

CONCLUSION

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We propose a secure verifiable semantic searching scheme that treats matching between queries and documents as a word transportation optimal matching task. Therefore, we investigate the fundamental theorems of linear programming (LP) to design the word transportation (WT) problem and a result verification mechanism. We formulate the WT problem to calculate the minimum word transportation cost (MWTC) as the similarity metric between queries and documents, and further propose a secure transformation technique to transform WT problems into random LP problems. Therefore, our scheme is simple to deploy in practice as any ready-made optimizer can solve the RLP problems to obtain the encrypted MWTC without learning sensitive information in the WT problems. Meanwhile, we believe that the proposed secure transformation technique can be used to design other privacy-preserving linear programming applications.

Future Enhancement:

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