SECURE FUZZY KNN QUERY SERVICES IN THE CLOUD WITH RASP DATA PERTURBATION

M.Seralathan [1], K.K.Ezhilarasan [2]

[1] PG Scholar, Department of Computer Science and Engineering,
Surya Group of Institution ,Vikiravandi.
[2] Assistant Professor, Department of Computer Science and Engineering,
Surya Group of Institution, Vikiravandi

Abstract—With the wide deployment of public cloud computing infrastructures, using clouds to host data query services has become an appealing solution for the advantages on scalability and cost-saving. However, some data might be sensitive that the data owner does not want to move to the cloud unless the data confidentiality and query privacy are guaranteed. On the other hand, a secured query service should still provide efficient query processing and significantly reduce the in-house workload to fully realize the benefits of cloud computing. We propose the RASP data perturbation method to provide secure and efficient range query and kNN query services for protected data in the cloud. The RASP data perturbation method combines order preserving encryption, dimensionality expansion, random noise injection, and random projection, to provide strong resilience to attacks on the perturbed data and queries. It also preserves multidimensional ranges, which allows existing indexing techniques to be applied to speedup range query processing. The kNN-R algorithm is designed to work with the RASP range query algorithm to process the kNN queries. We have carefully analyzed the attacks on data and queries under a precisely defined threat model and realistic security assumptions. Extensive experiments have been conducted to show the advantages of this approach on efficiency and security.In this papper feature work kNN replaced into Fuzzy kNN algorithm.