IJARSCT



International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)

International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal

Volume 3, Issue 2, August 2023

Neural Network based Digit Recognition at Higher Frequency

Shilpakala V.1, G. F. Ali Ahammed²

Research Scholar, Electrical Engineering, VTU PG Studies, Mysuru, VTU, Belagavi, India¹ Associate Professor, Dept of ECE, R L Jalappa Institute of Technology, Doddaballapur, India¹ Associate Professor, VTU Department of PG Studies, Mysuru, India² shilpasrini2004@gmail.com¹ and aliahammed78@gmail.com²

Abstract: Digit recognition is the process by which a proposed system at higher order frequency recognises digits and converts them into a digital format that can be used by the modelled system at higher order frequency in terms of 60GHz. The present concept proposed here has gained the major focus by many research schoolers to analyze the pattern based application for the sake of different variety of applications including alphabets, numerical, handling of data at the higher order frequency. We discuss in full the being system for handwritten character recognition in this paper. The essential functional unit of ANN is to perform the basic multiplier operation, the use of ANN as an operation of multiplier for executable with the neuron exist in the network. The desired work is carried out in xlinix vivado platform by selecting the best possible weights and biases by considering the parameters such as the accuracy, recognition rate and time consumed for the proposed system in terms of milliseconds

Keywords: Character recognition, English Preprocessing; Segmentation; neural network; Convolution neural network

REFERENCES

- [1] S. A. Yadav, S. Sharma and S. R. Kumar, "A robust approach for offline English character recognition, "2015 International Conference on Futuristic Trends on Computational Analysis and Knowledge Management (ABLAZE), Noida, 2015, pp. 121 126.
- [2] G. Katiyar and S. Mehfuz, "MLPNN based handwritten character recognition using combined feature extraction," International Conference on Computing, Communication & Automation, Noida, 2015, pp. 1155-1159.
- [3] M. S. Ali and M. N. I. Mondal,"Character Recognition System: Performance Comparison of Neural Networks & Genetic Algorithm,"2015 International Conference on Computer and Information Engineering (ICCIE), Rajshahi, 2015, pp. 91-94.
- [4] R. S. Hussien, A. A. Elkhidir and M. G. Elnourani, "Optical Character Recognition of Arabic handwritten characters using Neural Network," 2015 International Conference on Computing, Control, Networking, Electronics and Embedded SystemsEngineering (ICCNEEE), Khartoum, 2015, pp. 456-461.
- [5] V. J. Dongre and V. H. Mankar, "Devanagari offline handwritten numeral and character recognition using multiple features and neural network classifier," 2015 2nd International Conference on Computing for Sustainable Global Development (INDIACom), New Delhi, 2015, pp. 425-431.
- [6] Verma B.K, "Handwritten Hindi Character Recognition Using Multilayer Perceptron and Radial Basis Function Neural Network", IEEE International Conference on Neural Network, 4, pp. 2111-2115, 1995.
- [7] Sutha.J, Ramraj.N, "Neural Network Based Offline Tamil Handwritten Character Recognition System", IEEE International Conference on Computational Intelligence and Multimedia Application, 2007, 2, 13-15, Dec.2007, Page(s): 446-450, 2007.
- [8] Yuelong Li Jinping Li Li Meng, "Character Recognition Based on Hierarchical RBF Neural Networks" Intelligent Systems Design and Applications, 2006. ISDA '06. Sixth International Conference, 1, On Page(s): 127-132, 2006.
- [9] Dayashankar Singh, Maitreyee Dutta and Sarvpal Harpal Singh, "Comparative Analysis of Handwritten Hindi Character

DOI: 10.48175/IJARSCT-12767



IJARSCT



International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)

International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal

Impact Factor: 7.301 Volume 3, Issue 2, August 2023

[10] Recognition Technique", IEEE International Advanced Computing Conference (IACC'09), March 6-7, 2009, Thaper University, Patiala.

DOI: 10.48175/IJARSCT-12767

