Creating Digital networks using Artificial Neural Networks

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Abstract

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1. Introduction

Neural networks have been applied in different fields and out performed most of the manually prepared algorithms and other models of machine learning. they have seen a huge rise in global adoption recently as the data and resources to train and deploy massive neural networks became much simpler and easier with the advent of internet and hobbyist communities. Now that we know the power of neural networks and deep learning, performance is the only issue that is holding them back. Lot of research has been done to implement neural networks in an efficient way at the electronic level.

This is paper explores the possibility of recreating digital components like AND gate, OR gate etc. and also Digital Adders, Subtractors. The main motivation behind this paper is to recreate digital components by using a node based approach, which was complemented by neural networks. The idea is to train neural networks on the digital data and use the computed network as analog circuitry. Thereby, increasing speed of digital components

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