



Methodology of Privacy Preserving Data Publishing by Data Slicing

M.Alphonsa¹, V.Anandam², D.Baswaraj³

¹Department of CSE, CMR Institute of Technology, Hyderabad, Andhra Pradesh, India
Email:alphonsa.vedangi@yahoo.com

²Professor, Department of CSE, CMR Institute of Technology, Hyderabad, Andhra Pradesh, India
Email:velaanand@yahoo.com

³Associate Professor, Department of CSE, CMR Institute of Technology, Hyderabad, Andhra Pradesh, India
Email: braj5555@yahoo.co.in

Abstract

Many techniques have been designed for privacy preserving and microdata publishing, such as generalization and bucketization. Several works showed that generalization loses some amount of information especially for high dimensional data. So it's not efficient for high dimensional data. In case of Bucketization, it does not prevent membership disclosure and also does not applicable for data that do not have a clear separation between Quasi-identifying attributes and sensitive attributes. In this paper, we presenting an innovative technique called data slicing which partitions the data. An efficient algorithm is developed for computing sliced data that obeys l-diversity requirement. We also show how data slicing is better than generalization and bucketization. Data slicing preserves better utility than generalization and also does not requires clear separation between Quasi-identifying and sensitive attributes. Data slicing is also used to prevent membership disclosure. Experimental results demonstrate the effectiveness of this method.

Keywords: Privacy preserving; Data Security; Data Publishing; Microdata

Full Text: www.ijcsma.com/publications/september2013/V1I305.pdf