

# TREC 2012 Crowdsourcing Track, Text Relevance Assessing Task (TRAT) results

Group: (HAC) ECS, University of Southampton

Run ID: OrcVB1

Run type: Secondary

Description of run:

Using topic analysis to select files to crowdsource, we obtained 2600 labels from Amazon Mechanical Turk workers. Independent Bayesian Classifier Combination was applied, treating all crowd members as equal and learning from Topic features extracted from the text.

## Results

Topic	#Docs	#Rel	TP	TN	FP	FN	TPR	TNR	FPR	FNR	LAM	AUC
411	2056	27	21	1606	423	6	0.768	0.791	0.209	0.232	0.220	0.922
416	1235	45	43	738	452	2	0.946	0.620	0.380	0.054	0.158	0.858
417	2992	75	45	2230	687	30	0.599	0.764	0.236	0.401	0.313	0.866
420	1136	37	22	719	380	15	0.592	0.654	0.346	0.408	0.376	0.807
427	1528	37	10	1204	287	27	0.276	0.807	0.193	0.724	0.442	0.647
432	2503	22	15	1835	646	7	0.674	0.740	0.260	0.326	0.292	0.753
438	1798	162	126	956	680	36	0.776	0.584	0.416	0.224	0.312	0.799
445	1404	60	43	837	507	17	0.713	0.623	0.377	0.287	0.331	0.840
446	2020	156	134	1365	499	22	0.857	0.732	0.268	0.143	0.198	0.868
447	1588	16	5	1170	402	11	0.324	0.744	0.256	0.676	0.459	0.700
Average	1826.000	63.700	46.400	1266.000	496.300	17.300	0.652	0.706	0.294	0.348	0.310	0.806

Table 1: This table shows per-topic statistics and overall averages for the run OrcVB1. The topics are 10 randomly selected topics from the TREC 8 ad-hoc task. A relevant document is positive and a non-relevant document is negative. The true positive (TP), true negative (TN), false positive (FP), and false negative (FN) counts are based on an adjudicated set of relevance judgments that differs from the original TREC-8 ad-hoc qrels. The true positive rate (TPR), false positive rate (FPR), true negative rate (TNR), and the false negative rate (FNR) are all smoothed values. Details of the computation of the logistic average misclassification (LAM) rate and the area under the curve (AUC) are given in the track overview paper. Some runs did not report a probability of relevance and thus will have NA for their AUC score.

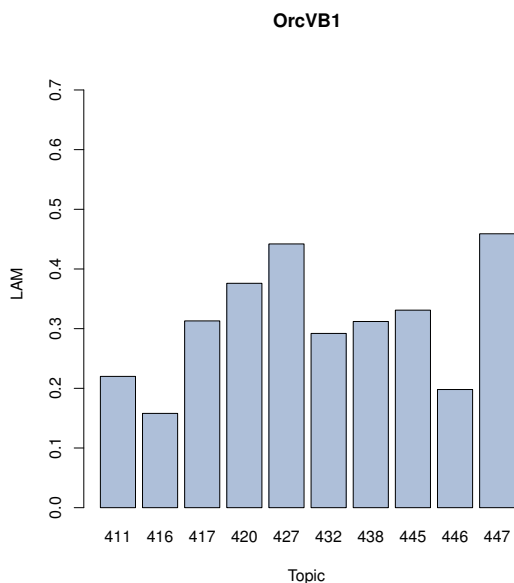


Figure 1: OrcVB1 LAM

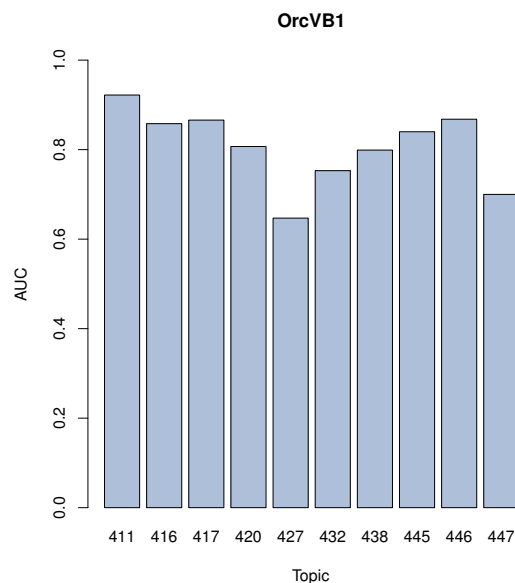


Figure 2: OrcVB1 AUC