

# 15-400 Milestone 1

## 15-400, Spring 2019

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### 1 Milestone Summary

For this current milestone, I feel that we are somewhat behind due to my volatile schedule of the first two weeks, changing and swapping courses. With this in mind, I have not been able to meet with my professor to discuss the current progress that has been made with the project. However, with an upcoming meeting near the end of this week I feel and completing a bit more work for the next milestone, this setback shouldn't cause too much of a setback.

### 2 Current Progress

Since the last milestone, I have been able to read a good amount of literature that helps determine what is possible vs impossible for this project. In particular, one of the biggest reasons why optical illusions are relatively hard to study from an algorithmic/computational point of view is due to the fact that the way we process images in an algorithm (pixel values) does not generally translate well to the empirical explanation of these phenomena.

As a result, PredNet, which was looked at in the last milestone will be our focus as the network is designed to predict movement of a still image, which has many similarities to optical illusions. We have begun to look at PredNet in more detail, begin testing the network looking into LSTMs and Attentional modules to potentially provide better results and see the results when illusions are used as input.

### 3 Changes and conclusion

Overall, I think that the current progress is a little on the light side, primarily due to lack of being able to meet in the last two weeks. I do however think we should be able to do a substantial amount before the next milestone since most of the background reading has been completed. The direction of PredNet along with testing LSTMs will put us back on track and so I don't feel revisions to be necessary for the next milestones. On that note however, I think any more delays and revisions to the rest of the goals is most likely necessary.

Resources required at the moment have not changed since the writing of the research proposal