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CPSC 8430 – Deep Learning
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Homework 2 Report

This report is meant to discuss the accuracy of my sequence-to-sequence model for homework 2. Unfortunately, I am unable to provide an overview of my model's performance as I could not manage to properly implement the model needed for this assignment.

There were two main portions of the project that caused me problems. The first was the presence of an encoder. It was my understanding that the class was told approximately 1-2 weeks into the project that we did not need to implement an encoder, only the decoder. As a result, I spent two weeks trying to understand how to pass the video features directly to the decoder, believing that the video features represented the context vector output from an encoder. It was only in the week of the project being due that the TA set me straight in that encoding was required. The second problem pertained to the embedding of captions. The process of encoding captions into vectors, embedding them into a matrix, properly padding the matrix, and passing this to the model was confusing. I struggled to find a resource that explained how to implement this process. In general, every portion of this project was novel to me, and apart from bombarding the TA with questions via email, I did not know where to turn for help in implementation, considering that this type of help is not provided during office hours (which focuses on big picture or theory-based questions).

My poor performance on this project was not a result of starting late. I began the project two days after it was posted and worked on it continuously. Instead, my shortfall is in understanding how to implement the steps shown on the slides of the prompt. The portions of the project I could complete were the creation of a vocabulary using the provided captions, creating the necessary data structures from the provided training and testing data, and writing a seqtoseq model that I believe has the required architecture. However, I could not train, test, or evaluate my decoder for the reasons previously mentioned. My hope was to receive partial credit for the portions of the code I could finish, but I am aware that since the code does not do what was required by the rubric, this will not be much if any.