

## **A Methodology for Knowledge Base Verification Using Fuzzy Petri Nets**

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### **Abstract**

In this paper, we present a methodology for knowledge base verification, where fuzzy production rules in the knowledge base of a rule-based system are modeled by a fuzzy Petri net model (FPN). Based on the fuzzy Petri net model, we develop a set of algorithms for verifying the consistency and completeness of the rules in the knowledge base. The proposed method can detect many potential problems that may exist when setting up a knowledge base or when maintaining a knowledge base in the future.

*Keywords:* Fuzzy Petri Net, Fuzzy Production Rule, Knowledge Base Verification, Rule-Based System.