(54) Title of the invention : PRIVACY-PRESERVING ASSOCIATION RULE MINING ALGORITHM FOR ENCRYPTED CLOUD DATA

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(57) Abstract :
This invention presents a privacy-preserving association rule mining algorithm designed to protect user personal information when utilizing encrypted data stored in the cloud. Traditional association rule mining methods require data to be decrypted, posing significant privacy risks. The proposed algorithm allows for the extraction of valuable patterns and associations directly from encrypted data, ensuring that sensitive information remains encrypted throughout the process. This innovation leverages homomorphic encryption techniques to enable secure computations on encrypted data, thereby facilitating the generation of association rules without compromising user privacy. The algorithm is applicable for various data mining tasks, including market basket analysis and recommendation systems, while ensuring compliance with data protection regulations in cloud environments. Accompanied Drawing [FIGS. 1-2]

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