

A View of Artificial Neural Network

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Abstract: In this paper, An Artificial Neural Network or ANN, its various characteristics and business applications. In this paper also show that “what are neural networks” and “Why they are so important in today’s Artificial intelligence?” Because various advances have been made in developing intelligent system, some inspired by biological neural networks. ANN provides a very exciting alternatives and other application which can play important role in today’s computer science field. There are some Limitations also which are mentioned

Keywords:-Artificial Neural Network, ANN, Feedback Network, Feed Forward Network, Artificial Neuron and Applications.

I. INTRODUCTION

The concept of ANN is basically introduced from the subject of biology where neural network plays an important and key role in human body. In human body work is done with the help of neural network. Neural Network is just a web of inter connected neurons which are millions and millions in number. With the help of these interconnected neurons all the parallel processing is done in human body and the human body is the best example of Parallel Processing

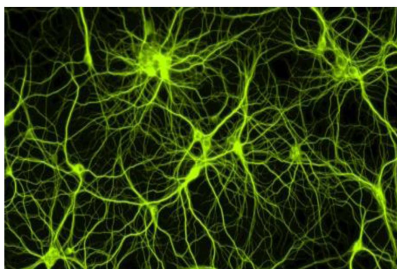


Fig 1 Neural Network in Human Body [9]

A neuron is a special biological cell that process information from one neuron to another neuron with the help of some electrical and chemical change. It is composed of a cell body or soma and two types of out reaching tree like branches: the axon and the dendrites. The cell body has a nucleus that contains information about hereditary traits and Plasma that holds the molecular equipments or producing material needed by the neurons [4]. The whole process of receiving and sending signals is

one in particular manner like a neuron receives signals from other neuron through dendrites. The Neuron send signals at spikes of electrical activity through a long thin stand known as an axon and an axon splits this signals through synapse and send it to the other neurons [7].

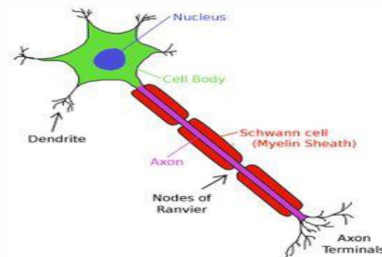


Fig 2 Human Neurons [4]

II. ARTIFICIAL NEURAL NETWORK

An Artificial Neuron is basically an engineering approach of biological neuron. It has device with many inputs and one output. ANN is consisting of large number of simple processing elements that are interconnected with each other and layered also. [6, 7]

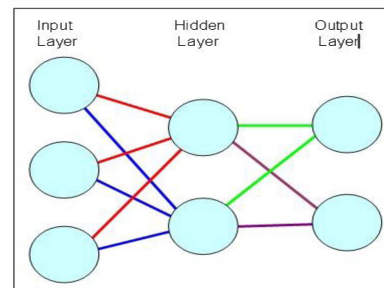


Fig 3 Artificial Neuron [7]

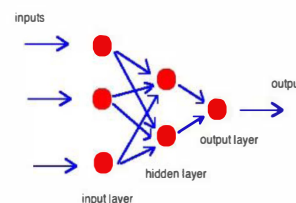


Fig 4 Multilayered ANN [2]

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