

Generating Descriptive Text From Images - Image Caption Generator

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Abstract: *In the modern era, image captioning has become one of the most widely required tools. Moreover, there are inbuilt applications that generate and provide a caption for a certain image, all these things are done with the help of deep neural network models. The process of generating a description of an image is called image captioning. It requires recognizing the important objects, their attributes, and the relationships among the objects in an image. It generates syntactically and semantically correct sentences. In this paper, we present a deep learning model to describe images and generate captions using computer vision and machine translation. This paper aims to detect different objects found in an image, recognize the relationships between those objects and generate captions. The dataset used is Flickr8k and the programming language used was Python3, and an ML technique called Transfer Learning will be implemented with the help of the caption model, to demonstrate the proposed experiment. This paper will also elaborate on the functions and structure of the various Neural networks involved. Generating image captions is an important aspect of Computer Vision and Natural language processing. Image caption generators can find applications in Image segmentation as used by Facebook and Google Photos, and even more so, its use can be extended to video frames. They will easily automate the job of a person who has to interpret images. Not to mention it has immense scope in helping visually impaired people*

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