

## A framework for intelligent multi agent system based neural network classification model.

### ABSTRACT

Intelligent multi agent systems have great potentials to use in different purposes and research areas. One of the important issues to apply intelligent multi agent systems in real world and virtual environment is to develop a framework that support machine learning model to reflect the whole complexity of the real world. In this paper, we proposed a framework of intelligent agent based neural network classification model to solve the problem of gap between two applicable flows of intelligent multi agent technology and learning model from real environment. We consider the new Supervised Multi-layers Feed Forward Neural Network (SMFFNN) model as an intelligent classification for learning model in the framework. The framework earns the information from the respective environment and its behavior can be recognized by the weights. Therefore, the SMFFNN model that lies in the framework will give more benefits in finding the suitable information and the real weights from the environment which result for better recognition. The framework is applicable to different domains successfully and for the potential case study, the clinical organization and its domain is considered for the proposed framework.

**Keyword:** Intelligent agents; Multi agent systems; Learning systems; Neural networks; New SMFFNN model; PWLA technique; Intelligent classification; Preprocessing; Pre-training.