.004	.006	.009	.000	.001	.001	.004	.010	.001	.001	.002	.005	.009
k=70	.005	.005	.004	.006	.009	.000	.001	.001	.004	.010	.001	.001	.002	.005	.009
k=80	.005	.005	.004	.006	.008	.000	.001	.001	.004	.010	.001	.001	.002	.005	.009
k=90	.005	.005	.004	.006	.008	.000	.001	.001	.004	.010	.001	.001	.002	.005	.009
k=100	.004	.005	.004	.006	.008	.000	.001	.001	.004	.010	.000	.001	.002	.005	.009

Feature	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
k=10	.632	.616	.547	.422	.317	.085	.159	.249	.383	.480	.150	.253	.342	.401	.382
k=20	.519	.530	.485	.377	.285	.061	.124	.209	.340	.441	.109	.202	.292	.358	.346
k=30	.449	.469	.447	.348	.265	.047	.103	.186	.309	.410	.086	.169	.262	.327	.322
k=40	.403	.428	.418	.329	.250	.041	.090	.168	.290	.986	.074	.148	.240	.308	.399
k=50	.376	.397	.393	.314	.239	.036	.079	.153	.272	.367	.066	.132	.220	.292	.290
k=60	.352	.370	.369	.301	.230	.034	.072	.140	.258	.352	.062	.121	.202	.278	.278
k=70	.330	.349	.347	.239	.223	.031	.067	.128	.248	.340	.056	.113	.187	.244	.269
k=80	.321	.336	.336	.285	.217	.029	.064	.123	.239	.330	.053	.108	.180	.260	.262
k=90	.314	.326	.323	.278	.213	.028	.062	.116	.229	.321	.051	.104	.170	.251	.256
k=100	.302	.315	.314	.273	.209	.026	.057	.111	.222	.313	.048	.097	.164	.245	.251

Feature	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
k=10	.005	.005	.005	.062	.009	.000	.001	.001	.004	.010	.000	.001	.002	.008	.009
k=20	.004	.005	.004	.006	.008	.000	.001	.001	.004	.010	.000	.001	.002	.005	.009
k=30	.005	.005	.004	.006	.008	.000	.001	.001	.004	.010	.001	.001	.002	.005	.009
k=40	.005	.005	.005	.006	.008	.000	.001	.001	.004	.026	.001	.001	.002	.005	.013
k=50	.005	.005	.005	.006	.008	.000	.001	.001	.004	.010	.001	.001	.002	.005	.009
k=60	.005	.005	.004	.006	.008	.000	.001	.001	.004	.010	.001	.001	.002	.005	.009
k=70	.005	.005	.004	.005	.008	.000	.001	.001	.004	.010	.001	.001	.002	.005	.009
k=80	.005	.005	.004	.006	.008	.000	.001	.001	.004	.010	.001	.001	.002	.005	.009
k=90	.005	.005	.004	.006	.008	.000	.001	.001	.004	.010	.001	.001	.002	.005	.009
k=100	.005	.005	.004	.006	.008	.000	.001	.001	.004	.010	.001	.001	.002	.005	.009

Feature	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
k=10	.589	.577	.509	.390	.292	.071	.138	.219	.349	.446	.127	.222	.307	.368	.353
k=20	.472	.480	.446	.345	.261	.047	.098	.177	.300	.399	.085	.163	.254	.321	.316
k=30	.420	.431	.414	.320	.242	.038	.081	.156	.270	.367	.070	.137	.226	.293	.292
k=40	.378	.391	.384	.304	.229	.033	.071	.138	.253	.345	.061	.120	.203	.276	.275
k=50	.355	.360	.361	.293	.220	.030	.062	.126	.237	.327	.056	.106	.187	.262	.263
k=60	.339	.342	.342	.282	.212	.028	.057	.116	.223	.312	.051	.097	.173	.249	.253
k=70	.326	.332	.329	.273	.207	.026	.054	.109	.212	.302	.048	.093	.164	.239	.246
k=80	.309	.314	.315	.266	.202	.024	.051	.102	.203	.290	.045	.087	.154	.230	.238
k=90	.298	.303	.304	.259	.198	.024	.048	.097	.195	.282	.044	.083	.147	.222	.232
k=100	.291	.292	.293	.254	.194	.023	.049	.093	.189	.274	.042	.083	.141	.216	.227

Feature	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
k=10	.559	.536	.469	.356	.266	.071	.129	.204	.325	.414	.127	.208	.285	.340	.324
k=20	.448	.460	.411	.314	.237	.048	.101	.170	.281	.374	.087	.165	.240	.296	.290
k=30	.393	.408	.379	.291	.219	.038	.081	.150	.255	.346	.069	.136	.214	.271	.268
k=40	.356	.373	.358	.276	.207	.032	.071	.135	.237	.327	.058	.119	.196	.255	.254
k=50	.332	.349	.340	.265	.200	.028	.063	.125	.224	.312	.052	.107	.183	.243	.244
k=60	.310	.328	.323	.256	.193	.026	.058	.114	.213	.299	.048	.098	.169	.232	.235
k=70	.300	.313	.311	.249	.188	.024	.053	.108	.204	.287	.044	.090	.160	.224	.227
k=80	.283	.299	.298	.241	.182	.021	.048	.100	.196	.276	.040	.082	.149	.216	.219
k=90	.267	.284	.288	.234	.177	.020	.045	.096	.189	.268	.037	.078	.144	.209	.213
k=100	.258	.271	.276	.228	.173	.020	.043	.089	.182	.261	.037	.074	.135	.202	.208

Feature	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
k=10	.593	.581	.512	.392	.294	.072	.139	.223	.352	.449	.128	.225	.311	.371	.355
k=20	.471	.483	.449	.348	.264	.046	.100	.179	.303	.403	.084	.166	.256	.324	.319
k=30	.423	.435	.417	.322	.244	.039	.083	.158	.274	.370	.071	.139	.229	.296	.294
k=40	.383	.397	.388	.306	.231	.033	.072	.140	.254	.346	.061	.122	.206	.278	.277
k=50	.358	.366	.365	.294	.222	.030	.064	.127	.238	.329	.056	.109	.188	.263	.265
k=60	.344	.347	.345	.286	.215	.029	.058	.117	.229	.316	.053	.100	.175	.255	.256
k=70	.325	.330	.330	.278	.209	.026	.053	.110	.217	.304	.048	.092	.165	.244	.248
k=80	.314	.319	.318	.270	.204	.025	.051	.103	.207	.295	.046	.088	.156	.235	.241
k=90	.301	.309	.307	.264	.199	.024	.050	.098	.201	.287	.045	.086	.148	.228	.235
k=100	.289	.296	.298	.257	.197	.023	.046	.094	.193	.280	.042	.080	.143	.221	.231

News

And

Tweet Text

Feature	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
k=10	.249	.263	.237	.184	.140	.024	.051	.094	.161	.213	.043	.085	.134	.172	.169
k=20	.184	.207	.197	.157	.123	.015	.034	.066	.134	.192	.027	.059	.099	.145	.150
k=30	.149	.170	.170	.140	.111	.011	.026	.055	.115	.174	.021	.046	.083	.126	.136
News	.133	.156	.157	.131	.103	.009	.023	.048	.101	.160	.017	.041	.074	.114	.126
And	.120	.138	.145	.123	.098	.008	.020	.043	.091	.151	.016	.035	.067	.104	.119
Tweet	.114	.128	.136	.116	.094	.008	.018	.039	.084	.141	.015	.031	.061	.097	.113
Topic	.111	.119	.127	.110	.092	.007	.016	.037	.080	.135	.014	.028	.057	.093	.109
k=80	.105	.114	.122	.106	.089	.067	.014	.033	.075	.128	.081	.025	.052	.088	.105
k=90	.100	.111	.116	.102	.087	.006	.014	.031	.072	.122	.011	.025	.049	.084	.102
k=100	.095	.107	.109	.097	.084	.006	.014	.029	.068	.116	.011	.024	.046	.080	.098

Table Annex 1. 3. Jaccard Baseline Results (Precision, Recall and F-measure of both)

Feature		S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
	k=10	.530	.685	.801	.896	.914	.827	.145	.501	.330
	k=20	.386	.555	.712	.849	.905	.833	.109	.468	.242
	k=30	.341	.508	.658	.810	.887	.836	.094	.453	.223
	k=40	.328	.481	.622	.788	.867	.838	.085	.444	.207
News	k=50	.313	.454	.598	.766	.849	.839	.078	.436	.197
All	k=60	.305	.423	.569	.740	.834	.840	.074	.430	.195
	k=70	.288	.418	.558	.735	.826	.840	.071	.426	.195
	k=80	.275	.397	.544	.719	.815	.841	.067	.422	.187
	k=90	.271	.399	.538	.707	.803	.841	.066	.420	.185
	k=100	.285	.401	.537	.695	.795	.841	.064	.418	.186

