Table 8: Selected examples of miss-classified paper titles.

Paper Title	Conference	Target Class	Top-	2	3	4	5
A New Algorithm for Optimal Bin Packing	AAAI	AI	ALG	ΑI	MOD	COLT	DNA
(Im)possibility of Safe Exchange Mechanism Design	AAAI	AI	NET	SC	LG	DB	MD
Performance Issues and Error Analysis in an Open-Domain Question Answering System	ACL	LG	AI	LG	ALG	DC	SC
Active Learning for Statistical Natural Language Parsing	ACL	LG	AI	LG	NN	COLT	ALG
Improving Machine Learning Approaches to Coreference Resolution	ACL	LG	AI	LG	ALG	FM	NN
A language modelling approach to relevance profiling for document browsing	JCDL	LIS	AI	UI	LG	LIS	ALG
Structuring keyword-based queries for web databases	JCDL	LIS	AI	LIS	DB	ALG	ARC
A multilingual, multimodal digital video library system	JCDL	LIS	LG	UI	LIS	ECAD	NET
SOS: Secure Overlay Services	SIGCOMM	NET	SC	NET	MC	OS	DC

AI :Artificial Intelligence

ALG: Algorithms ARC: Architecture

COLT:Computational Learning Theory

DB :Databases

DC :Distributed Computing

DNA: DNA-Based Computing

ECAD: Electronic Computer Aided Design

FM: Formal Methods LG :Linguistics

LIS :Library and Information Science

MC : Mobile Computing

MOD:Modeling

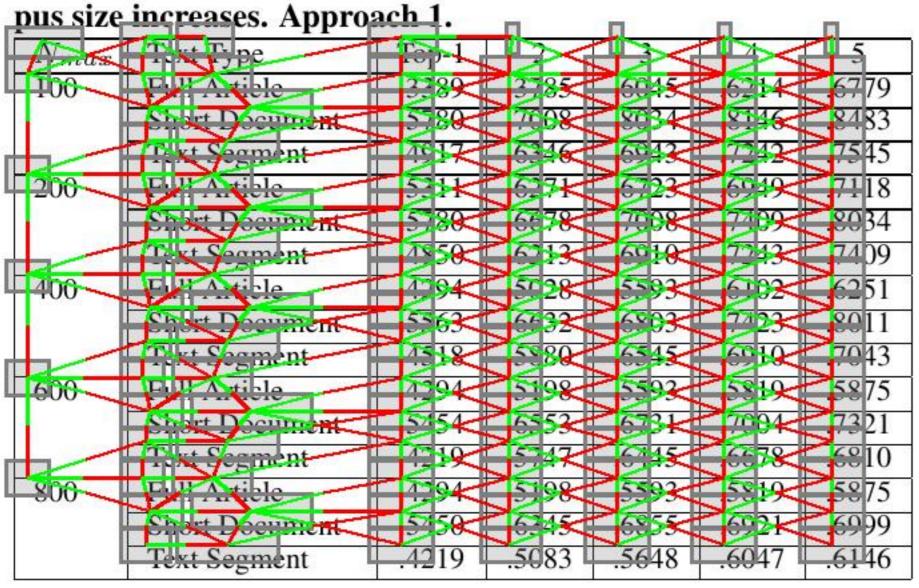
NET: Networks NN :Neural Network

OS :Operating Systems

SC :Security

UI :User Interface

Table 9: Yahoo!'s Computer Science experiment when the cor-



be used to create more value-added Web information services. For common human users, LiveClassifier also bestows much convenience. No longer troubled by the tedious work of preparing corpora, users may effortlessly construct many classifiers by his/her own preference.

The effectiveness of *LiveClassifier* deserves some remarks. As discussed in the preceding section, downloading un-labelled Web corpora to augment features or to enhance the size of training corpora has been tried in many recent works. However, few have considered the problem of "how" to collect and organize the corpora.

One may entertain the idea that **HCQF** simply depends on the enormous size of Web resource to train the topic-hierarchy, however, this is not the case. Table 9 lists the results of the Computer Science experiment when training corpora increased. It can be observed that the performance did not ameliorate with the size of the training corpora, on the contrary, it is the other way around.

A probable reason of this phenomenon is that the lowly-ranked snippets contain much more noise, thus dragging down the performance. Obviously, downloading Web documents indiscriminately does not ensure success in training. The reason that HCQF can get better results is rather its exploiting structural information contained in topic hierarchies. We have presented in Section 3 that subtrees of limited depth extracted from Yahoo!'s directory can achieve satisfactory results. We have also proven in Section 3.2 that in different granularities and in diverse domains, HCQF can achieve acceptable results. However, designing experiments of larger scale is still desirable.

LiveClassifier can be accessed online in the following URL

http://liveclassifier.iis.sinica.edu.tw/. Users can create and modify classifiers online.

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