Deep Learning

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Module – 4.9
Lecture – 04
Derivative of the Activation Function

Let us see so, now, we have that activation function and we were taking the derivative of the pre activation oh sorry of the activation with respect to pre activation. And I just pushed it under the rug by saying ok. We will write it as g dash right. So, I need to show you what g dash is ok.

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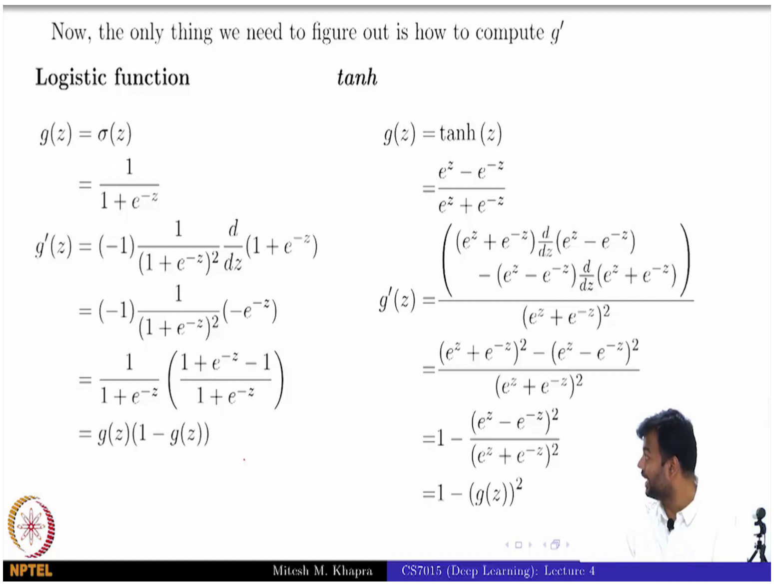

What how to compute g dash? So, this is suppose g is the logistic function ok, so that means, what is z actually? It is one of those as right. So, this is the activation that you are going to feed it right and then you are taking the element wise sorry z is actually the pre activation that you feed it and then g is the activation function. So, I will do element wise activation function. Now what is the derivative of this? Ok, so, I will just I will not do this derivation.

It is there and you end up with a very neat formula which is g of z into 1 minus g of z ok. So, now, that bit is also taken care of is there any more spoon feeding that I can do? Ok, you are ready for the assignment now, ok. I will do one more bit. You will also have used a tan h function ok. So, this is the derivative of the tan h function. It again boils down to a very neat formula which is 1 minus g of zd whole square ok. So, we will end this lecture.