Feature		S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
	k=10	.573	.717	.819	.900	.909	.821	.158	.512	.338
	k=20	.448	.607	.740	.865	.905	.826	.120	.477	.258
	k=30	.385	.556	.695	.828	.887	.829	.104	.462	.235
	k=40	.380	.533	.672	.801	.871	.831	.095	.454	.231
News	k=50	.353	.506	.652	.794	.862	.832	.088	.446	.219
Entity	k=60	.342	.496	.643	.786	.854	.832	.083	.441	.217
	k=70	.333	.479	.623	.768	.841	.832	.079	.436	.209
	k=80	.321	.464	.609	.759	.837	.832	.076	.432	.209
	k=90	.313	.459	.601	.751	.830	.832	.073	.429	.204
	k=100	.298	.440	.591	.745	.824	.832	.071	.425	.193

Feature		S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
	k=10	.505	.676	.800	.895	.913	.825	.142	.496	.291
	k=20	.367	.550	.709	.848	.905	.831	.108	.465	.227
	k=30	.329	.504	.661	.811	.888	.833	.093	.451	.212
	k=40	.315	.473	.625	.788	.866	.835	.084	.442	.204
News	k=50	.303	.445	.600	.763	.850	.836	.078	.435	.194
Text	k=60	.285	.423	.566	.749	.838	.836	.074	.429	.182
	k=70	.285	.420	.557	.732	.825	.837	.071	.426	.181
	k=80	.280	.411	.545	.718	.817	.837	.068	.422	.177
	k=90	.269	.402	.535	.705	.802	.837	.066	.419	.174
	k=100	.268	.399	.533	.694	.798	.836	.064	.417	.176

Feature		S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
	k=10	.094	.198	.301	.405	.496	.713	.015	.320	.063
	k=20	.055	.131	.278	.440	.538	.717	.015	.322	.047
	k=30	.046	.105	.230	.429	.551	.721	.015	.323	.045
	k=40	.036	.085	.182	.393	.542	.725	.014	.322	.039
News	k=50	.038	.083	.156	.372	.541	.727	.014	.322	.039
Topic	k=60	.043	.082	.158	.347	.536	.728	.014	.322	.041
	k=70	.034	.071	.139	.302	.517	.730	.013	.322	.037
	k=80	.036	.073	.124	.283	.489	.731	.013	.321	.036
	k=90	.031	.033	.110	.259	.460	.732	.013	.321	.031
	k=100	.033	.074	.011	.255	.448	.734	.014	.321	.032

Feature		S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
	k=10	.807	.874	.915	.929	.933	.869	.375	.655	.505
	k=20	.686	.788	.879	.925	.933	.874	.305	.611	.418
	k=30	.616	.739	.852	.916	.934	.877	.269	.587	.369
	k=40	.562	.697	.810	.900	.927	.877	.244	.568	.343
Tweet	k=50	.544	.662	.790	.887	.920	.878	.226	.555	.334
All	k=60	.520	.633	.761	.877	.917	.878	.212	.545	.325
	k=70	.498	.615	.736	.863	.911	.878	.200	.536	.319
	k=80	.488	.596	.718	.856	.907	.879	.192	.529	.313
	k=90	.472	.583	.703	.847	.902	.878	.185	.523	.305
	k=100	.461	.565	.692	.837	.900	.878	.178	.517	.302

Feature		S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
	k=10	.011	.018	.039	.120	.233	.636	.009	.275	.014
	k=20	.011	.019	.040	.121	.233	.636	.009	.275	.014
	k=30	.011	.018	.039	.121	.233	.636	.009	.275	.014
	k=40	.011	.018	.004	.120	.233	.636	.009	.275	.014
Tweet	k=50	.011	.019	.039	.120	.233	.636	.009	.275	.014
Entity	k=60	.011	.018	.004	.121	.233	.636	.009	.275	.014
	k=70	.011	.018	.039	.120	.232	.636	.009	.275	.136
	k=80	.011	.018	.040	.122	.234	.636	.009	.275	.014
	k=90	.010	.018	.038	.121	.232	.636	.009	.275	.014
	k=100	.011	.018	.039	.120	.232	.636	.009	.275	.013

Feature		S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
	k=10	.804	.878	.915	.931	.932	.870	.377	.656	.507
	k=20	.694	.796	.881	.926	.936	.875	.309	.614	.414
	k=30	.622	.738	.850	.916	.934	.876	.271	.588	.367
	k=40	.572	.703	.819	.904	.927	.877	.247	.571	.347
Tweet	k=50	.546	.664	.794	.893	.924	.878	.229	.558	.335
Text	k=60	.523	.640	.769	.876	.917	.878	.215	.547	.325
	k=70	.502	.616	.744	.870	.916	.879	.204	.539	.312
	k=80	.494	.604	.728	.859	.908	.879	.196	.532	.313
	k=90	.492	.600	.711	.848	.904	.879	.189	.527	.308
	k=100	.477	.589	.700	.840	.898	.879	.182	.521	.303

Feature		S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
	k=10	.011	.018	.039	.120	.232	.636	.009	.275	.014
	k=20	.011	.018	.039	.120	.232	.636	.009	.275	.014
	k=30	.011	.018	.039	.120	.233	.636	.009	.275	.013
	k=40	.011	.018	.039	.120	.232	.636	.009	.275	.014
Tweet	k=50	.011	.018	.039	.121	.233	.636	.009	.027	.014
Topic	k=60	.011	.019	.040	.121	.232	.636	.009	.275	.013
	k=70	.011	.018	.039	.120	.232	.636	.009	.274	.014
	k=80	.011	.018	.039	.120	.231	.636	.009	.275	.014
	k=90	.107	.018	.039	.120	.233	.636	.009	.275	.014
	k=100	.011	.018	.039	.120	.232	.636	.009	.275	.014

Feature		S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
	k=10	.757	.840	.895	.928	.933	.865	.326	.627	.495
	k=20	.629	.741	.841	.911	.932	.871	.264	.584	.412
	k=30	.580	.688	.801	.893	.925	.873	.234	.562	.377
News	k=40	.548	.655	.771	.883	.921	.875	.213	.546	.358
And	k=50	.529	.625	.744	.864	.910	.876	.199	.535	.351
Tweet	k=60	.515	.613	.720	.848	.903	.876	.187	.525	.338
All	k=70	.504	.607	.710	.836	.897	.877	.178	.518	.332
	k=80	.491	.592	.699	.822	.889	.877	.170	.511	.327
	k=90	.485	.584	.688	.813	.883	.876	.164	.505	.320
	k=100	.478	.573	.681	.805	.875	.876	.158	.501	.320

Feature		S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
	k=10	.747	.827	.888	.919	.922	.844	.287	.604	.476
	k=20	.636	.756	.836	.903	.919	.849	.234	.566	.402
	k=30	.575	.704	.804	.887	.918	.851	.206	.544	.364
News	k=40	.532	.653	.775	.868	.911	.853	.189	.530	.333
And	k=50	.509	.624	.749	.853	.906	.854	.176	.519	.316
Tweet	k=60	.480	.607	.731	.844	.900	.855	.166	.511	.305
Entity	k=70	.473	.588	.713	.831	.892	.855	.158	.504	.299
	k=80	.446	.572	.698	.823	.881	.855	.150	.496	.288
	k=90	.437	.557	.686	.812	.875	.855	.144	.491	.277
	k=100	.428	.538	.664	.801	.868	.855	.139	.486	.272

Feature		S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
	k=10	.762	.847	.898	.928	.933	.866	.330	.630	.499
	k=20	.634	.743	.842	.912	.933	.872	.266	.586	.410
	k=30	.583	.695	.804	.896	.926	.874	.237	.565	.381
News	k=40	.547	.660	.768	.881	.918	.876	.216	.548	.359
And	k=50	.523	.630	.745	.860	.909	.876	.202	.537	.349
Tweet	k=60	.521	.615	.726	.854	.906	.877	.190	.528	.339
Text	k=70	.510	.602	.714	.840	.898	.877	.181	.520	.333
	k=80	.494	.588	.700	.828	.892	.877	.173	.513	.322
	k=90	.489	.586	.687	.819	.885	.877	.167	.508	.320
	k=100	.472	.570	.682	.810	.879	.877	.161	.503	.315

Feature		S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
	k=10	.413	.551	.706	.825	.854	.771	.098	.442	.241
	k=20	.320	.442	.587	.772	.846	.781	.081	.425	.184
	k=30	.284	.390	.515	.716	.821	.785	.071	.414	.159
News	k=40	.254	.366	.482	.670	.799	.788	.065	.408	.151
And	k=50	.232	.340	.458	.637	.784	.791	.062	.404	.141
Tweet	k=60	.227	.328	.440	.612	.757	.793	.058	.400	.142
Topic	k=70	.221	.315	.434	.596	.741	.794	.056	.397	.141
	k=80	.207	.307	.428	.586	.725	.795	.053	.393	.132
	k=90	.204	.301	.415	.576	.713	.795	.051	.391	.130
	k=100	.198	.296	.403	.567	.699	.796	.049	.389	.124

Table Annex 1. 4. Jaccard Baseline Results (Ranking-based measures)

