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A fuzzy computational model of emotion for cloud based sentiment analysis

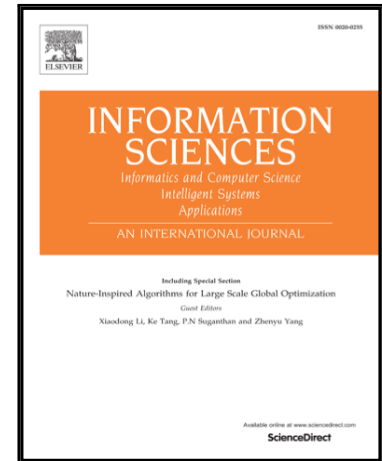
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## A fuzzy computational model of emotion for cloud based sentiment analysis

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### Abstract

This paper presents a novel emotion modeling methodology for incorporating human emotion into intelligent computer systems. The proposed approach includes a method to elicit emotion information from users, a new representation of emotion (AV-AT model) that is modelled using a genetically optimized adaptive Fuzzy Logic technique, and a framework for predicting and tracking user's affective trajectory over time. The fuzzy technique is evaluated in terms of its ability to model affective states in comparison to other existing machine learning approaches. The performance of the proposed affect modeling methodology is tested through the deployment of a personalised learning system, and series of offline and online experiments. A hybrid cloud intelligence infrastructure is used to conduct large-scale experiments to analyze user sentiments and associated emotions, using data from a million Facebook users. A performance analysis of the infrastructure on processing, analyzing, and data storage has been carried out, illustrating its viability for large-scale data processing tasks. A comparison of the proposed emotion categorizing approach with Facebook's sentiment analysis API demonstrates that our approach can achieve comparable

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