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Context-aware music recommendations

Type of Thesis: Master Thesis

Related Research Topic / Project: [Context-aware Applications](#)

Recommender systems have been researched and deployed extensively over the past decade in various application areas, including e-commerce and e-health. Last.fm is a well-known example that generates music recommendations. There are several techniques that are used to generate these recommendations. Three approaches commonly implemented are collaborative filtering, content-based filtering, and combinations of both techniques. The collaborative filtering approach uses information about users to generate music recommendations based on interests of like-minded users. A content-based approach compares characteristics of music, such as rhythm, year and genre, to generate suggestions. Such an approach compares songs and suggests music based on other songs that the user likes.

In recent years, incorporation of contextual information about the user in the recommendation process has attracted major interest. Such contextualization is researched as a paradigm for building intelligent systems that can better predict and anticipate the needs of users, and act more efficiently in response to their behavior. For instance, when a user is reading news, she may wish to listen to different music than during a party or a barbecue with friends. The objective of this thesis is to capture different contextual variables (location, mood, etc.) and to incorporate such variables in the recommendation process.

Background Knowledge:

Good programming skills

Technical challenges:

- You will learn about recommendation techniques and APIs.
- You will learn about contextual modeling techniques.
- You will learn about evaluation techniques for recommender systems.

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Academic Year: 2014-2015