A Content-based System for Music Recommendation and Visualization of User Preferences Working on Semantic Notions

http://musrec.upf.edu/avatar/
http://mtg.upf.edu/project/musicalavatar

- Works on audio examples of tracks preferred by a user (a preference set).
- Collects preference examples from user accounts on popular online music services.
- Alternatively works on preferred music tracks explicitly given by a user.
- Retrieves audio for each track and automatically computes a semantic description of musical preferences based on raw audio information (http://mtg.upf.edu/technologies/essentia).

- Generates a visual representation of the user preferences in form of a cartoony Musical Avatar.
- Provides music recommendations based on a semantic music similarity measure between the preference set and the available universe of music.

For each track extracts:
Genre, Moods, Rhythm, Instrumentation and Musical Culture

In-house collection
search for similar tracks
user model
summarization and mapping to visual elements

Preference Visualization

Data Gathering

User
Last.fm API SoundCloud API

request for user tracks
Artist / Track Names or Audio Files

Audio Tracks
preference set

in-house library for semantic analysis of audio: Essentia

Audio Analysis

Recommendation

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