Project 1

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I. DELIVERABLES

Due to time constraints, underestimating the time it takes to train and my programs crashing on random epochs, I was not able to fully train one model. My task 1 model made it to iteration 98 before crashing. The error.log was filled with lines of "PTBTokenizer tokenized x tokens at x tokens per second." without indication what that meant or why it happened. I could not find any resources for what to do about it. For task 1 it happened on iteration 47 and then again on 98. The best score it had achieved up until that point was a METEOR score of 23.5 and the latest BLEU-4 score was 23.07. But at the end of the 97th epoch, the current METEOR score was only 20.9, so the goal of 25 in METEOR score seemed unlikely.

All models were trained using the values listed in table I, except for task 4 which only had 30 epochs.

Parameter	Value
Optimizer	adamW
LearningRate	0.001
Weight decay	0.00001
Number of cnn features	2048
Embedding size	300
Vocabulary size	10000
Truncated backprop length	25
Hidden state sizes	512
Num rnn layers	2
Scheduler milestones	[75,90]
Scheduler factor	0.2
Batch size	128
Epochs	99

I hope I am able to try this project again so that I have time to fully train all the models. Unfortunately this week and the week before have been high stress, full of university work and work work. I do think all my models are working correctly, so it shouldnt be much work to get a full report for next time. Even though my other models didnt finish training, I included some of the last out.log files for each of them hoping it will make help me get another shot.

To run any task in particular, place the .py files in the studen_version folder and run the corresponding Exercise_Train_an_image_captioning_network_test.py file (with task 1 having no number next to it).