

consider the necessary computer resources such as the Memory when retrieving information. The best algorithm should ensure that memory space needed for it to run efficiently and effectively be cheap and manageable. An algorithm that ensures such success is the tokenization algorithm. As explained in this article, it uses index model that stores document ID rather than the whole document.

It is ideally a huge dilemma when trying to choose the best algorithm for your IR tool. All these algorithms have weaknesses whose effect can be felt by either the user or the resource provider. An algorithm such as the clustering algorithm has its strength in handling huge information at the shortest time possible which is a win for the user. However, it is not all that economical when it comes to memory space usage. Equally the tokenization or the Ranking algorithms have their strongholds. They are accurate in

a low degree of memory space usage but, they can be disastrous when used in retrieving information at bulk. They are not as fast as the star cluster algorithm. Choosing the best algorithm and model is a critical decision to be made. The system developers should always keep the user satisfaction with the available resources before anything else.

12. Acknowledgment

The work was supported by the National Natural Science Foundation (NSF) under grant (No.61472294, No.61672397), Key Laboratory of Spatial Data Mining & Information Sharing of Ministry of Education, Fuzhou university (No. 2016LSDMISO5) program for the High-end Talents of Hubei Province Any opinions, findings, and conclusions are those of the authors and do not necessarily reflect the views of the above agencies.

References

- [1] Beebe, N. H. A Complete Bibliography of ACM Transactions on Information Systems (2017).
- [2] Beel, J, Gipp. B, Stiller. J, "Information Retrieval On Mind Maps - What Could It Be Good For? Proceedings of the 5th International Conference on Collaborative Computing: Networking, Applications and Work sharing (CollaborateCom'09). Washington, DC: IEEE. (2009).
- [3] Broderse`n, K.H., Ong, C.S., Stephan, K.E., Buhmann J.M "The binormal assumption on precision-recall curves". Proceedings of the 20th International Conference on Pattern Recognition, (2010). 4263-4266.

- [4] Center for Intelligent Information Retrieval | UMass Amherst". (2016) ciir.cs.umass.edu. Retrieved -07-29.
- [5] Christopher D. M., Prabhakar, R., Hinrich, S., "Chapter 8: Evaluation in information retrieval" (PDF) (2009). Retrieved 2015-06-14. Part of Introduction to Information Retrieval
- [6] Della Rocca, P, Senatore, S, & Loia, V. A semantic-grained perspective of latent knowledge modeling. Information Fusion (2015) n, 36, 52-67. <https://doi.org/10.1016/j.inffus.2016.11.003>
- [7] Doslu, M., & Bingol, H. O. Context sensitive article ranking with citation context analysis. *Scientometrics*, 108(2) (2016) 653-671. <https://link.springer.com/article/10.1007/s11192-016-1982-6>.
- [8] Frakes. A, William. B, 'Information Retrieval Data Structures & Algorithms' Prentice-Hall, Inc. (1992) ISBN 0-13-463837-9

- [9] Foote, J "An overview of audio information retrieval". Multimedia Systems. Springer. (1999)
- [10] Goodrum, A. A. (2000) "Image Information Retrieval: An Overview of Current Research". Informing Science. **3** (2).
- [11] Jansen, B. J. and Rieh, S. "The Seventeen Theoretical Constructs of Information Searching and Information Retrieval". Journal of the American Society for Information Sciences and Technology. (2010) 61(8), 1517-1534.
- [12] Lavrenko, V. "Introduction to Probabilistic Models for Information Retrieval". (2010) <http://homepages.inf.ed.ac.uk/vlavrenk/doc/pmir-1x2.pdf>.
- [13] Manning, C. D., Raghavan, P., Schütze, H. "Introduction to Information Retrieval. Cambridge University Press". (2008)
- [14] McSweeney, D, A Data Driven Guide To Anchor Text (And Its Impact On SEO) (2016). <https://ahrefs.com/blog/anchor-text/>.
- [15] Mark S., Bruce, W.C., "The History of Information Retrieval Research". Proceedings of the IEEE. **100**: (2012) 1444–1451. doi:10.1109/jproc.2012.2189916.
- [16] Powers, D. M., W "Evaluation: From Precision, Recall and F-Measure to ROC, Informedness, Markedness & Correlation" (PDF). Journal of Machine Learning Technologies. (2011) **2** (1): 37–63.
- [17] Sreedhar, G & Chari, A. A. First Look on Web Mining Techniques to Improve Business Intelligence of E-Commerce Applications. In Handbook of Research on Advanced Data Mining Techniques and Applications for Business Intelligence. (2017) (pp. 298-314). IGI Global.
- [18] Ting, K. M. "Encyclopedia of machine learning" (2011). Springer. ISBN 978-0-387-30164-8.
- [19] "University of Glasgow, School of Computing Science, Research overview - Information Retrieval" (2016). www.gla.ac.uk. Retrieved 2016-07-29
- [20] Wang, L., Zhang, Y., Qian, D., & Yao, M. "Extraction of Information from Public Health Emergency Web Documents (2016)