

Title (en)

METHOD AND APPARATUS FOR UTILITY-AWARE PRIVACY PRESERVING MAPPING AGAINST INFERENCE ATTACKS

Title (de)

VERFAHREN UND VORRICHTUNG FÜR NUTZENBEWUSSTES DATENSCHUTZBEWAHRENDES MAPPING GEGEN INFERENZANGRIFFE

Title (fr)

PROCÉDÉ ET APPAREIL PERMETTANT UN MAPPAGE UTILITAIRE PRÉSERVANT LA VIE PRIVÉE CONTRE LES ATTAQUES D'INTERFÉRENCE

Publication

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Application

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Abstract (en)

[origin: WO2015026384A1] The present principles focus on the privacy-utility tradeoff encountered by a user who wishes to release some public data (denoted by X) to an analyst, that is correlated with his private data (denoted by S), in the hope of getting some utility. The public data is distorted before its release according to a probabilistic privacy preserving mapping mechanism, which limits information leakage under utility constraints. In particular, this probabilistic privacy mechanism is modeled as a conditional distribution, $P_{\cdot}(Y|X)$, where Y is the actual released data to the analyst. The present principles design utility-aware privacy preserving mapping mechanisms against inference attacks, when only partial, or no, statistical knowledge of the prior distribution, $P_{\cdot}(S,X)$, is available. Specifically, using maximal correlation techniques, the present principles provide a separability result on the information leakage that leads to the design of the privacy preserving mapping.

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See references of WO 2015026384A1

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