

Exploring the relationship between weights and accuracy of neural networks

In neural networks, some weights are not important to the accuracy of neural networks, indicating that there exists redundancy in neural networks. This redundancy can be used to adjust the shape of weight distributions of neural networks. This adjustment of weight distributions can be achieved by adding penalties in the cost function of neural networks during software training. For example, Figure 1 shows an adjustment of weight distribution by adding penalties during software training.

In this bachelor thesis, the tradeoff between the accuracy of neural networks and the shape of weight distributions will be explored. In addition, how the pruning affects this tradeoff will also be explored.

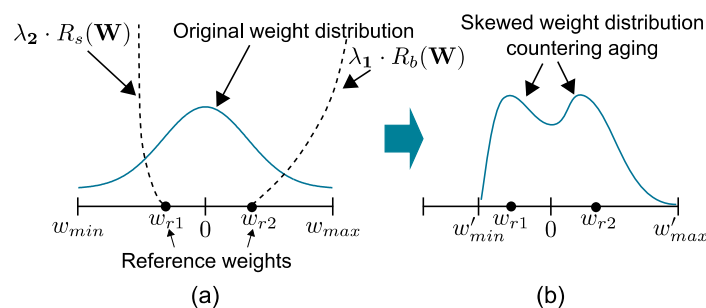


Figure 1: (a) The weight distribution after traditional software training. (b) The weight distribution after adjustment.

If you are interested in this topic for bachelor thesis, please contact:
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