## **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 11, May 2023

# Image Captions Generator-A CNN-RNN Attention Model

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**Abstract:** The process of creating descriptions for what's happening in an image is known as image captioning. Image captioning is used to create explanations that provide context for the images. In general, image captioning is extremely helpful in a variety of applications, such as the analysis of enormous quantities of unlabelled photos and the discovery of hidden insights for ML applications that guide to create a software that provides guidance for the blind. Deep Learning Models can be used for this image captioning. Deep learning and Natural Language Processing advancements have made it simpler than ever to create descriptions for the provided visuals. Neural networks will be used in image captioning. CNN (Inception V3) is used for the encoding, which is supposed to retrieve the features from the depth of the image. RNN (Long-Short Term Memory) has been used for the decoder, and it helps to generate the captions for the images using the features of the image

### **Keywords:** RNN, CNN

#### REFERENCES

- [1]. Sreejith S P, Vijayakumar A "Image Captioning Generator using Deep Machine Learning", International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Volume-5 | Issue-4, June 2021, pp.832-834
- [2]. PrekshaKhant, Vishal Deshmukh, Aishwarya Kude, PrachiKiraula, "Image Caption Generator using CNN-LSTM", International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2395-0056, Volume: 09 Issue: 01 | Jan 2022.
- [3]. Ali Ashraf Mohamed, "Image Caption Using CNN and LSTM",2020.
- [4]. S. Amirian, K. Rasheed, T. R. Taha and H. R. Arabnia, "Image Captioning with Generative Adversarial Network," 2019 International Conference on Computational Science and Computational Intelligence (CSCI), Las Vegas, NV, USA, 2019, pp. 272-275, doi: 10.1109/CSCI49370.2019.00055.
- [5]. H. -Y. Hsieh, J. -S. Leu and S. -A. Huang, "Implementing a Real-Time Image Captioning Service for Scene Identification Using Embedded System," 2019 16th Annual IEEE International Conference on Sensing, Communication, and Networking (SECON), Boston, MA, USA, 2019, pp. 1-2, doi: 10.1109/SAHCN.2019.8824961.
- [6]. Aghasi Poghosyan, Aghasi Poghosyan, "Long Short-Term Memory With Read-Only Unit In Neural Image Caption Generator." 8312-163 ©2017 IEEE.
- [7]. Dataset Link: https://www.kaggle.com/datasets/srbhshinde/flickr8k-sau
- [8]. Mathur, Pranay, Aman Gill, Aayush Yadav, Anurag Mishra and Nand Kumar Bansode. "Camera2Caption: A real-time image caption generator." 2017 International Conference on Computational Intelligence in Data Science(ICCIDS) (2017): 1-6.
- [9]. S. Das, L. Jain and A. Das, "Deep Learning for Military Image Captioning," 2018 21st International Conference on Information Fusion (FUSION), Cambridge, UK, 2018, pp. 2165-2171, doi: 10.23919/ICIF.2018.8455321.

DOI: 10.48175/IJARSCT-10589

