

## Recommender System Based on Mining Graph Databases for Data-Intensive Applications

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**Abstract :** In recent years, many digital documents on the web have been created due to the rapid growth of 'social applications' communities or 'Data-intensive applications'. The evolution of online-based multimedia data poses new challenges in storing and querying large amounts of data for online recommender systems. Graph data models have been shown to be more efficient than relational data models for processing complex data. This paper will explain the key differences between graph and relational databases, their strengths and weaknesses, and why using graph databases is the best technology for building a realtime recommendation system. Also, The paper will discuss several similarity metrics algorithms that can be used to compute a similarity score of pairs of nodes based on their neighbourhoods or their properties. Finally, the paper will discover how NLP strategies offer the premise to improve the accuracy and coverage of realtime recommendations by extracting the information from the stored unstructured knowledge, which makes up the bulk of the world's data to enrich the graph database with this information. As the size and number of data items are increasing rapidly, the proposed system should meet current and future needs.

**Keywords :** graph databases, NLP, recommendation systems, similarity metrics

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