Week 12
11-777

Due: Thursday, Nov 16, 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 four questions (you are welcome to answer all 4), 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

Memory Fusion Network

1. How is the solution proposed for multi-view learning in this paper different from the prior work in this area? Explain w.r.t. each category (view concatenation in sequential learning, multi-view sequence learning, and multi-view learning by sequence representation learning).

2. Briefly describe the different components in the Memory Fusion Network. What is the output of the MFN, and how is it used for different downstream tasks?

3. How do the conducted experiments measure the importance of memory in the network? What do the results indicate?

4. Explain the results obtained by increasing the DMAN input region size to cover more steps. Why do you think it saturates at q = 2?