

## Cooperative Learning Mechanism in Intelligent Multi-Agent System

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**Abstract :** In this paper, we propose a cooperative learning mechanism in a multi-agent intelligent system. The basic idea is that intelligent agents are capable of collaborating with one another by sharing their knowledge. The agents will start collaboration by providing their knowledge rules to the other agents. This will allow the most important and insightful detection rules produced by the most experienced agent to bubble up for the benefit of the entire agent community. The updated rules will lead to improving the agents' decision performance. To evaluate our approach, we designed a five-agent system and implemented it using JADE and FuzzyJess software packages. The agents will work with each other to make a decision about a suspicious medical case. This system provides quick response rate and the decision is faster than the manual methods. This will save patients life.

**Keywords :** intelligent, multi-agent system, cooperative, fuzzy, learning

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