Feature	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
k=10	.304	.315	.283	.219	.167	.033	.073	.127	.221	.300	.059	.119	.175	.220	.215
k=20	.197	.217	.222	.178	.140	.017	.044	.095	.177	.254	.032	.074	.133	.178	.180
k=30	.163	.179	.188	.157	.125	.014	.035	.078	.153	.226	.026	.058	.110	.155	.161
k=40	.147	.159	.171	.146	.116	.012	.029	.066	.140	.208	.022	.049	.095	.143	.149
k=50	.134	.146	.153	.138	.110	.010	.025	.057	.131	.195	.019	.043	.083	.134	.141
k=60	.130	.135	.143	.130	.105	.009	.022	.052	.119	.184	.018	.038	.076	.124	.134
k=70	.123	.129	.134	.125	.102	.009	.021	.048	.112	.176	.017	.036	.070	.118	.129
k=80	.116	.121	.126	.120	.100	.008	.019	.044	.105	.170	.016	.033	.065	.112	.126
k=90	.115	.121	.125	.117	.097	.008	.019	.042	.101	.164	.015	.032	.063	.109	.122
k=100	.116	.119	.123	.114	.096	.008	.018	.040	.097	.160	.015	.031	.061	.105	.120

Feature	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
k=10	.345	.345	.304	.231	.177	.041	.083	.137	.230	.311	.073	.134	.189	.231	.226
k=20	.236	.258	.241	.189	.149	.025	.057	.105	.189	.268	.045	.094	.146	.189	.191
k=30	.186	.213	.211	.169	.133	.019	.045	.088	.166	.241	.035	.075	.124	.168	.171
k=40	.177	.195	.192	.157	.125	.016	.040	.078	.151	.222	.030	.066	.111	.154	.160
k=50	.161	.177	.179	.149	.119	.014	.035	.072	.140	.211	.026	.058	.102	.145	.152
k=60	.157	.167	.169	.143	.115	.013	.031	.066	.134	.202	.025	.053	.095	.138	.146
k=70	.147	.158	.159	.137	.111	.012	.029	.061	.123	.192	.022	.049	.089	.129	.140
k=80	.141	.148	.153	.132	.107	.011	.026	.057	.121	.185	.020	.045	.083	.126	.136
k=90	.135	.143	.147	.128	.105	.010	.025	.055	.116	.180	.019	.042	.080	.122	.132
k=100	.125	.134	.142	.125	.103	.010	.023	.053	.113	.174	.018	.040	.077	.119	.129

Feature	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
k=10	.282	.310	.278	.218	.168	.030	.073	.127	.222	.300	.055	.119	.174	.220	.215
k=20	.178	.203	.215	.177	.140	.017	.044	.094	.179	.257	.031	.072	.131	.178	.181
k=30	.156	.173	.186	.157	.125	.013	.034	.078	.155	.228	.025	.057	.110	.156	.161
k=40	.145	.155	.167	.145	.116	.012	.029	.068	.141	.210	.023	.049	.096	.143	.150
News	.132	.143	.156	.137	.110	.011	.026	.061	.130	.196	.020	.043	.087	.133	.141
Text	.122	.134	.142	.130	.105	.097	.023	.054	.122	.184	.108	.040	.078	.126	.134
k=70	.122	.131	.133	.125	.102	.009	.022	.049	.114	.178	.017	.038	.072	.119	.130
k=80	.116	.127	.130	.120	.099	.009	.021	.048	.106	.170	.017	.037	.070	.113	.125
k=90	.115	.123	.128	.118	.097	.009	.020	.045	.103	.166	.016	.034	.066	.110	.122
k=100	.113	.119	.125	.114	.096	.009	.019	.043	.099	.162	.016	.033	.064	.106	.120

Feature	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
k=10	.031	.053	.049	.033	.025	.003	.009	.016	.023	.032	.006	.016	.024	.027	.028
k=20	.018	.036	.043	.035	.028	.002	.007	.015	.028	.039	.003	.011	.022	.031	.033
k=30	.014	.028	.035	.034	.029	.001	.005	.012	.028	.042	.002	.009	.018	.031	.034
k=40	.011	.021	.026	.029	.027	.001	.004	.009	.026	.041	.002	.007	.014	.027	.032
k=50	.012	.020	.022	.026	.026	.001	.004	.008	.024	.041	.002	.006	.012	.025	.032
k=60	.014	.020	.021	.024	.025	.001	.003	.007	.022	.040	.002	.006	.011	.023	.031
k=70	.010	.016	.018	.020	.024	.001	.003	.006	.019	.039	.001	.005	.010	.019	.029
k=80	.010	.016	.165	.019	.022	.001	.003	.006	.017	.037	.001	.005	.011	.018	.028
k=90	.010	.016	.015	.017	.021	.001	.003	.005	.016	.034	.001	.005	.008	.017	.026
k=100	.010	.017	.016	.019	.021	.001	.003	.006	.016	.034	.001	.005	.008	.017	.026

Feature	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
k=10	.629	.614	.547	.421	.316	.083	.156	.248	.381	.479	.147	.249	.341	.400	.381
k=20	.514	.526	.481	.375	.284	.058	.123	.208	.337	.437	.105	.199	.291	.355	.344
k=30	.446	.467	.444	.347	.264	.046	.100	.183	.307	.408	.083	.165	.260	.326	.321
k=40	.397	.422	.416	.326	.248	.039	.086	.164	.285	.382	.070	.143	.235	.304	.301
k=50	.373	.390	.388	.314	.238	.035	.077	.149	.269	.364	.064	.128	.215	.290	.288
k=60	.346	.364	.365	.301	.228	.032	.070	.135	.254	.348	.059	.117	.197	.276	.276
k=70	.326	.343	.343	.290	.221	.030	.064	.123	.242	.335	.054	.108	.182	.264	.266
k=80	.317	.330	.328	.282	.216	.028	.061	.116	.232	.324	.051	.103	.171	.255	.259
k=90	.304	.316	.318	.275	.210	.026	.058	.111	.225	.316	.048	.097	.165	.247	.252
k=100	.294	.303	.307	.270	.207	.246	.054	.106	.217	.309	.268	.091	.157	.241	.248

Feature	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
k=10	.005	.005	.005	.006	.009	.000	.001	.001	.005	.010	.001	.001	.002	.005	.009
k=20	.005	.005	.005	.006	.009	.000	.001	.001	.005	.010	.001	.001	.002	.005	.009
k=30	.005	.005	.005	.006	.009	.000	.001	.001	.004	.010	.001	.001	.002	.005	.009
k=40	.005	.005	.005	.006	.009	.000	.001	.001	.004	.010	.001	.001	.002	.005	.009
k=50	.005	.005	.005	.006	.009	.000	.001	.001	.004	.010	.001	.001	.002	.005	.009
k=60	.005	.005	.004	.006	.009	.000	.001	.001	.004	.010	.001	.001	.002	.005	.009
k=70	.005	.005	.004	.006	.009	.000	.001	.001	.004	.010	.001	.001	.002	.005	.009
k=80	.005	.005	.004	.006	.009	.000	.001	.001	.004	.010	.001	.001	.002	.005	.009
k=90	.005	.005	.004	.006	.009	.000	.001	.001	.004	.010	.001	.001	.002	.005	.009
k=100	.004	.005	.004	.006	.009	.000	.001	.001	.004	.010	.001	.001	.002	.005	.009

Feature	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
k=10	.632	.616	.547	.422	.317	.085	.159	.249	.384	.481	.151	.253	.342	.402	.382
k=20	.520	.531	.485	.376	.285	.061	.124	.209	.340	.441	.108	.201	.292	.357	.346
k=30	.451	.471	.447	.348	.265	.048	.104	.186	.311	.410	.086	.170	.262	.328	.322
k=40	.402	.428	.419	.328	.250	.041	.090	.169	.289	.385	.074	.149	.241	.307	.303
Tweet	.378	.398	.393	.314	.239	.037	.080	.153	.271	.365	.067	.133	.220	.291	.289
Text	.351	.369	.369	.302	.230	.033	.072	.139	.259	.353	.061	.120	.202	.279	.279
k=70	.332	.349	.348	.293	.223	.031	.068	.129	.248	.341	.056	.113	.188	.269	.270
k=80	.322	.337	.335	.285	.217	.029	.064	.122	.238	.321	.053	.108	.179	.259	.259
k=90	.315	.326	.323	.279	.213	.028	.061	.115	.229	.320	.051	.103	.169	.251	.255
k=100	.302	.315	.314	.273	.209	.026	.057	.110	.222	.314	.047	.097	.163	.245	.251

Feature	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
k=10	.005	.005	.005	.062	.009	.000	.001	.001	.004	.010	.001	.001	.002	.008	.009
k=20	.005	.005	.004	.006	.008	.000	.001	.001	.004	.010	.001	.001	.002	.005	.009
k=30	.005	.005	.005	.006	.008	.000	.001	.001	.004	.010	.001	.001	.002	.005	.009
k=40	.005	.005	.005	.006	.008	.000	.001	.001	.004	.026	.001	.001	.002	.005	.013
Tweet k=50	.005	.005	.005	.006	.008	.000	.001	.001	.004	.010	.001	.001	.002	.005	.009
Topic k=60	.005	.005	.005	.006	.008	.000	.001	.001	.004	.010	.001	.001	.002	.005	.009
k=70	.005	.005	.004	.005	.008	.000	.001	.001	.004	.010	.001	.001	.002	.005	.009
k=80	.005	.005	.005	.006	.008	.000	.001	.001	.004	.010	.001	.001	.002	.005	.009
k=90	.005	.005	.004	.006	.008	.000	.001	.001	.004	.010	.001	.001	.002	.005	.009
k=100	.005	.005	.004	.006	.008	.000	.001	.001	.004	.010	.001	.001	.002	.005	.009

