Abstract

We present a system that automatically recommends videos to the three YouTube users: new, light and heavy. We have proposed YouTube video cross network recommendation system; it extracts users auxiliary information on Twitter to address the three typical problems: new user, cold start and sparsity which are occurring in single network recommendation system. At the first stage, the system recommends videos to the new user using cross relevance method, it maps individual user Twitter preferences with video titles on YouTube. Our system has calculated a tweet vocabulary of more than 400 words using Hash Map function. At the second stage, we construct textual and visual similarity between user's data on different OSNs (Online Social Networks), i.e. the system recommends videos to light and heavy users by considering their data on both Twitter and YouTube. Here we map visual based features of user-uploaded videos on YouTube with all other videos in a database also uploaded video titles is used to automatically suggest relevant videos on the basis of text similarity. These methods give benefit to new, light and heavy users who are having limited or fr++++
sequent behavior record on YouTube. Finally, we compared our cross-relevance method with other single network based methods a) the average relevance of videos automatically recommended by our system for new YouTube users is 76% with Top K=5. b) The average relevance of videos automatically recommended by our system for light and heavy YouTube users is 90% with Top K=5.

References

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Index Terms

Computer Science          Networks
Keywords

YouTube video recommendation, Cross-network social relevance, Matrix factorization, User Modeling, Online social network.