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(54) Title: DRIFT REGULARIZATION TO COUNTERACT VARIATION IN DRIFT COEFFICIENTS FOR ANALOG ACCELERATORS

(57) Abstract: A drift regularization is provided to counteract variation in drift coefficients in analog neural networks. A method of training an artificial neural network is illustrated. A plurality of weights is randomly initialized. Each of the plurality of weights corresponds to a synapse of an artificial neural network. At least one array of inputs is inputted to the artificial neural network. At least one array of outputs is determined by the artificial neural network based on the at least one array of inputs and the plurality of weights. The at least one array of outputs is compared to ground truth data to determine a first loss. A second loss is determined by adding a drift regularization to the first loss. The drift regularization is positively correlated to variance of the at least one array of outputs. The plurality of weights is updated based on the second loss by backpropagation.

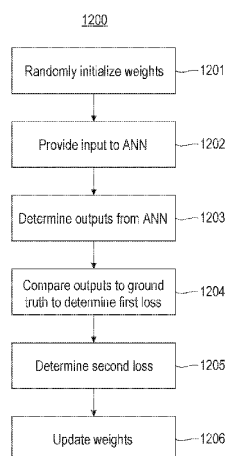


FIG. 12

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