Survey of Content-driven Music Recommendation

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Data Mining

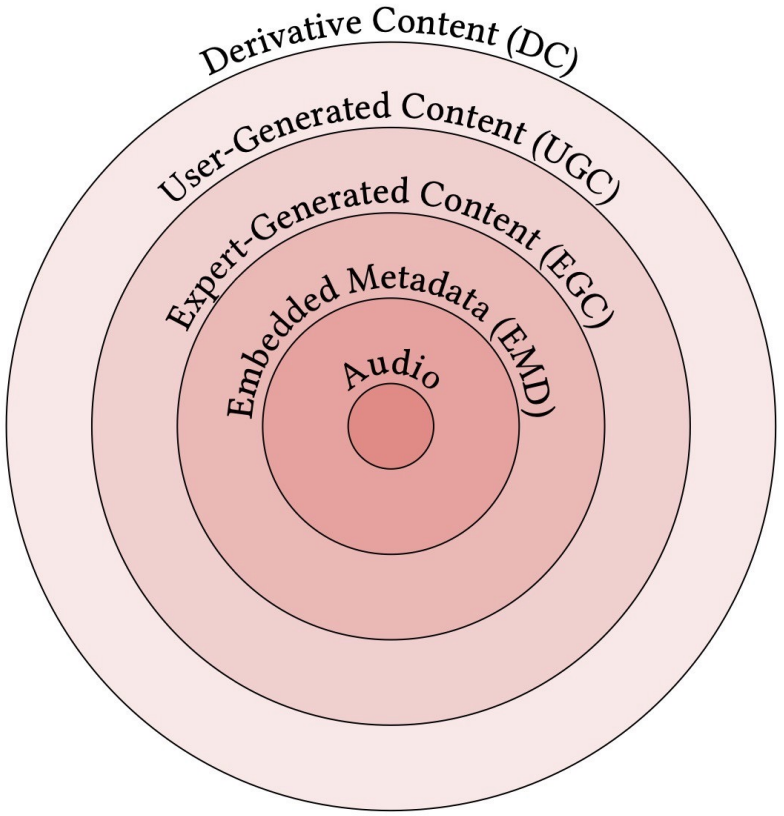
About the survey

- This survey reviews 47 articles on content-driven music recommendation.
- Firstly, it propose an onion model comprising five layers, each of which corresponds to a category of music content
- It then identifies six overarching challenges in the field of recommendation system
- Further, the articles are discussed to shed light on the evolution of content-driven music recommendation strategies.
- Lastly, it provides list of persisting challenges that are waiting to solved in the near future.

Introduction & Motivation

- As music collections offered to the users of streaming services are continuously growing, it is difficult for user to find interesting new content
- To lessen users' burden to identify interesting items (e.g., performer, releases, or single tracks), recommender systems (RSs) have emerged and evolved during the past decade
- At present, the majority of industrial music recommender systems (MRSs) rely on usage patterns.
- More recent RSs, in contrast, tend to use model-based variants of CF, such as matrix factorization (MF

Levels of Content



Main Challenges

- Increasing recommendation diversity and novelty
- Providing transparency and explanations
- Accomplishing context-awareness
- Recommending sequences of music
- Improving scalability and efficiency
- Alleviating cold start

Conclusions

- This survey reviewed a total of 47 articles on content-driven music recommendation and categorized them according to an onion model of music content data
- It identifies six overarching challenges, according to which they organize our survey from a high-level perspective

Open grand challenges

- Acquiring, processing, understanding, and integrating derivative content into MRSs
- Understanding the cognitive processes in human decision making
- Multi-faceted definition of diversity and novelty
- Conversational music recommender systems

Thank You!