

Week 9

11-777

Due: Thursday, Oct 26, by 4:30 pm

Instructions

A small yet significant part of the course is answering a few questions based on a paper you just read. By design, some of these questions are open-ended and the purpose is to start a thinking process. Some of those questions may already have been answered in recent literature (or in the given paper itself). We encourage you to, both, come up with your own ideas and survey recent papers before answering these questions.

A few key points to take care of:

- Answer **two out of the three questions** (you are welcome to answer all 3), unless stated otherwise.
- A lot of questions ask you to suggest changes or make alterations. It would be nice to support it with logical / mathematical arguments. Cite all sources used in the process of coming up with your answer. Figures and equations, if they support your arguments will be appreciated.

Questions

Generating Images from Captions with Attention

1. How does the image model network presented in this paper extend the DRAW network? Describe its specific characteristics. What are the other main contributions of this paper?
2. "Compared to reporting classification accuracies in discriminative models, the measures defining generative models are intractable most of the times and might not correctly define the real quality of the model." What quantitative methods can be used to evaluate generative models such as the one described in the paper?
3. What advantages does the model gain because of attentional mechanisms? Mention some interesting observations that have been made about the attention process in the paper.