

SA/DA/MA: Novel Approaches to Music Recommendation

Several factors, such as the growth of the Internet, peer-to-peer technologies, or the emergence of the mp3-music format have changed the way people deal with music. Personal music collections have grown bigger, and, thanks to mp3-players and advances in storage technology, they can nowadays be accessed anywhere and anytime. Traditional music-stores have lost their monopoly and have to compete with online music portals and file-sharing-platforms. All these changes made music more available. This high availability, however, also increases the danger of getting lost in an overwhelming offer of music we have today.

It is thus important to provide means that assist users in finding those parts of the offer they are in fact interested in. This is



usually done by recommendation systems. The goal of this thesis is to implement a recommendation system that goes beyond the “customers who bought this item also bought the following items” method, currently in use in many online music stores, such as *Amazon.com* or *iTunes*. In particular, it would be interesting to suggest music which the users do not know yet, and which does not sound identical to what they already know. Instead of suggesting the most similar items, it would rather be interesting to propose artists and songs of entirely other areas that nevertheless match the taste of a user. These issues are not sufficiently addressed by the existent techniques.

The recommendation system developed throughout this thesis should build upon and be integrated into the *musicexplorer.org* website that represents music in a Euclidean space. We believe that this Euclidean representation in conjunction with the special usage patterns of the website should offer possibilities for novel recommendation algorithms. Your task will cover different aspects, ranging from innovative ideas in recommendation functionality to algorithm design and the actual implementation of your ideas.

Interested? Please contact us for more details!

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