









Clustering

Efficient k-Anonymization Using Clustering Techniques^{*}

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Abstract. k-anonymization techniques have been the focus of intense research in the last few years. An important requirement for such techniques is to ensure anonymization of data while at the same time min-

Solid Theoretical Foundation

Differential Privacy for Deep and Federated Learning: A Survey

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ABSTRACT Users' privacy is vulnerable at all stages of the deep learning process. Sensitive information of users may be disclosed during data collection, during training, or even after releasing the trained learning model. Differential privacy (DP) is one of the main approaches proven to ensure strong privacy protection in data analysis. DP protects the users' privacy by adding noise to the original dataset or the learning parameters.

Anonymization

Deep Learning with Differential Privacy

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ABSTRACT

Machine learning techniques based on neural networks are achieving remarkable results in a wide variety of domains. Often, the training of models requires large, representative datasets, which may be crowdsourced and contain sensitive information. The models should not expose private information in these datasets. Addressing this goal, we develop new algorithmic techniques for learning and a refined analysis of

- We demonstrate that, by tracking detailed information (higher moments) of the privacy loss, we can obtain much tighter estimates on the overall privacy loss, both asymptotically and empirically.
- We improve the computational efficiency of differentially private training by introducing new techniques.
 These techniques include efficient algorithms for computing gradients for individual training examples, sub-

Dynamic Tech Stack

