

RESEARCH-ARTICLE

# Privacy Preservation of e-Governance Data Using Local Beam Search

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## Abstract

E-governance is mandated to extend various digital services to the citizens in a transparent and easy-to-access manner. This requires an enormous amount of data acquisition, analysis, and processing. Normally, such databases contain references to private information of different stakeholders. It is the responsibility of the government to protect the data against privacy disclosure which can be maneuvered through direct or indirect inference by linking different databases. Though governments have adopted policies to control privacy but still there are technical issues and even the data



privacy of data through k-anonymity one must ensure minimum information loss without hampering the utility of data. Towards this end, we analyze the efficiency of two existing greedy heuristic based techniques, viz., Datafly and Improved Greedy heuristic and we propose two Local Beam Search based algorithms: Sequential Local Beam Search (SLBS) and Binary search based Sequential Local Beam Search (BSLBS). A comparative analysis of the algorithms is done with the help of Information Loss metric Info.Loss. It is observed that BSLBS outperforms the existing greedy based heuristic methods.

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## Index Terms

Privacy Preservation of e-Governance Data Using Local Beam Search



Security and privacy



Security services



Pseudonymity, anonymity and untraceability

## Recommendations

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dg.o '19: Proceedings of the 20th Annual International Conference on Digital Government Research

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