**[CS-8395 Spring 2020]**

**Deep Learning in Medical Image Computing**

**\* Please print and bring it before each class**

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Paper Title: Deep learning

Please summarize the paper using your own words: (<100 words)

The paper presents a summary of the field of deep learning. The authors begin by emphasizing that deep learning is different from traditional forms of machine learning in that feature engineering is not required for deep learning; instead, the network is able to learn the features. The authors then talk about how convolutional neural networks have been popular in recent years because of the fact that they focus on similarities within local structure. The authors then end with a summary of recurrent neural networks, which store the current state of the computation and use that as one of the inputs for the next time step.

Question 1 for the paper:

Why do the authors think that deep learning will be able to avoid the kind of “winter” that neural networks suffered in the past when their popularity died down after an initial period of hype?

Question 2 for the paper:

Why do the authors think that deep learning will be useful for unsupervised learning as for supervised learning; what if another paradigm would be much more effective for unsupervised learning?