WEEK 3

INTRODUCTION

The concepts of Neural Networks will still be a little fuzzy if you have just completed the week 2 portions. To better realize the ideas of neural networks, this week we look at various ways we can make a neural network ' s weights converge to the ideal and the best once.

Then we will try to look at the basics of Convolutional Neural Networks.

HYPERPARAMETERS

These are the elements we define of the neural network this includes the number of layers, number of neurons, learning rate, etc. One of many questions you will be wandering will be how do I choose these parameters. I hope the following resources help you understand these questions:

https://towardsdatascience.com/demystifying-hyper-parameter-tuning-acb83af0258f

OPTIMIZERS

These are few techniques which is helps escape problems caused while in backpropagating, having an overview of these techniques are required. Here are few useful resources:

http://ruder.io/optimizing-gradient-descent/ very detailed article you may go through till topic momentum, then refer RMSProp, ADAM that will be suffice.

Introduction To Convolutional Neural Networks

Let us enter into the exciting world of images, here we will cover the basics of how a computer can differentiate between cat and dog. These resources are the best you can refer to understand CNNs:

http://cs231n.github.io/convolutional-networks/

https://skymind.ai/wiki/convolutional-network

Search for good videos on this topic and share it in the group.

PRACTICAL

Introduction to Neural Network Notebook:

https://drive.google.com/open?id=1amKxLbIpq4GvsNNnU3NOy43rizDw3b95