Feature	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
k=10	.587	.577	.509	.389	.292	.071	.138	.220	.349	.446	.127	.223	.307	.368	.353
k=20	.469	.479	.447	.345	.261	.046	.098	.178	.300	.399	.084	.163	.255	.321	.316
k=30	.418	.432	.414	.319	.242	.038	.082	.156	.268	.367	.069	.137	.226	.292	.292
k=40	.378	.391	.384	.304	.229	.033	.071	.138	.252	.344	.061	.120	.203	.276	.275
k=50	.352	.360	.361	.292	.220	.030	.063	.126	.236	.327	.055	.107	.187	.261	.263
k=60	.341	.343	.343	.282	.213	.028	.057	.116	.223	.313	.052	.097	.173	.249	.253
k=70	.325	.331	.329	.274	.207	.025	.054	.109	.214	.302	.047	.092	.164	.240	.246
k=80	.308	.312	.315	.266	.202	.024	.050	.103	.203	.291	.045	.086	.155	.230	.239
k=90	.298	.302	.304	.259	.198	.023	.048	.097	.195	.282	.043	.083	.147	.223	.232
k=100	.292	.292	.298	.254	.194	.023	.046	.092	.190	.274	.042	.079	.140	.217	.228

Feature	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
k=10	.557	.536	.468	.256	.265	.071	.129	.203	.326	.414	.126	.208	.283	.287	.324
k=20	.450	.461	.412	.314	.237	.048	.100	.170	.282	.375	.086	.165	.240	.297	.290
k=30	.396	.409	.380	.291	.219	.038	.082	.151	.256	.348	.070	.136	.216	.273	.269
k=40	.356	.374	.358	.276	.208	.031	.070	.135	.237	.326	.057	.118	.196	.255	.254
k=50	.332	.349	.339	.265	.200	.028	.064	.124	.224	.312	.052	.108	.182	.243	.244
k=60	.309	.328	.325	.256	.193	.026	.058	.116	.213	.298	.048	.098	.171	.233	.234
k=70	.300	.313	.312	.248	.187	.024	.053	.108	.205	.287	.044	.090	.160	.224	.226
k=80	.284	.298	.298	.241	.181	.022	.477	.100	.196	.276	.040	.367	.150	.217	.219
k=90	.266	.284	.288	.235	.177	.020	.045	.096	.189	.269	.037	.078	.144	.210	.213
k=100	.257	.271	.276	.228	.173	.019	.043	.090	.182	.261	.036	.074	.135	.203	.208

Feature	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
k=10	.596	.581	.512	.391	.294	.072	.139	.222	.351	.448	.128	.224	.309	.370	.355
k=20	.470	.482	.417	.348	.263	.046	.099	.178	.304	.404	.084	.165	.249	.324	.319
k=30	.428	.434	.417	.322	.244	.039	.083	.158	.273	.370	.071	.139	.229	.295	.294
k=40	.385	.398	.388	.306	.231	.033	.072	.140	.255	.348	.062	.122	.206	.278	.278
k=50	.258	.366	.364	.295	.222	.030	.064	.127	.240	.329	.054	.109	.188	.264	.265
k=60	.343	.347	.345	.286	.214	.028	.058	.117	.228	.315	.052	.099	.175	.254	.255
k=70	.326	.332	.331	.278	.209	.026	.054	.110	.218	.304	.049	.093	.165	.244	.248
k=80	.314	.319	.318	.270	.204	.025	.051	.103	.208	.296	.046	.088	.156	.235	.242
k=90	.298	.307	.307	.264	.199	.024	.049	.098	.200	.286	.045	.085	.148	.228	.235
k=100	.290	.296	.297	.258	.196	.023	.047	.094	.194	.279	.043	.081	.143	.222	.231

News

And

Tweet Text

Feature	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
k=10	.247	.260	.235	.184	.141	.024	.050	.093	.160	.213	.043	.084	.133	.171	.169
k=20	.184	.206	.198	.158	.122	.015	.034	.067	.135	.192	.027	.059	.100	.146	.149
k=30	.148	.171	.170	.139	.111	.011	.026	.054	.115	.175	.021	.046	.083	.126	.136
News	.132	.155	.158	.131	.104	.010	.023	.484	.101	.160	.018	.041	.238	.114	.126
And	.118	.138	.146	.123	.098	.008	.020	.044	.091	.151	.015	.035	.067	.104	.119
Tweet	.114	.128	.136	.116	.094	.008	.018	.039	.084	.141	.014	.031	.061	.098	.113
Topic	.111	.119	.127	.110	.092	.007	.016	.037	.081	.135	.014	.028	.057	.093	.109
k=80	.107	.114	.121	.106	.089	.007	.014	.033	.075	.128	.013	.025	.052	.088	.105
k=90	.100	.111	.116	.102	.087	.006	.014	.031	.072	.123	.012	.025	.049	.085	.102
k=100	.095	.106	.109	.097	.084	.006	.014	.029	.068	.115	.011	.024	.046	.080	.097

Table Annex 1. 5. Pearson Baseline Results (Precision, Recall and F-measure of both)

Feature		S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
	k=10	.529	.683	.799	.896	.916	.827	.145	.501	.328
	k=20	.386	.561	.711	.849	.902	.832	.109	.468	.239
	k=30	.339	.506	.661	.812	.887	.836	.094	.453	.222
	k=40	.326	.480	.623	.788	.865	.838	.085	.443	.209
News	k=50	.310	.452	.595	.769	.847	.839	.078	.436	.195
All	k=60	.305	.423	.573	.746	.834	.840	.074	.430	.195
	k=70	.288	.418	.560	.737	.826	.840	.071	.427	.194
	k=80	.275	.398	.548	.722	.817	.840	.067	.422	.186
	k=90	.271	.398	.535	.707	.802	.841	.066	.420	.184
	k=100	.279	.397	.535	.697	.798	.841	.064	.418	.187

Feature		S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
	k=10	.578	.719	.821	.899	.908	.821	.158	.511	.336
	k=20	.449	.606	.745	.867	.906	.826	.120	.478	.255
	k=30	.395	.563	.693	.830	.890	.829	.104	.462	.236
	k=40	.377	.530	.665	.805	.874	.831	.095	.453	.229
News	k=50	.355	.508	.654	.790	.861	.832	.088	.446	.218
Entity	k=60	.344	.494	.641	.782	.854	.832	.083	.441	.217
	k=70	.325	.481	.624	.768	.842	.832	.079	.436	.209
	k=80	.322	.464	.607	.756	.832	.832	.076	.432	.211
	k=90	.314	.460	.601	.747	.830	.832	.073	.429	.203
	k=100	.297	.439	.588	.745	.821	.832	.071	.426	.193

Feature		S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
	k=10	.510	.675	.802	.896	.915	.825	.142	.497	.290
	k=20	.371	.550	.714	.851	.906	.830	.108	.465	.226
	k=30	.330	.504	.664	.813	.885	.833	.093	.451	.214
	k=40	.323	.474	.627	.786	.868	.835	.084	.442	.201
News	k=50	.308	.449	.602	.769	.853	.836	.078	.435	.193
Text	k=60	.289	.421	.570	.745	.833	.836	.074	.429	.181
	k=70	.286	.422	.556	.730	.829	.836	.070	.426	.182
	k=80	.275	.414	.545	.718	.811	.837	.068	.422	.177
	k=90	.275	.401	.535	.703	.802	.837	.066	.419	.175
	k=100	.269	.398	.532	.697	.799	.837	.064	.417	.178

Feature		S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
	k=10	.093	.197	.304	.405	.498	.713	.015	.320	.062
	k=20	.054	.131	.275	.437	.537	.717	.015	.322	.047
	k=30	.045	.103	.232	.432	.552	.721	.015	.322	.044
	k=40	.036	.084	.182	.393	.543	.725	.014	.322	.039
News	k=50	.037	.084	.157	.371	.542	.727	.014	.322	.038
Topic	k=60	.043	.084	.157	.345	.534	.728	.014	.322	.041
	k=70	.032	.070	.136	.299	.515	.730	.013	.321	.036
	k=80	.034	.070	.123	.283	.494	.731	.013	.321	.036
	k=90	.030	.065	.109	.257	.460	.732	.013	.321	.031
	k=100	.032	.073	.114	.257	.453	.733	.014	.321	.032

Feature		S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
	k=10	.799	.871	.914	.929	.932	.869	.374	.654	.501
	k=20	.689	.791	.880	.926	.934	.875	.306	.612	.418
	k=30	.615	.739	.851	.915	.933	.876	.269	.586	.367
	k=40	.565	.698	.811	.899	.926	.877	.243	.568	.347
Tweet	k=50	.547	.664	.791	.891	.921	.878	.226	.555	.338
All	k=60	.518	.632	.760	.875	.915	.878	.212	.544	.326
	k=70	.498	.614	.736	.865	.911	.878	.200	.535	.317
	k=80	.486	.597	.716	.855	.907	.879	.192	.529	.309
	k=90	.475	.584	.706	.850	.903	.878	.185	.523	.308
	k=100	.467	.571	.698	.835	.899	.878	.178	.517	.302

