

## **Additional Resources for Session 9**

The following are a few Reference Material Links that will help you get more idea about the topics that are going to be discussed:

### **CNNs**

<https://www.coursera.org/learn/deep-learning-business/lecture/6t88U/5-1-deep-learning-with-cn n-convolutional-neural-network>

<https://cambridgespark.com/content/tutorials/convolutional-neural-networks-with-keras/index.html>

<https://towardsdatascience.com/applied-deep-learning-part-4-convolutional-neural-networks-584bc134c1e2>

### **RNNs**

<http://www.wildml.com/2015/09/recurrent-neural-networks-tutorial-part-1-introduction-to-rnns/>

<https://www.analyticsvidhya.com/blog/2017/12/introduction-to-recurrent-neural-networks/>

<https://machinelearningmastery.com/rnn-unrolling/>

<https://towardsdatascience.com/introduction-to-recurrent-neural-network-27202c3945f3>

### **Vanishing Gradients**

[https://en.wikipedia.org/wiki/Vanishing\\_gradient\\_problem](https://en.wikipedia.org/wiki/Vanishing_gradient_problem)

<https://medium.com/@anishsingh20/the-vanishing-gradient-problem-48ae7f501257>

[https://stats.stackexchange.com/questions/130596/how-do-cnns-avoid-the-vanishing-gradient-problem?utm\\_medium=organic&utm\\_source=google\\_rich\\_qa&utm\\_campaign=google\\_rich\\_qa](https://stats.stackexchange.com/questions/130596/how-do-cnns-avoid-the-vanishing-gradient-problem?utm_medium=organic&utm_source=google_rich_qa&utm_campaign=google_rich_qa)

### **LSTM node**

<http://adventuresinmachinelearning.com/recurrent-neural-networks-lstm-tutorial-tensorflow/>

<https://towardsdatascience.com/recurrent-neural-networks-and-lstm-4b601dd822a5>

<http://colah.github.io/posts/2015-08-Understanding-LSTMs/>

<https://deeplearning4j.org/lstm.html>