BAB VI

KESIMPULAN DAN SARAN

A. Kesimpulan

Hasil dari penelitian dan pembahasan yang telah dilakukan penulis menghasilkan kesimpulan sebagai berikut :

1. Algoritma LVQ melakukan klasifikasi SMS dengan cara memasukkan input vektor dengan jumlah tertentu yang telah ditentukan dan berisi nilai dari SMS yang telah diproses sebelumnya.

2. Tingkat akurasi algoritma LVQ dalam melakukan klasifikasi SMS adalah :

   a. 100% untuk data SMS dengan kategori Bencana

   b. 0% untuk data SMS dengan kategori Kejahatan

   c. 0% untuk data SMS dengan kategori Kecelakaan

B. Saran

Saran yang dapat penulis berikan setelah melakukan penelitian ini adalah :

1. Menggunakan varian algoritma LVQ yang berbeda atau menggunakan algoritma untuk mesin pembelajaran yang lain yang sesuai untuk pengolahan teks agar dapat mendapatkan perbandingan antara akurasi dan kecepatan dalam melakukan klasifikasi SMS.

2. Kesulitan dalam mencari basis data SMS yang sudah teruji yang akan digunakan dalam melakukan penelitian dapat dihindari dengan menggunakan basis data SMS yang sudah teruji dengan penelitian yang telah dilakukan sebelumnya untuk menghindari inkonsistensi basis data.

DAFTAR PUSTAKA

Abandah, G.A. and Jamour, F.T., 2014. A Word Matching Algorithm in Handwritten Arabic Recognition Using Multiple-Sequence Weighted Edit Distances. 11(3), pp.18–26.

Almeida, T. a, Hidalgo, J.M.G. and Yamakami, A., 2011. Contributions to the study of SMS spam filtering: new collection and results. *Proceedings of the 11th ACM symposium on Document engineering*, pp.259–262.

Al-Talib, G. and Hassan, H., 2013. A Study on Analysis of SMS Classification Using TF-IDF Weighting. *ijcncs.org*, [online] 1(5), pp.189–194. Available at: <http://www.ijcncs.org/published/volume1/issue5/p3_1-5.pdf> [Accessed 5 Sep. 2014].

Azara, Mohammed, Fatayer, Tamer, El-Halees, A., 2012. Arabic Text Classification Using Learning Vector Quantization. In: *The 8th International Conference on INFOrmatics and Systems (INFOS2012)*. pp.40–44.

Baharudin, B., Lee, L.H. and Khan, K., 2010. A Review of Machine Learning Algorithms for Text-Documents Classification. *Journal of Advances in Information Technology*, [online] 1(1), pp.4–20. Available at: <http://www.jait.us/index.php?m=content&c=index&a=show&catid=160&id=85 9>.

Beliga, S. and Martinčić-Ipšić, S., 2014. Non-Standard Words as Features for Text Categorization. *IEEE 37th International Convention on …*, [online] pp.1415–1419. Available at: <http://bib.irb.hr/prikazi-rad?lang=en&rad=700038> [Accessed 6 Sep. 2014].

Bijalwan, V., Kumar, V., Kumari, P. and Pascual, J., 2014. KNN based Machine Learning Approach for Text and Document Mining. *International Journal of …*, [online] 2, pp.62–66. Available at: <http://www.sersc.org/journals/IJDTA/vol7_no1/6.pdf> [Accessed 6 Sep. 2014].

Dai, J. and Liu, X., 2014. Approach for text classification based on the similarity measurement between normal cloud models. *TheScientificWorldJournal*, [online] 2014, p.784392. Available at: <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=3953649&tool=pmc entrez&rendertype=abstract>.

Hariri, F.R., Utami, E. and Amborowati, A., n.d. Learning Vector Quantization untuk Klasifikasi Abstrak Tesis. pp.128–143.

Hasan Alkahtani, Paul Gardner-Stephen, R.G., 2012. A TAXONOMY OF EMAIL SPAM FILTERS. In: *The International Conference on Computing, Networking and Digital Technologies (ICCNDT2012) - Bahrain*.

Healy, M., Delany, S. and Zamolotskikh, A., 2004. An assessment of case base reasoning for short text message classification. *Conference papers*, [online] pp.0–10. Available at: <http://arrow.dit.ie/cgi/viewcontent.cgi?article=1046&context=scschcomcon> [Accessed 4 Sep. 2014].