Feature		S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
	k=10	.011	.018	.039	.120	.233	.636	.009	.275	.014
	k=20	.011	.019	.040	.121	.233	.636	.009	.275	.014
	k=30	.011	.018	.039	.121	.233	.636	.009	.275	.014
	k=40	.011	.018	.004	.120	.233	.636	.009	.275	.014
Tweet	k=50	.011	.019	.039	.120	.233	.636	.009	.275	.014
Entity	k=60	.011	.018	.004	.121	.233	.636	.009	.275	.014
	k=70	.011	.018	.039	.120	.232	.636	.009	.275	.136
	k=80	.011	.018	.040	.122	.234	.636	.009	.275	.014
	k=90	.010	.018	.038	.121	.232	.636	.009	.275	.014
	k=100	.011	.018	.039	.120	.232	.636	.009	.275	.014

Feature		S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
	k=10	.804	.878	.917	.932	.934	.870	.376	.657	.509
	k=20	.695	.799	.880	.926	.935	.875	.309	.613	.413
	k=30	.627	.739	.852	.917	.934	.876	.272	.588	.369
	k=40	.571	.703	.819	.904	.925	.878	.247	.571	.348
Tweet	k=50	.550	.668	.797	.891	.921	.878	.229	.558	.333
Text	k=60	.522	.633	.765	.878	.919	.879	.215	.547	.328
	k=70	.504	.618	.746	.871	.913	.879	.204	.539	.315
	k=80	.495	.604	.727	.861	.907	.879	.196	.532	.310
	k=90	.490	.598	.710	.852	.902	.879	.189	.527	.311
	k=100	.478	.589	.700	.839	.899	.879	.182	.521	.305

Feature		S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
	k=10	.011	.018	.039	.120	.232	.636	.009	.275	.014
	k=20	.011	.018	.039	.120	.232	.636	.009	.275	.014
	k=30	.011	.018	.039	.121	.233	.636	.009	.275	.013
	k=40	.011	.018	.039	.120	.232	.636	.009	.275	.014
Tweet	k=50	.011	.018	.039	.121	.233	.636	.009	.028	.014
Topic	k=60	.011	.019	.040	.121	.232	.636	.009	.275	.014
	k=70	.011	.018	.039	.120	.232	.636	.009	.275	.014
	k=80	.011	.018	.039	.120	.231	.636	.009	.275	.014
	k=90	.107	.018	.039	.120	.233	.636	.009	.275	.014
	k=100	.011	.018	.039	.120	.232	.636	.009	.275	.014

Feature		S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
	k=10	.759	.843	.895	.929	.933	.865	.325	.627	.493
	k=20	.625	.740	.842	.910	.932	.871	.263	.584	.409
	k=30	.578	.690	.800	.891	.925	.874	.233	.561	.377
News	k=40	.545	.654	.770	.881	.917	.875	.213	.546	.360
And	k=50	.525	.626	.746	.863	.910	.876	.198	.534	.349
Tweet	k=60	.518	.612	.719	.846	.905	.876	.187	.526	.342
All	k=70	.502	.606	.712	.839	.900	.876	.178	.518	.330
	k=80	.491	.594	.697	.820	.891	.877	.170	.511	.331
	k=90	.485	.584	.687	.812	.883	.876	.164	.505	.322
	k=100	.479	.573	.671	.806	.876	.876	.159	.501	.319

Feature		S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
	k=10	.747	.828	.889	.920	.923	.844	.286	.603	.473
	k=20	.639	.755	.837	.903	.920	.849	.234	.566	.404
	k=30	.578	.705	.807	.887	.919	.852	.206	.545	.361
News	k=40	.534	.653	.774	.865	.908	.853	.189	.530	.332
And	k=50	.510	.625	.747	.854	.905	.854	.176	.519	.318
Tweet	k=60	.479	.605	.732	.843	.899	.855	.166	.511	.304
Entity	k=70	.470	.586	.714	.834	.889	.854	.158	.503	.297
	k=80	.450	.574	.703	.822	.882	.855	.150	.496	.291
	k=90	.433	.557	.685	.812	.877	.855	.144	.491	.276
	k=100	.428	.544	.668	.803	.871	.854	.139	.486	.272

Feature		S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
	k=10	.761	.844	.897	.927	.932	.865	.330	.630	.503
	k=20	.633	.741	.844	.912	.934	.872	.266	.586	.411
	k=30	.579	.693	.803	.895	.926	.874	.237	.564	.379
News	k=40	.551	.660	.769	.882	.916	.876	.216	.549	.362
And	k=50	.523	.634	.743	.866	.912	.876	.202	.537	.354
Tweet	k=60	.518	.615	.725	.852	.903	.877	.190	.528	.340
Text	k=70	.506	.603	.714	.843	.899	.877	.181	.520	.327
	k=80	.498	.591	.701	.829	.893	.877	.173	.513	.324
	k=90	.486	.585	.690	.819	.884	.877	.167	.508	.320
	k=100	.471	.575	.684	.814	.878	.877	.162	.503	.314

Feature		S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
	k=10	.411	.549	.706	.824	.852	.771	.098	.442	.242
	k=20	.320	.443	.591	.776	.845	.781	.081	.425	.186
	k=30	.282	.392	.513	.713	.824	.785	.071	.414	.160
News	k=40	.253	.365	.485	.670	.800	.788	.066	.408	.150
And	k=50	.228	.341	.457	.653	.778	.791	.062	.404	.141
Tweet	k=60	.227	.328	.443	.611	.761	.793	.058	.400	.144
Topic	k=70	.221	.317	.439	.602	.742	.794	.056	.397	.141
	k=80	.212	.308	.426	.583	.725	.794	.053	.393	.133
	k=90	.204	.303	.414	.577	.715	.795	.051	.391	.128
	k=100	.197	.297	.403	.568	.694	.796	.049	.389	.126

Table Annex 1. 6. Pearson Baseline Results (Ranking-based measures)

Feature	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
News All	.220	.278	.242	.161	.115	.073	.137	.195	.260	.313	.110	.184	.216	.199	.168
News Entity	.294	.269	.221	.151	.109	.064	.106	.153	.216	.274	.105	.152	.180	.178	.156
News Text	.224	.310	.268	.177	.124	.072	.150	.217	.287	.344	.109	.202	.240	.219	.182
News Topic	.055	.053	.053	.051	.046	.007	.011	.021	.048	.082	.012	.018	.030	.049	.059
Tweet All	.459	.432	.333	.200	.131	.125	.180	.226	.274	.312	.197	.254	.269	.231	.184
Tweet Entity	.570	.486	.384	.256	.177	.131	.187	.247	.334	.403	.214	.270	.300	.290	.246
Tweet Text	.509	.464	.354	.211	.138	.132	.190	.238	.288	.328	.210	.270	.284	.243	.194
Tweet Topic	.080	.080	.072	.058	.045	.012	.023	.037	.063	.091	.020	.035	.049	.060	.061
News and Tweet All	.466	.388	.280	.169	.114	.125	.168	.202	.244	.282	.197	.235	.235	.200	.162
News and Tweet Entity	.401	.359	.285	.189	.132	.111	.161	.211	.277	.333	.174	.222	.243	.225	.189
News and Tweet Text	.510	.429	.311	.184	.129	.135	.183	.221	.264	.300	.214	.256	.258	.217	.181
News and Tweet Topic	.068	.071	.065	.054	.044	.010	.020	.033	.058	.086	.018	.031	.044	.056	.058

Table Annex 1. 7 Abel et al Results (Precision, Recall and F-measure of both)

Feature	S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
News All	.551	.793	.878	.934	.965	.907	.146	.513	.295
News Entity	.601	.729	.823	.908	.951	.900	.126	.496	.328
News Text	.624	.827	.895	.949	.972	.915	.162	.529	.292
News Topic	.148	.230	.323	.503	.664	.837	.033	.369	.119
Tweet All	.849	.901	.935	.964	.979	.891	.210	.565	.458
Tweet Entity	.824	.894	.942	.973	.983	.925	.288	.645	.718
Tweet Text	.871	.921	.948	.972	.983	.893	.228	.582	.497
Tweet Topic	.225	.332	.432	.580	.678	.817	.039	.373	.163
News and Tweet All	.812	.863	.907	.946	.963	.884	.178	.537	.444
News and Tweet Entity	.741	.839	.908	.961	.980	.910	.206	.571	.485
News and Tweet Text	.851	.900	.935	.959	.970	.888	.198	.556	.469
News and Tweet Topic	.203	.303	.409	.562	.662	.827	.036	.371	.154

Table Annex 1. 8. Abel et al Results (Ranking-based measures)

