Preserving Sensitive Information using Fuzzy C-Means Approach

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Abstract

Privacy is one of the important issues now days as privacy is linked with multidimensional issues; security, sentiment, fear, emotions, threats etc. Protecting privacy is as much as data utilization. In this day and age, data is getting generated largely by various industries. Medical industry is one of them. Providing safe access controls and privacy preservation are the primary concerns in the development of medical applications. Medical data possess sensitive information. According to the author, privacy should be preserved at all levels; storage level, to view level to knowledge discovery level. At view level, very limited approaches are proposed to protect the privacy of the medical data. This paper implements Fuzzy C means approach to protect the sensitive data while viewing blood donor data online. In this paper, a sample blood donor records are extracted to categorize the data into high sensitive data and low sensitive data using fuzzy C means rules. Subsequently, the model teaches the underlying relations to perform categorization based on the input. This paper describes the experiment in view of privacy preserving data mining. The experiment is simulated using MATLAB and shows satisfactory result.
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Index Terms

Computer Science  Fuzzy Systems
Keywords

Sensitive data, Non sensitive data, confidential data, privacy preserving data mining, FCM algorithm.