

Propose some solutions for distributed data mining ensuring privacy.

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Abstract: This study proposes privacy-preserving distributed data mining solutions in the context of the data explosion. The main objective is to optimize the efficiency of knowledge analysis without directly sharing raw data between units. The approach focuses on applying Secure Multi-Party Computation (SMPC) techniques combined with differential privacy to protect sensitive attributes. The expected outcome is to build a stable system architecture framework that supports large-scale collaborative data analysis while strictly complying with legal regulations. The topic holds significant practical importance, helping to resolve the conflict between the need for information exploitation and privacy rights.

Keywords: distributed data mining, privacy security, secure multi-party computation, differential privacy, information security