State-of-the-art Recommendation Algorithms

Approach	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
BPRMF	.109	.102	.095	.084	.075	.069	.101	.150	.240	.332	.085	.101	.117	.124	.122
MultiCore-BPRMF	.006	.006	.006	.006	.006	.000	.000	.001	.002	.004	.000	.001	.001	.003	.005
Random	.004	.037	.003	.004	.003	.000	.000	.001	.002	.003	.000	.001	.001	.002	.003
Most Popular	.036	.035	.031	.029	.027	.003	.005	.009	.020	.035	.006	.009	.014	.023	.030
Soft Margin Ranking	.103	.099	.095	.869	.079	.053	.085	.131	.224	.321	.070	.091	.110	.356	.127
W-BPRMF	.178	.171	.155	.126	.101	.017	.031	.052	.091	.132	.030	.053	.078	.106	.115
Hybrid	.366	.265	.291	.257	.208	.126	.187	.279	.348	.417	.180	.219	.285	.295	.278
LDA	.094	.098	.084	.260	.062	.033	.052	.080	.134	.189	.049	.068	.082	.176	.094
LRMF	.112	.110	.100	.311	.074	.039	.063	.096	.160	.227	.058	.080	.098	.211	.112
RankALS	.114	.113	.101	.200	.073	.037	.058	.089	.147	.208	.056	.077	.094	.169	.108
RankSGD	.115	.115	.102	.223	.073	.031	.050	.077	.129	.183	.048	.069	.088	.163	.104

Table Annex 1. 9 State of the Art Results (Precision, Recall and F-measure of both)

Approach	S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
BPRMF	.348	.513	.699	.912	.982	.965	.131	.512	.244
MultiCore-BPRMF	.024	.044	.074	.133	.207	.539	.005	.283	.038
Random	.017	.033	.061	.134	.217	.500	.004	.278	.018
Most Popular	.153	.210	.281	.397	.509	.788	.020	.339	.126
Soft Margin Ranking	.347	.539	.755	.952	.996	.969	.115	.502	.242
W-BPRMF	.342	.431	.525	.657	.761	.840	.079	.413	.266
Hybrid-librec	.513	.740	.888	.928	.968	.902	.178	.477	.490
LDA	.249	.357	.461	.561	.630	.750	.076	.391	.211
LRMF	.294	.420	.538	.646	.714	.792	.090	.412	.245
RankALS	.349	.498	.633	.749	.814	.851	.108	.439	.291
RankSGD	.349	.489	.609	.708	.777	.827	.106	.426	.300

Table Annex 1. 10 State of the Art Results (Ranking-based measures)

FCA-based approach

Feature	Th.	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
News	0%	.496	.479	.428	.328	.242	.092	.149	.218	.317	.381	.155	.227	.289	.323	.296
	5%	.477	.458	.401	.306	.226	.088	.142	.208	.305	.372	.149	.217	.274	.306	.282
	10%	.466	.446	.385	.291	.217	.088	.141	.202	.295	.364	.148	.214	.265	.293	.272
	15%	.463	.442	.379	.282	.210	.088	.140	.200	.289	.358	.148	.212	.262	.286	.264
	20%	.462	.438	.374	.277	.205	.875	.140	.199	.287	.354	.605	.212	.260	.282	.260
All	25%	.456	.436	.373	.272	.199	.087	.139	.198	.282	.349	.146	.210	.258	.277	.254
	30%	.456	.435	.369	.271	.197	.087	.139	.196	.280	.346	.146	.210	.256	.275	.251
	35%	.459	.435	.368	.268	.194	.087	.138	.196	.278	.342	.146	.210	.255	.273	.247
	40%	.457	.433	.368	.265	.190	.087	.138	.195	.278	.340	.145	.209	.254	.271	.244
	50%	.463	.435	.368	.262	.190	.088	.139	.195	.275	.339	.148	.211	.255	.268	.244

Feature	Th.	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
News	0%	.604	.544	.464	.341	.246	.100	.154	.220	.317	.380	.172	.240	.299	.328	.299
	5%	.567	.503	.421	.306	.224	.096	.145	.207	.298	.366	.164	.225	.278	.302	.278
	10%	.546	.481	.395	.284	.210	.094	.142	.199	.285	.354	.160	.219	.265	.285	.263
	15%	.532	.468	.382	.273	.201	.092	.139	.194	.278	.346	.157	.214	.257	.276	.254
	20%	.522	.460	.372	.265	.194	.091	.137	.190	.272	.339	.155	.211	.252	.268	.247
Entity	25%	.518	.452	.367	.258	.189	.091	.136	.188	.269	.335	.155	.208	.249	.263	.242
	30%	.512	.444	.360	.253	.184	.091	.135	.186	.264	.329	.154	.206	.245	.259	.236
	35%	.506	.440	.356	.249	.180	.090	.134	.184	.262	.325	.153	.205	.243	.255	.232
	40%	.500	.437	.349	.245	.177	.090	.134	.183	.260	.322	.152	.205	.240	.252	.228
	50%	.497	.432	.347	.242	.174	.090	.133	.182	.257	.319	.152	.203	.239	.249	.226

Feature	Th.	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
News	0%	.471	.461	.418	.325	.241	.090	.147	.217	.316	.380	.151	.223	.286	.320	.295
	5%	.451	.441	.393	.304	.227	.087	.142	.207	.304	.372	.146	.215	.271	.304	.282
	10%	.443	.433	.381	.290	.217	.086	.140	.203	.295	.364	.144	.212	.265	.292	.272
	15%	.441	.428	.375	.283	.211	.086	.140	.201	.291	.360	.144	.211	.262	.287	.266
Text	20%	.435	.424	.371	.277	.207	.086	.139	.200	.287	.357	.143	.210	.260	.282	.262
	25%	.436	.421	.366	.272	.202	.086	.138	.198	.284	.352	.144	.208	.257	.278	.257
	30%	.433	.422	.364	.272	.200	.086	.139	.198	.283	.350	.143	.209	.256	.278	.254
	35%	.432	.419	.363	.270	.197	.085	.138	.197	.282	.347	.142	.208	.256	.276	.251
	40%	.435	.421	.362	.267	.194	.085	.138	.196	.280	.343	.143	.208	.255	.274	.248
	50%	.436	.420	.361	.264	.194	.085	.138	.195	.278	.342	.143	.208	.254	.271	.248

Feature	Th.	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
News	0%	.032	.054	.506	.033	.025	.003	.009	.016	.023	.032	.006	.016	.031	.028	.028
	5%	.018	.037	.044	.036	.028	.002	.007	.015	.028	.040	.003	.011	.023	.032	.033
	10%	.017	.031	.036	.034	.029	.001	.006	.013	.029	.042	.002	.009	.019	.031	.034
	15%	.012	.021	.028	.031	.027	.001	.004	.011	.027	.042	.002	.007	.015	.029	.033
	20%	.014	.022	.239	.027	.026	.001	.004	.009	.025	.042	.002	.007	.017	.026	.032
Topic	25%	.014	.021	.024	.025	.025	.001	.004	.008	.022	.040	.002	.006	.012	.023	.031
	30%	.011	.017	.020	.021	.024	.001	.003	.007	.020	.040	.002	.005	.011	.020	.030
	35%	.011	.017	.019	.020	.023	.001	.003	.007	.018	.037	.001	.005	.010	.019	.028
	40%	.010	.016	.017	.018	.021	.001	.003	.006	.017	.035	.001	.005	.009	.017	.026
	50%	.011	.018	.019	.019	.022	.001	.003	.007	.017	.034	.001	.005	.010	.018	.027

Feature	Th.	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
	0%	.793	.730	.641	.485	.356	.133	.210	.305	.437	.521	.228	.326	.413	.460	.423
	5%	.777	.711	.610	.456	.336	.130	.202	.289	.418	.507	.223	.315	.392	.436	.404
	10%	.773	.703	.595	.439	.323	.129	.200	.282	.406	.495	.221	.312	.382	.422	.391
	15%	.768	.697	.587	.428	.314	.129	.199	.278	.395	.485	.220	.309	.377	.411	.381
Tweet	20%	.763	.694	.582	.420	.307	.128	.197	.274	.388	.477	.219	.307	.373	.404	.373
All	25%	.760	.691	.579	.415	.301	.127	.196	.273	.383	.470	.217	.306	.371	.398	.367
	30%	.760	.690	.576	.411	.296	.127	.196	.271	.379	.464	.217	.305	.368	.394	.362
	35%	.759	.689	.576	.407	.293	.126	.196	.271	.377	.460	.217	.305	.368	.391	.358
	40%	.757	.688	.574	.404	.290	.127	.195	.270	.375	.458	.217	.304	.367	.389	.355
	50%	.757	.687	.571	.402	.287	.126	.194	.268	.372	.453	.216	.303	.365	.387	.352

