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## **Crisp to fuzzy ontology conversion in the context of social networks: A new approach**

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### **Abstract**

Fuzzy ontology is a generalization of crisp ontology for modeling uncertain information and has been applied in recent years for supporting different activities of semantic web. However, there are great collections of crisp ontologies developed so far in various domains which are not appropriate for decision making in fuzzy environment. Accordingly, this paper aims at presenting an approach to automatically convert a crisp ontology to fuzzy ontology in the context of social networks. Furthermore, this paper demonstrates that the combination of a learning process of crisp ontology with proposed approach, decreases computational complexity of fuzzy ontology learning due to breaking the task to two optimal steps. Accordingly, the approach allows for an advantageous application of various crisp clustering techniques in fuzzy ontology context.

**Keywords:** fuzzy ontology, automation, social networks, crisp ontology.