Healy, M., Delany, S. and Zamolotskikh, A., 2005. An assessment of case-based reasoning for short text message classification. *Procs. of 16th Irish Conference on Artificial Intelligence and Cognitive Science,(AICS-05)*, pp.257–266.

Ikonomakis, M., 2005. Text classification using machine learning techniques. *WSEAS Transactions ...*, [online] 4(8), pp.966–974. Available at: <http://www.infoautoclassification.org/public/articles/Ikonomakis-et.-al._Text-Classification-Using-Machine-Learning-Techniques.pdf> [Accessed 4 Sep. 2014].

Katankar, V. and Thakare, V., 2010. Short Message Service using SMS Gateway. *Retrieved on Jan*, [online] 02(04), pp.1487–1491. Available at: <http://www.enggjournals.com/ijcse/doc/IJCSE10-02-05-38.pdf> [Accessed 4 Sep. 2014].

Liu, W. and Wang, T., 2010. Index-based online text classification for SMS spam filtering. *Journal of Computers*, 5(6), pp.844–851.

Martín-Valdivia, M.T., Ureña-López, L. a and García-Vega, M., 2007. The learning vector quantization algorithm applied to automatic text classification tasks. *Neural networks : the official journal of the International Neural Network Society*, [online] 20(6), pp.748–56. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/17368839> [Accessed 12 Sep. 2014].

Padhiyar, H., 2013. Improving Accuracy of Text Classification for SMS Data. 1(10), pp.8–10.

Patra, B., Dash, S. and Tripathy, B.K., 2013. Neural Techniques for Improving the Classification Accuracy of Microarray Data Set using Rough Set Feature Selection Method. *International Journal of Computer Trends and Technology*, 4(3), pp.424–429.

Remya, K.R. and Ramya, J.S., 2014. A Survey of Machine Learning Approaches for Relation Classification from Biomedical Texts. 4(3), pp.2–7.

Shirani-mehr, H., 2012. SMS Spam Detection using Machine Learning Approach.

Sukhjit, P., Sehra, S. and Nayyar, P.A., 2013. A REVIEW PAPER ON ALGORITHMS. 2(3), pp.90–99.

Suzuki, M. and Hirasawa, S., 2007. Text categorization based on the ratio of word frequency in each categories. *... Man and Cybernetics, 2007. ISIC. IEEE ...*, [online] 2003, pp.3535–3540. Available at: <http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=4414216> [Accessed 4 Sep. 2014].

Ting, S., Ip, W. and Tsang, A., 2011. Is Naive Bayes a good classifier for document classification? *... Journal of Software Engineering and Its ...*, [online] 5(3), pp.37–46. Available at: <http://www.sersc.org/journals/IJSEIA/vol5_no3_2011/4.pdf> [Accessed 4 Sep. 2014].

Uysal, A., Gunal, S., Ergin, S. and Gunal, E.S., 2012. The Impact of Feature Extraction and Selection on SMS Spam Filtering. *Elektronika ir Elektrotechnika*, [online] pp.67–72. Available at: <http://eis.ktu.lt/index.php/elt/article/view/1829> [Accessed 16 Jul. 2014].

Uysal, A.K. and Gunal, S., 2012. A novel probabilistic feature selection method for text classification. *Knowledge-Based Systems*, 36, pp.226–235.

Xia, T. and Chai, Y., 2011. An improvement to TF-IDF: Term Distribution based Term Weight Algorithm. *Journal of Software*, [online] 6(3), pp.413–420. Available at: <http://ojs.academypublisher.com/index.php/jsw/article/view/3517>

[Accessed 5 Sep. 2014].

Yu, H., Ho, C., Juan, Y. and Lin, C., 2013. Libshorttext: a library for short-text classification and analysis. [online] pp.1–5. Available at: <http://ntu.csie.org/~cjlin/papers/libshorttext.pdf> [Accessed 4 Sep. 2014].

Zhang, Y., Gong, L. and Wang, Y., 2005. An improved TF-IDF approach for text classification. *Journal of Zhejiang University SCIENCE*, [online] 6(1), pp.49–55. Available at: <http://www.zju.edu.cn/jzus/article.php?doi=10.1631/jzus.2005.A0049> [Accessed 2 Sep. 2014].