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Project Topic: Generate Image Description using Deep Learning Techniques

Data source: <https://www.kaggle.com/datasets/adityajn105/flickr8k/data?select=Images>

Our project is focusing on using the concepts from computer vision and natural language processing to develop a system capable of generating descriptive captions for provided images. We got our data from kaggle, which includes 8091 images, each paired with 5 different captions that convey the same meaning. We probably will employ deep learning techniques like Convolutional Neural Networks and some types of Recurrent Neural Networks using python. We also found this project has revealed its potential applicability across various fields. For example, with the advent of technologies like Vision Pro, this concept could be utilized in the medical domain to aid visually impaired individuals. Imagine specialized glasses that can interpret the surrounding environment for the wearer while navigating public spaces, which gives the blind people guidance on how to proceed. Furthermore, there are numerous other applications such as autonomous driving, security monitor videos, environmental monitoring…etc, which we believe represents the direction in which the world is heading and is closely related to the core concepts of our project.