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**ENABLING PERSONALIZED SEARCH OVER ENCRYPTED OUTSOURCED DATA WITH EFFICIENCY IMPROVEMENT**

**ABSTRACT**

In cloud computing, searchable encryption scheme over outsourced data is a hot research field. However, most existing works on encrypted search over outsourced cloud data follow the model of “one size fits all” and ignore personalized search intention. Moreover, most of them support only exact keyword search, which greatly affects data usability and user experience. So how to design a searchable encryption scheme that supports personalized search and improves user search experience remains a very challenging task. In this paper, for the first time, we study and solve the problem of personalized multi-keyword ranked search over encrypted data (PRSE) while preserving privacy in cloud computing. With the help of semantic ontology WordNet, we build a user interest model for individual user by analyzing the user's search history, and adopt a scoring mechanism to express user interest smartly. To address the limitations of the model of “one size fit all” and keyword exact search, we propose two PRSE schemes for different search intentions. Extensive experiments on real-world dataset validate our analysis and show that our proposed solution is very efficient and effective.