



# Asian Research Consortium

Asian Journal of Research in Social Sciences and Humanities  
Vol. 10, No. 10, October 2020, pp. 25-34.

ISSN 2249-7315

A Journal Indexed in Indian Citation Index

DOI NUMBER: *10.5958/2249-7315.2020.00019.2*

**SJIF - SCIENTIFIC JOURNAL IMPACT FACTOR :7.615(2020)**

## Term Selection Methods for Query Expansion in Pseudo Relevance Feedback

R. Jothi Lakshmi\*

\*Associate Professor,

Department of Information Technology (IT),

RMD Engineering College,

Chennai, India.

---

Asian Journal  
of Research in  
Social Sciences  
and  
Humanities

---

www.aijsh.com

---

### Abstract

Query expansion term selection methods are very essential to increase the precision and the efficiency of Pseudo-Relevance Feedback (PRF) based automatic query expansion for information retrieval system by excluding distinct and redundant terms from the top retrieved feedback documents collection with respect to the user query. Specific query expansion term selection methods have been broadly explored for improving its performance. Still, it is always a challenging task to find a specific query expansion term selection method which would outperform other individual query expansion terms selection methods in maximum cases. In this paper, we explore the individual query expansion term selection methods and compare the performance of the individual term selection methods for query expansion. Our experimental results show that the information delivered by each method is of contrasting nature and, and finally concluding the term selection method for query expansion.

**Keywords:** Query expansion terms selection; Information retrieval; Pseudo relevance feedback; Ranking methods.

---

### References

C.J. Van Rijsbergen, A theoretical basis for the use of co-occurrence data in information retrieval, *Journal of Documentation* (1977), Vol. 33, p.106–119.



- Chia-Jung Lee, Yi-Chun Lin, Ruey-Cheng Chen, and Pu-Jen Cheng, Selecting Effective Terms for Query Formulation, LNCS (2009), Vol. 5839, pp. 168–180.
- C.J. Van Rijsbergen, A theoretical basis for the use of co-occurrence data in information retrieval, *Journal of Documentation*(1977), Vol. 33, p.106–119.
- Claudio Carpinet , Renato De Mori, Giovanni Romano, Informative term selection for automatic query expansion, *Proceedings of TREC*(1999), pp. 363-370.
- Robertson SE, On term selection for query expansion, *Journal of Documentation* (1990), Vol.46, pp.359-364.
- Chia-Jung Lee, Yi-Chun Lin, Ruey-Cheng Chen, and Pu-Jen Cheng, Selecting Effective Terms for Query Formulation, LNCS (2009), Vol. 5839, pp. 168–180.
- Yiming Yang ,Jan O.Pedersen, A Comparative study on feature selection in text categorization, *Proceedings of the Fourteenth International Conference on Machine Learning*(1997), pp.412-420.
- Li Y, Luo C and Chung SM. Text clustering with feature selection by using statistical data. *IEEE Transaction on Knowledge and Data Engineering* (2008), pp.641-652.
- Adekpedjou A and Zamba KD. A Chi-Squared Goodness of Fit Test for Recurrent Event Data. *Journal of Statistical Theory and Applications* (2012), pp.97-119.
- C Carpineto, R De Mori, G Romano, B Bigi, An information-theoretic approach to automatic query expansion, *ACM Transactions on Information Systems* (2001), pp. 1-27.
- Swets JA. ,*Information Retrieval Systems* ,*Science* (1963), Vol.141, pp.245-250.
- Brookes BC, The measure of information retrieval effectiveness proposed by swets, *Journal of Documentation*(1968), Vol.24, pp. 41-54.
- Croft, W. B. , Combining approaches to information retrieval, *Advances in information retrieval*(2002) Volume 7 of the series *The Information Retrieval Series* pp.1-36 .
- J. Miao, J. X. Huang, and Z. Ye, Proximity-based rocchio's model for pseudo relevance, *Proceedings of the 35th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval* (2012), pp. 535–544.
- Ricardo Baeza-Yates,1999, *Modern Information Retrieval*, ACM Press.
- Robertson SE, Walker S, Jones S, Beaulieu MMH and Gatford M. Okapi at TREC-3. In: *Proceedings of the third Text REtrieval Conference*, 1995, pp. 109-126.