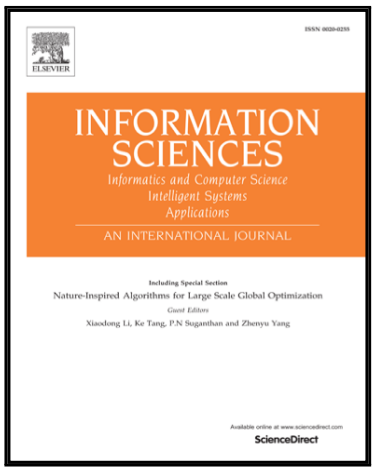

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Abstract

P2P lending is a burgeoning online service that allows individuals to directly borrow money from each other. In these platforms, each loan has a specific duration for raising money from lenders. Following the "all-or-nothing" rule, many loans fail due to insufficient pledges/money in their funding durations. Thus, automatically accessing and finding potential lenders early is crucial for loans. However, this problem has some unique challenges (e.g., the temporality of loan) that are still being explored. To that end, in this paper, we present a holistic study on finding potential lenders in P2P lending. Specifically, we propose a hybrid random walk approach, i.e., $\mathcal{RWH}$, by combining both collaborative filtering and content-based filtering, which can be adapted to loans at any funding progress (e.g., the starting progress). In the content-based filtering of $\mathcal{RWH}$, the model extract dynamic features and adopt bagging to estimate the similarity between loans. Further more, to adapt to the loan temporality, $\mathcal{RWH}$ is dynamically established with temporal loans and lenders via a sliding window. Finally, we systematically evaluate our method on large-scale real-world datasets. The experimental results clearly demonstrate the effectiveness and robustness of our solutions.

Keywords: P2P Lending, Random Walk, Hybrid Recommender System

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