Feature	Th.	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
Tweet	0%	.007	.007	.006	.008	.011	.001	.001	.002	.006	.013	.001	.002	.003	.007	.012
	5%	.008	.008	.007	.009	.011	.001	.001	.002	.006	.013	.001	.002	.003	.007	.012
	10%	.009	.009	.007	.009	.012	.001	.002	.002	.007	.014	.002	.003	.003	.008	.013
	15%	.010	.010	.007	.009	.012	.001	.002	.002	.007	.015	.002	.003	.004	.008	.013
	20%	.011	.010	.008	.009	.012	.001	.002	.003	.007	.015	.002	.003	.004	.008	.013
Entity	25%	.011	.011	.008	.009	.012	.001	.002	.003	.007	.015	.002	.004	.004	.008	.014
	30%	.012	.012	.008	.010	.013	.001	.002	.003	.008	.016	.002	.004	.004	.008	.014
	35%	.012	.012	.008	.010	.013	.001	.003	.003	.008	.016	.002	.004	.005	.009	.014
	40%	.013	.012	.009	.010	.013	.001	.003	.003	.008	.016	.003	.004	.005	.009	.014
	50%	.013	.013	.009	.010	.013	.002	.003	.003	.008	.017	.003	.005	.005	.009	.015

Feature	Th.	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
	0%	.792	.731	.641	.486	.357	.133	.211	.305	.438	.522	.228	.327	.414	.461	.424
	5%	.779	.713	.612	.458	.337	.131	.204	.290	.421	.509	.224	.318	.393	.439	.406
	10%	.774	.705	.596	.441	.324	.131	.202	.283	.408	.497	.224	.314	.384	.424	.393
	15%	.770	.702	.590	.430	.316	.129	.201	.279	.398	.488	.221	.312	.379	.413	.383
Tweet	20%	.765	.696	.584	.422	.309	.129	.199	.276	.391	.480	.221	.310	.375	.406	.376
Text	25%	.762	.692	.580	.416	.303	.128	.198	.275	.385	.473	.219	.308	.373	.400	.369
	30%	.762	.693	.578	.413	.299	.127	.197	.273	.382	.468	.218	.307	.370	.397	.365
	35%	.763	.690	.576	.410	.294	.128	.197	.272	.379	.464	.220	.307	.370	.394	.360
	40%	.761	.689	.575	.407	.292	.128	.196	.272	.378	.462	.219	.306	.369	.392	.358
	50%	.761	.690	.575	.406	.290	.128	.197	.272	.377	.458	.219	.306	.369	.391	.355

Feature	Th.	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
Tweet	0%	.006	.007	.006	.079	.011	.000	.001	.002	.006	.012	.001	.002	.003	.010	.011
	5%	.008	.008	.006	.008	.011	.001	.001	.002	.006	.013	.001	.002	.003	.007	.012
	10%	.009	.009	.007	.009	.012	.001	.002	.002	.006	.014	.002	.003	.003	.007	.013
	15%	.010	.009	.007	.009	.012	.001	.002	.002	.007	.014	.002	.003	.003	.008	.013
	20%	.011	.010	.008	.009	.012	.001	.002	.003	.007	.015	.002	.003	.004	.008	.013
	25%	.012	.011	.008	.009	.012	.001	.002	.003	.007	.015	.002	.004	.004	.008	.014
	30%	.012	.011	.008	.010	.013	.001	.002	.003	.007	.015	.002	.004	.004	.008	.014
	35%	.013	.012	.009	.010	.013	.001	.002	.003	.008	.016	.002	.004	.005	.009	.014
	40%	.013	.012	.009	.010	.013	.001	.003	.003	.008	.016	.003	.004	.005	.009	.014
	50%	.014	.013	.009	.010	.013	.002	.003	.003	.008	.016	.003	.004	.005	.009	.014

Feature	Th.	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
News and Tweet All	0%	.781	.711	.617	.462	.340	.129	.200	.290	.416	.500	.221	.312	.394	.438	.405
	5%	.771	.698	.592	.441	.324	.125	.194	.275	.400	.486	.215	.304	.375	.419	.389
	10%	.766	.688	.580	.427	.313	.125	.191	.270	.390	.476	.215	.299	.368	.407	.377
	15%	.768	.686	.574	.418	.305	.125	.191	.267	.383	.468	.215	.298	.364	.399	.369
	20%	.763	.683	.570	.412	.300	.124	.190	.265	.378	.462	.213	.297	.362	.394	.364
	25%	.761	.681	.568	.407	.295	.124	.190	.263	.373	.456	.213	.297	.360	.389	.358
	30%	.760	.680	.565	.404	.291	.124	.189	.262	.371	.452	.213	.296	.358	.386	.354
	35%	.759	.679	.564	.401	.287	.124	.189	.262	.369	.449	.213	.296	.358	.384	.350
	40%	.761	.678	.564	.399	.285	.124	.189	.262	.366	.445	.213	.295	.357	.381	.347
	50%	.759	.676	.562	.397	.283	.124	.188	.261	.365	.443	.213	.294	.356	.380	.345

Feature	Th.	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
News	0%	.744	.674	.579	.429	.313	.121	.188	.269	.383	.460	.209	.295	.368	.404	.372
	5%	.722	.648	.546	.401	.293	.118	.181	.255	.365	.445	.202	.283	.347	.382	.353
	10%	.711	.630	.530	.384	.280	.116	.176	.249	.354	.434	.200	.275	.339	.368	.340
And	15%	.702	.622	.518	.372	.271	.115	.175	.244	.347	.427	.198	.273	.332	.359	.331
	20%	.692	.612	.509	.363	.264	.114	.172	.241	.341	.420	.196	.269	.327	.352	.324
Tweet	25%	.690	.608	.503	.357	.259	.114	.171	.237	.336	.413	.195	.266	.323	.346	.318
	30%	.688	.606	.499	.353	.254	.113	.170	.236	.333	.409	.194	.266	.320	.343	.313
Entity	35%	.687	.603	.495	.349	.250	.114	.170	.235	.330	.405	.195	.265	.318	.340	.309
	40%	.681	.598	.490	.345	.246	.113	.169	.232	.326	.399	.194	.263	.315	.336	.304
	50%	.678	.595	.487	.342	.243	.112	.168	.231	.324	.397	.192	.262	.314	.333	.301

Feature	Th.	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
News	0%	.779	.711	.617	.464	.341	.129	.200	.290	.418	.502	.221	.312	.394	.439	.406
	5%	.774	.700	.594	.443	.326	.128	.197	.278	.404	.499	.219	.307	.378	.422	.395
	10%	.767	.691	.584	.430	.316	.126	.193	.273	.394	.481	.217	.302	.372	.411	.381
	15%	.765	.687	.577	.421	.308	.125	.192	.270	.386	.472	.215	.300	.368	.403	.373
And	20%	.762	.684	.573	.415	.302	.125	.191	.268	.381	.466	.215	.299	.365	.398	.367
	25%	.764	.684	.572	.411	.298	.125	.191	.267	.378	.461	.215	.299	.364	.394	.362
Tweet	30%	.763	.683	.569	.408	.294	.125	.191	.265	.375	.456	.215	.299	.362	.391	.358
	35%	.761	.681	.567	.405	.291	.124	.191	.264	.372	.453	.214	.298	.360	.388	.354
	40%	.761	.681	.567	.403	.289	.124	.191	.264	.371	.451	.214	.298	.361	.387	.352
Text	50%	.761	.679	.566	.401	.287	.124	.190	.264	.370	.448	.214	.297	.360	.385	.350

Feature	Th.	P@5	P@10	P@20	P@50	P@100	R@5	R@10	R@20	R@50	R@100	F1@5	F1@10	F@20	F@50	F@100
News	0%	.262	.282	.252	.196	.148	.026	.058	.103	.174	.224	.047	.096	.146	.184	.178
	5%	.198	.218	.208	.166	.129	.017	.038	.075	.147	.206	.031	.065	.110	.156	.159
	10%	.169	.189	.183	.149	.116	.013	.031	.062	.128	.188	.025	.054	.092	.138	.143
And	15%	.150	.172	.171	.139	.108	.011	.028	.055	.113	.175	.021	.049	.083	.124	.134
	20%	.134	.156	.161	.131	.104	.010	.024	.050	.101	.163	.019	.042	.076	.114	.127
Tweet	25%	.128	.141	.149	.124	.100	.009	.022	.045	.094	.155	.017	.038	.069	.107	.121
	30%	.122	.140	.143	.120	.097	.009	.020	.043	.091	.149	.016	.035	.066	.104	.117
Topic	35%	.119	.132	.137	.116	.094	.008	.018	.040	.085	.142	.015	.032	.062	.098	.113
	40%	.118	.131	.134	.114	.091	.008	.018	.038	.084	.136	.015	.031	.060	.097	.109
	50%	.116	.129	.130	.111	.090	.007	.018	.037	.081	.130	.014	.031	.057	.094	.106

Table Annex 1. 11. FCA-based Results (Precision, Recall and F-measure of both)

	Threshold	S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
News	0%	.750	.868	.897	.910	.916	.829	.279	.599	.432
	5%	.731	.855	.892	.909	.916	.836	.261	.592	.421
	10%	.716	.838	.877	.907	.915	.840	.252	.589	.414
	15%	.713	.830	.869	.907	.915	.844	.246	.586	.411
	20%	.710	.828	.864	.905	.917	.846	.242	.585	.408
All	25%	.703	.826	.860	.900	.917	.848	.238	.582	.408
	30%	.702	.823	.858	.908	.916	.848	.236	.581	.403
	35%	.703	.821	.856	.904	.913	.850	.234	.580	.407
	40%	.703	.820	.855	.898	.909	.851	.231	.580	.405
	50%	.707	.821	.856	.892	.913	.852	.231	.579	.409

