AK Tech Training and Placements

Transform Dreams into Reality

A Reversible-Logic Based Architecture for Artificial Neural Network

In this project, a novel design of Artificial Neural Network (ANN) using reversible logic gates is implemented. ANN can be described as Scalar weight matrix multiplication with input scalars, Sum of weighted input scalars, (iii) Scalar-to-scalar non-linearity calculation. High power consumption in ANN, is a crucial issue that can cause over reliability degradation, chip damage. Hence the weighted sums and multiplication are performed with reversible logic for better power reduction. These modules have been implemented using Verilog HDL and the results are obtained using Xilinx ISE 14.7.

Domain: Tools / XilInx
Technology: VLSI