

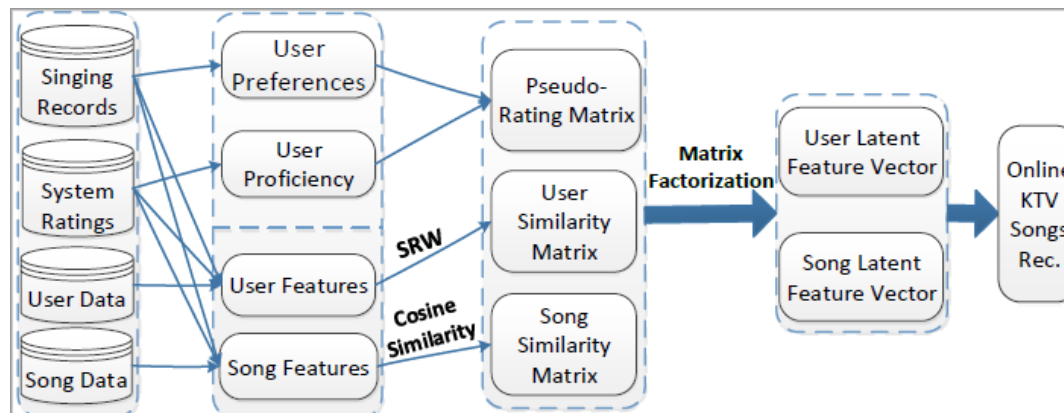
Leveraging proficiency and preference for online Karaoke recommendation

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Frontiers of Computer Science, DOI: [10.1007/s11704-018-7072-6](https://doi.org/10.1007/s11704-018-7072-6)

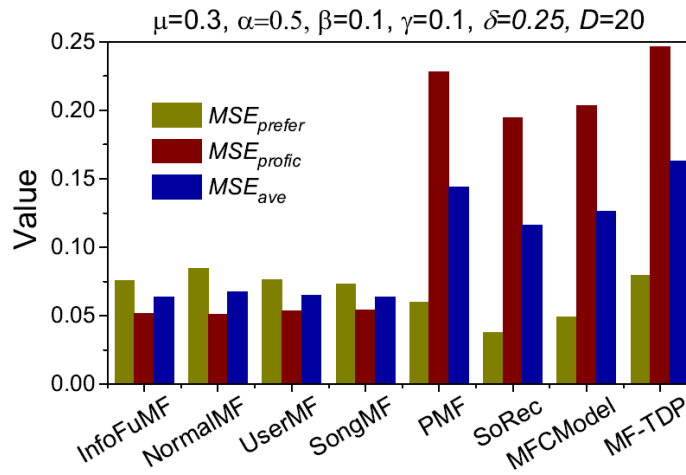
Problems & Ideas

- Problems: Recommending approximate songs to users in online karaoke platforms
 - Users may not achieve high scores evaluated by system on their favorite songs.
 - Sparsity of user-song interaction behavior.
- Ideas: Information-fused recommendation model
 - Define factors and construct pseudo-rating matrix to measure user preferences and proficiency.
 - Utilize supervised random walks and cosine similarity to learn user and song similarity with user and song features respectively.
 - Fuse user similarity, song similarity and pseudo-rating matrix into a unified matrix factorization model.

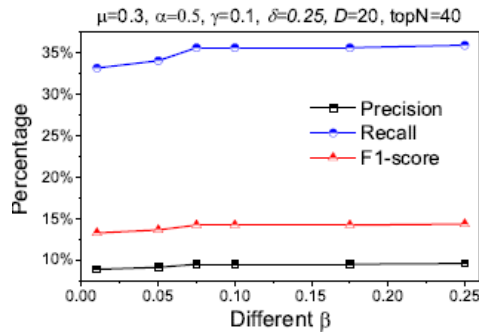


Main Contributions

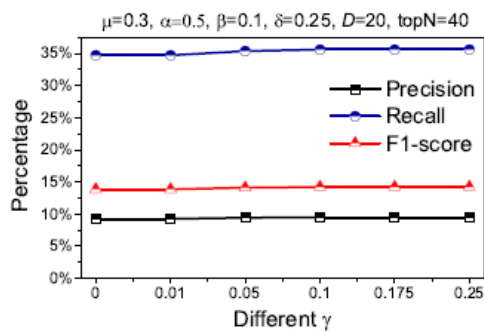
- Rating prediction evaluation



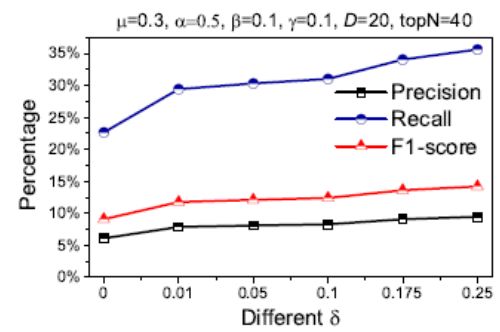
- Performance of precision, recall and F1 with different β, γ, δ



a) Performance on parameter β



b) Performance on parameter γ



c) Performance on parameter δ