

Impact of Neuron with Two Dendrites in Heart Behavior

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Abstract : Neurons are the fundamental units of the brain and the nervous system. The variable structure model of neurons consists of a system of differential equations with various parameters. By optimizing these parameters, we can create a unique model that describes the dynamic behavior of a single neuron. We introduce a neural network based on neurons with multiple dendrites employing an activation function with a variable structure. In this paper, we present a model for heart behavior. Finally, we showcase our successful simulation of the heart's ECG diagram using our Variable Structure Neuron Model (VSMN). This result could provide valuable insights into cardiology.

Keywords : neural networks, neuron, dendrites, heart behavior, ECG

Conference Title : ICCBN 2023 : International Conference on Cognitive and Behavioral Neuroscience

Conference Location : Jeddah, Saudi Arabia

Conference Dates : November 20-21, 2023