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Image Captioning Project

**Reflection**

Primary Learnings:

* Experience with using tensorflow and keras
* Experience with installing and troubleshooting packages related to machine learning and data science
* Experience working with image-based datasets
* Working with Deep Learning

Result Discussion:

Model accuracy and caption generations aren't to the point that I would like. I think the most beneficial step to improve model accuracy and generalizability would be to expand the dataset as the 8000ish images aren't really enough to develop a well-generalized model. Furthermore, I think that 20 epochs aren't enough training though more testing would certainly show if it would be an effective approach.

References and resources:

<https://www.kaggle.com/datasets/adityajn105/flickr8k/>

<https://www.kaggle.com/code/quadeer15sh/flickr8k-image-captioning-using-cnns-lstms>

<https://www.geeksforgeeks.org/image-caption-generator-using-deep-learning-on-flickr8k-dataset/>

<https://www.math.ucla.edu/~minchen/doc/ImgCapGen.pdf>

<https://www.youtube.com/watch?v=jztwpsIzEGc>

https://www.geeksforgeeks.org/python-image-classification-using-keras/#