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A Corrective View of Neural Networks: Representation, Memorization and Learning

We develop a corrective mechanism for neural network approximation: the total available non-linear units are divided into multiple groups and the first group approximates the function under consideration, the second group approximates the error in approximation produced by the first group and corrects it, the third group approximates the error produced by the first and second groups together and so on. We discuss various new representation and learning results which can be shown using this technique.