Deeplearning-for-beginners

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1 Deeplearning for beginners

Hi, with this notebook I will getting you started with Deeplearning in Python3. We will build our own neural net from scratch and learn how to use tflearn. Also we want to cover diffrent types of neural nets and more. The structure you can find at the end of the file. Prequisites: 1. Python3 knowledge (go on youtube and look for a python3 getting started or a youtuber called sendtex, he has got a starter series on his channel) 2. Algebra knowledge (if you want to learn or refresh it I reccomend you the Khan academy; https://www.khanacademy.org/)

If you find spelling/writing mistakes please report them to me so I can fix them.
Note: it's possible that these will not work when you read it because of new updates!

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2 Usage of machine/deeplearning

So as you may know machine learning is implemented in our everyday life, so you have propably used it at least once. You use it in photo editing, in apps(Snapchat's filters for example, that makes you look like a dog or whatever else), in your Google search (the recommendations that google is showing you) or in advertisment (like Amazon:"The people who bought this product also bought..."). So as you see Machine Learning is everywere and why don't use it aswell. Or in image classification (this is a dog and this and this not...) and more.

Before we continue I am not a biologist and it's possible that there is something wrong, so if you find something please inform me!

3 The general idea

So the examples above sounds nice but how do they work... Let's find it out: So as we humans often do, we looked around in nature and find a powerfull "device" to work with data. It's called "Brain"; so the brain is learning by exprience. In detail our brain is working with neurons (so were do you think the name: "Neural Network" is from?), a neuron is a nerv that taking an input and returning an output if a certain point is reached (the neuron is "fireing"). The neuron sends these output to another neurons with a nerve called "synapse" if a neuron is using one synapes more then others these will became stronger.(You have to know that not only a single neuron is for one task responsible, so they are working together) If these getting stronger you can better do things like distinguish cats and dogs or drive a car. An artifical neural network is doning the same with math. A synapse can in- or decrease an incomming signal so sometimes if the input signal is to