

عنوان مقاله:

Neuron Mathematical Model Representation of Neural Tensor Network for RDF Knowledge Base Completion

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خلاصه مقاله:

In this paper, a state-of-the-art neuron mathematical model of neural tensor network (NTN) is proposed to RDF knowledge base completion problem. One of the difficulties with the parameter of the network is that representation of its neuron mathematical model is not possible. For this reason, the NTN is modeled as a multi-layer perceptron (MLP) network and the tensor parameter can be distributed into the new network neurons. Moreover, it is suggested that the inputs can be converted into one vector rather than the inputs of NTN are two correlated vectors at the same time. The results approve that the NTN does not indeed represent a new neural network and the implementation results easily confirm it can be considered as another representation of the MLP network. So, the first idea is representation of a neuron based mathematical model for the NTN through the ordinary and yet well-defined neural network concepts and next contribution will be equivalency proof of the two NTN and suggested MLP networks.

کلمات کلیدی:

Semantic Web, Knowledgebase Completion, Neural Tensor Network, Multi-Layer Perceptron Network, RDF Data Model

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