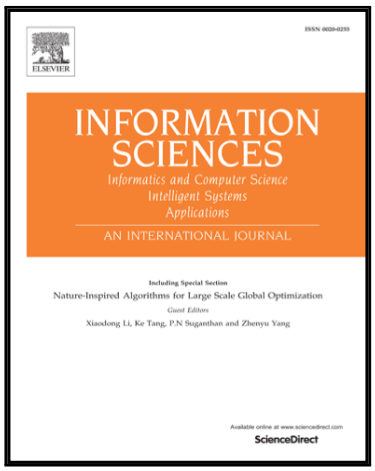

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Version-sensitive mobile App recommendation

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Abstract

Being part and parcel of the daily life for billions of people all over the globe, the domain of mobile Applications (Apps) is the fastest growing sector of mobile market today. Users, however, are frequently overwhelmed by the vast number of released Apps and frequently updated versions. Towards this end, we propose a novel version-sensitive mobile App recommendation framework. It is able to recommend appropriate Apps to right users by jointly exploring the version progression and dual-heterogeneous data. It is helpful for alleviating the data sparsity problem caused by version division. As a byproduct, it can be utilized to solve the in-matrix and out-of-matrix cold-start problems. Considering the progression of versions within the same categories, the performance of our proposed framework can be further improved. It is worth emphasizing that our proposed version progression modeling can work as a plug-in component to be embedded into most of the existing latent factor-based algorithms. To support the online learning, we design an incremental update strategy for the framework to adapt the dynamic data in real-time. Extensive experiments on a real-world dataset have demonstrated the promising performance of our pro-

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