

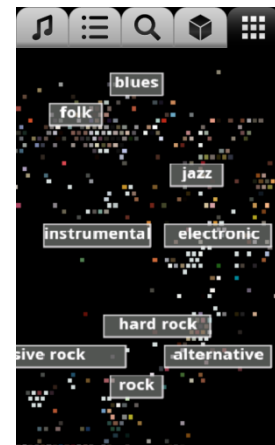
SA/MA: Advanced Music Retrieval Interfaces for Android Mobile Devices

Do you have a flair for visual design, and do you want to contribute to the next generation's music players? Then this thesis is the right thing for you!

Several factors, such as the growth of the Internet, peer-to-peer technologies, or the emergence of the compact media formats have changed the way people deal with music. Personal music collections have grown bigger, and, thanks to portable players and advances in storage technology, they can nowadays be accessed anywhere and anytime. The music collections accumulated by music lovers have reached sizes that make it hard to maintain an overview of the data by just browsing hierarchies of folders. Therefore, novel methods to organize music are required – methods that efficiently operate on orders of thousands of songs, and that allow personal music collections to be seen not just as isolated entities, but positioned in the global context of the world of music.

jukefox

In our laboratory, we have developed *museek* (<http://www.museek.ethz.ch>), a Music Player for the Android Mobile Platform. An important ingredient of the application is a “map of music” that reflects music similarity. In particular, we have placed more than 1M artists and songs into a Euclidean space, such that similar items reside at similar location in this space. Such a representation is an excellent foundation to design sophisticated user interfaces for music retrieval. *museek* already implements some advanced interfaces, such as a smart shuffling mode that avoids unwanted regions by considering the user's skipping behavior, and a map based visualization that allows the user to serendipitously browse a collection.



The goal of this project is to complement the existing application with a novel visual interface that facilitates an intuitive access to large music collections. Thereby, you can take advantage of the described music space which, in conjunction with its geometric properties, greatly simplifies the interface design. We already have some ideas how such an interface might look like, however, we are also open for suggestions from your side.

If the interface you develop throughout this project achieves release quality, you can directly integrate it into the existing application, which has a broad user basis (more than 100,000 downloads at the time of writing).

Required Skills: Good programming skills (Java), interest in visual design

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