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An Online Based Approach for Health Care Using Clustering Algorithm with Map Reduce For Scalable Data

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Abstract: The world is moving on the speed of the internet. With the increase of internet user's in past years has given rise to multiple online things like booking tickets, shopping. Shopping through internet has paved way to order medicines through online. So, this method is one such online communications of patients and doctors. Effective and authenticated communication is the best way for people to use any kind of internet participation. Here we provide a concept of data anonymization were the details of every single user whether it is a patient, doctor or a third-party user is hidden from another person. The third party user can be split into 3 and they are region, age, disease through which the classification can be done. This third-party user can be any of the government organization of any medicines manufacturing company's or an university taking a survey.

Key Terms— Big Data; Cloud Computing; MapReduce; Data Anonymization; Proximity Privacy.

I. INTRODUCTION

CLOUD computing and big data, two disruptive trends at present, pose a significant impact on current IT industry and research communities [1, 2]. Today, a large number of big data applications and services have been deployed or migrated into cloud for data mining, processing or sharing. The salient characteristics of cloud computing such as high scalability and pay-asyou-go fashion make big data cheaply and easily accessible to various organizations through public cloud infrastructure. Data sets in many big data applications often contain personal privacy-sensitive data like electronic health records and financial transaction records. As the analysis of these data sets provides profound insights into a number of key areas of society (e.g., healthcare, medical, government services, e-research), the data sets are often shared or released to third party partners or the public. The privacy-sensitive information can be divulged with less effort by an adversary as the coupling of big data with public cloud environments disables some traditional privacy protection measures in cloud [3, 4]. This can bring considerable economic loss or severe social reputation impairment to data owners. As such, sharing or releasing privacy-sensitive data sets to third-parties in cloud will bring about potential privacy concerns, and therefore requires strong privacy preservation.

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II. CONCLUSIONS

In this paper, local-recoding anonymization for big data in cloud has been investigated from the perspectives of capability of defending proximity privacy breaches, scalability and time-efficiency. We have proposed a proximity privacy model, -dissimilarity, by allowing multiple sensitive attributes and semantic proximity of categorical sensitive values. Since the satisfiability problem of -dissimilarity is NP-hard, the problem of big data local recoding against proximity privacy breaches has been modeled as a proximity-aware clustering problem. We have proposed a scalable two-phase clustering approach based on MapReduce to address the above problem time-efficiently. A series of innovative MapReduce jobs have been developed and coordinated to conduct data-parallel computation. Extensive experiments on realworld data sets have demonstrated that our approach significantly improves the capability of defending proximity attacks, the scalability and the time-efficiency of localrecoding anonymization over existing approaches

REFERENCES

- [1] S. Chaudhuri, "What Next?: A Half-Dozen Data Management Research Goals for Big Data and the Cloud," Proc. 31st Symp. Principles of Database Systems (PODS'12), pp. 1-4, 2012.
- [2] L. Wang, J. Zhan, W. Shi and Y. Liang, "In Cloud, Can Scientific Communities Benefit from the Economies of Scale?," IEEE Trans. Parallel Distrib. Syst., vol. 23, no. 2, pp. 296-303, 2012.
- [3] X. Wu, X. Zhu, G.-Q. Wu and W. Ding, "Data Mining with Big Data," IEEE Trans. Knowl. Data Eng., vol. 26, no. 1, pp. 97-107, 2014.
- [4] X. Zhang, C. Liu, S. Nepal, S. Pandey and J. Chen, "A Privacy Leakage Upper Bound Constraint-Based Approach for CostEffective Privacy Preserving of Intermediate Data Sets in Cloud," IEEE Trans. Parallel Distrib. Syst., vol. 24, no. 6, pp. 1192-1202, 2013.
- [5] B.C.M. Fung, K. Wang, R. Chen and P.S. Yu, "Privacy-Preserving Data Publishing: A Survey of Recent Developments," ACM Comput. Surv., vol. 42, no. 4, pp. 1-53, 2010.
- [6] L. Sweeney, "K-Anonymity: A Model for Protecting Privacy," Int'l J. Uncertain. Fuzz., vol. 10, no. 5, pp. 557-570, 2002.
- [7] A. Machanavajjhala, D. Kifer, J. Gehrke and M. Venkatasubramanian, "L-Diversity: Privacy Beyond kAnonymity," ACM Trans. Knowl. Disc. Data, vol. 1, no. 1, Article No. 3, 2007.
- [8] N. Li, T. Li and S. Venkatasubramanian, "Closeness: A New Privacy Measure for Data Publishing," IEEE Trans. Knowl. Data Eng., vol. 22, no. 7, pp. 943-956, 2010.
- [9] J. Xu, W. Wang, J. Pei, X. Wang, B. Shi and A.W.C. Fu, "UtilityBased Anonymization Using Local Recoding," Proc. 12th ACM SIGKDD Int'l Conf. Knowledge Discovery and Data (KDD'06), pp. 785-790, 2006
- [10] K. LeFevre, D.J. DeWitt and R. Ramakrishnan, "WorkloadAware Anonymization Techniques for Large-Scale Datasets," ACM Trans. Database Syst., vol. 33, no.3, pp.1-47, 2008.
- [11] G. Aggarwal, R. Panigrahy, T. Feder, D. Thomas, K. Kenthapadi, S. Khuller and A. Zhu, "Achieving Anonymity Via Clustering," ACM Trans. Algorithms, vol. 6, no. 3, Article No. 49, 2010.
- [12] T. Wang, S. Meng, B. Bamba, L. Liu and C. Pu, "A General Proximity Privacy Principle," Proc. IEEE 25th Int'l Conf. Data Engineering (ICDE'09), pp. 1279-1282, 2009.
- [13] T. Iwuchukwu and J.F. Naughton, "K-Anonymization as Spatial Indexing: Toward Scalable and Incremental Anonymization," Proc. 33rd Int'l Conf. Very Large Data Bases (VLDB'07), pp. 746-757, 2007.
- [14] X. Zhang, L.T. Yang, C. Liu and J. Chen, "A Scalable Two-Phase Top-Down Specialization Approach for Data Anonymization Using Mapreduce on Cloud," IEEE Trans. Parallel Distrib. Syst., vol. 25, no. 2, pp. 363-373, 2014.
- [15] X. Zhang, C. Liu, S. Nepal, C. Yang, W. Dou and J. Chen, "A Hybrid Approach for Scalable Sub-Tree Anonymization over Big Data Using Mapreduce on Cloud," J. Comput. Syst. Sci., vol. 80,no. 5, pp. 1008-1020, 2014.



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