	Threshold	S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
News	0%	.823	.878	.896	.906	.908	.823	.291	.613	.508
	5%	.800	.869	.896	.907	.912	.829	.263	.601	.492
	10%	.784	.853	.880	.904	.909	.833	.250	.594	.482
	15%	.771	.845	.875	.904	.908	.836	.240	.589	.472
	20%	.766	.842	.871	.904	.909	.837	.234	.585	.467
Entity	25%	.756	.839	.873	.904	.909	.838	.228	.582	.465
	30%	.754	.837	.870	.901	.906	.839	.225	.580	.465
	35%	.749	.832	.870	.901	.906	.840	.221	.577	.457
	40%	.742	.833	.869	.902	.907	.841	.218	.576	.454
	50%	.741	.829	.870	.901	.907	.841	.215	.574	.452

	Threshold	S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
News	0%	.723	.853	.896	.908	.913	.827	.275	.594	.409
	5%	.701	.842	.890	.907	.913	.834	.260	.588	.397
	10%	.689	.831	.875	.907	.915	.837	.250	.584	.394
	15%	.681	.823	.869	.909	.918	.840	.246	.583	.388
	20%	.674	.818	.861	.904	.917	.842	.242	.581	.386
Text	25%	.673	.813	.858	.897	.917	.844	.239	.579	.386
	30%	.672	.813	.856	.907	.916	.845	.237	.579	.387
	35%	.669	.810	.856	.904	.913	.846	.235	.578	.386
	40%	.676	.809	.854	.898	.908	.847	.233	.576	.386
	50%	.673	.807	.852	.889	.910	.847	.232	.576	.385

	Threshold	S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
News Topic	0%	.094	.199	.305	.408	.498	.713	.016	.321	.062
	5%	.054	.131	.277	.439	.539	.718	.015	.322	.047
	10%	.052	.108	.230	.428	.554	.722	.015	.323	.046
	15%	.036	.079	.185	.401	.550	.725	.015	.323	.039
	20%	.039	.820	.163	.366	.541	.728	.015	.323	.039
	25%	.042	.836	.164	.341	.534	.730	.014	.323	.041
	30%	.035	.067	.140	.296	.515	.732	.014	.322	.035
	35%	.035	.068	.129	.276	.486	.733	.014	.322	.035
	40%	.031	.062	.115	.246	.449	.735	.014	.322	.030
	50%	.034	.074	.121	.247	.439	.737	.014	.322	.031

	Threshold	S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
Tweet	0%	.906	.921	.926	.932	.933	.870	.501	.732	.586
	5%	.897	.917	.925	.933	.936	.876	.466	.721	.566
	10%	.894	.916	.925	.934	.937	.878	.448	.716	.553
	15%	.891	.915	.922	.929	.935	.880	.436	.710	.545
	20%	.887	.911	.921	.930	.936	.881	.427	.707	.543
All	25%	.883	.910	.920	.927	.935	.882	.420	.704	.541
	30%	.884	.910	.921	.928	.936	.883	.414	.702	.546
	35%	.883	.911	.920	.928	.934	.884	.410	.700	.543
	40%	.885	.910	.921	.928	.935	.884	.406	.699	.538
	50%	.885	.910	.919	.927	.934	.885	.403	.697	.542

	Threshold	S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
Tweet Entity	0%	.014	.021	.044	.134	.258	.705	.013	.340	.018
	5%	.016	.024	.046	.136	.259	.706	.015	.360	.021
	10%	.017	.025	.047	.136	.260	.706	.016	.372	.023
	15%	.019	.026	.005	.138	.260	.707	.017	.381	.024
	20%	.020	.028	.051	.140	.262	.708	.018	.389	.025
	25%	.020	.029	.005	.142	.263	.708	.019	.394	.026
	30%	.021	.030	.054	.143	.264	.708	.020	.399	.258
	35%	.022	.031	.057	.147	.267	.709	.020	.403	.027
	40%	.022	.031	.055	.147	.267	.709	.021	.408	.027
	50%	.022	.032	.057	.147	.267	.710	.022	.411	.027

	Threshold	S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
	0%	.905	.922	.927	.933	.934	.870	.501	.732	.585
	5%	.897	.917	.925	.933	.937	.876	.469	.722	.566
	10%	.897	.918	.925	.933	.939	.879	.451	.717	.554
	15%	.893	.916	.923	.931	.936	.880	.439	.712	.549
Tweet	20%	.890	.912	.924	.931	.936	.881	.431	.709	.541
Text	25%	.886	.911	.922	.929	.935	.882	.423	.706	.540
	30%	.885	.910	.921	.928	.935	.883	.418	.704	.540
	35%	.886	.911	.922	.930	.935	.884	.414	.703	.541
	40%	.886	.910	.923	.930	.936	.885	.411	.702	.543
	50%	.887	.912	.923	.930	.935	.885	.408	.701	.542

	Threshold	S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
	0%	.014	.021	.044	.134	.257	.705	.013	.340	.017
	5%	.016	.023	.046	.134	.257	.706	.015	.359	.021
	10%	.017	.025	.047	.136	.259	.706	.016	.371	.022
	15%	.019	.026	.049	.137	.260	.707	.017	.380	.024
Tweet	20%	.019	.028	.050	.140	.262	.707	.018	.039	.025
Topic	25%	.020	.030	.053	.142	.262	.708	.019	.393	.025
	30%	.022	.030	.054	.142	.263	.708	.019	.398	.026
	35%	.022	.031	.055	.144	.263	.709	.020	.402	.026
	40%	.213	.030	.057	.145	.267	.709	.021	.406	.027
	50%	.023	.031	.057	.148	.268	.710	.021	.409	.027

	Threshold	S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
News And	0%	.899	.915	.924	.931	.932	.867	.467	.719	.624
	5%	.894	.911	.921	.931	.934	.873	.440	.710	.614
	10%	.891	.910	.923	.931	.935	.876	.425	.705	.610
	15%	.895	.911	.920	.930	.934	.878	.417	.703	.610
	20%	.892	.909	.919	.927	.931	.880	.409	.700	.601
Tweet All	25%	.892	.909	.918	.927	.932	.881	.403	.698	.609
	30%	.891	.907	.917	.926	.931	.883	.399	.696	.604
	35%	.890	.909	.919	.928	.933	.884	.395	.695	.611
	40%	.892	.908	.918	.926	.932	.884	.392	.693	.606
	50%	.889	.909	.919	.927	.933	.884	.389	.692	.604

	Threshold	S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
News And Tweet Entity	0%	.884	.906	.914	.919	.921	.845	.412	.687	.602
	5%	.875	.898	.908	.916	.921	.851	.383	.676	.585
	10%	.865	.895	.905	.915	.922	.854	.366	.670	.582
	15%	.865	.893	.902	.916	.923	.856	.355	.665	.579
	20%	.860	.890	.901	.916	.922	.858	.346	.661	.571
	25%	.859	.890	.899	.914	.921	.859	.339	.658	.568
	30%	.861	.889	.899	.914	.922	.860	.334	.656	.567
	35%	.861	.889	.899	.915	.922	.860	.330	.654	.568
	40%	.857	.887	.899	.914	.920	.861	.325	.651	.570
	50%	.855	.888	.899	.915	.921	.861	.321	.650	.562

	Threshold	S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
News And	0%	.898	.916	.924	.931	.933	.867	.468	.719	.622
	5%	.898	.917	.924	.932	.935	.874	.445	.713	.612
	10%	.894	.915	.923	.931	.936	.878	.431	.708	.606
	15%	.892	.912	.922	.930	.934	.879	.421	.704	.607
	20%	.892	.912	.921	.929	.934	.881	.414	.702	.606
Tweet Text	25%	.893	.912	.920	.929	.934	.882	.409	.700	.606
	30%	.891	.910	.919	.928	.934	.883	.405	.699	.605
	35%	.890	.911	.919	.930	.934	.884	.400	.696	.606
	40%	.892	.912	.920	.928	.934	.884	.398	.696	.606
	50%	.890	.910	.918	.929	.933	.885	.394	.694	.605

	Threshold	S@5	S@10	S@20	S@50	S@100	AUC	MAP	NDCG	MRR
News And Tweet Topic	0%	.418	.582	.736	.839	.854	.772	.106	.450	.235
	5%	.325	.445	.617	.800	.854	.782	.087	.432	.181
	10%	.294	.402	.530	.751	.839	.786	.077	.422	.160
	15%	.262	.381	.494	.705	.820	.789	.072	.415	.148
	20%	.241	.351	.471	.660	.799	.793	.067	.411	.136
	25%	.251	.336	.448	.637	.785	.795	.064	.407	.134
	30%	.220	.325	.443	.619	.768	.796	.062	.404	.133
	35%	.212	.316	.432	.598	.746	.797	.059	.401	.129
	40%	.216	.318	.426	.597	.736	.798	.058	.399	.128
	50%	.211	.314	.417	.588	.722	.799	.056	.397	.127

Table Annex 1. 12 FCA-based Results (Ranking-based measures)