

Fundamentals of Neural Networks

In the abstract and introduction parts, the writer has managed to create a clear image in readers' mind on what neural networks are and clarified most significant terms on the subject. The only thing which can be added to the introduction is the timeline of neural networks and the historical progress of them, because it might help readers on understanding how the whole concept has evolved to its current situation.

In the second section, the perceptron concept is introduced very well and the explanations are supported with well-formed figures and formulations. There are just lacks on some basic terms in this part which have no big preventive influence on understanding.

In the third section, there are sufficient explanations on what feedforward neural networks are and how they are related to perceptrons which were introduced in the previous section. The connections and information/computation flow between layers might be included in the network architecture.

The training process of feedforward neural networks is very good formulated and supported with mathematical explanations and formulations in an instructive way. The problem with this section is that the transition from the introduction of the section to the methods is a bit unclear, so a few bridging sentences/expressions might be added to the end of the introduction. Another small thing is that there is no broad comparison or exemplification on what each of these methods differs from each other and what their main advantages/disadvantages are.

Recurrent neural networks have been explained as brief as possible which is quite enough considering the fundamentals of the subject and the natural language processing example supports the brief definition really well. A few words on how convolutional neural networks differ from basic feedforward neural networks and why they need far less parameters might be really helpful to get the concept clearly.

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