

MODELS AND SOFTWARE COMPONENTS RESEARCH FOR AUTOMATED CREATION OF A MUSIC PLAYLIST BASED ON COMMON PREFERENCES OF USERS GROUP

Kharchenko V., Bilova M.

National Technical University «Kharkiv Polytechnic Institute», Kharkiv

In today's world, social interactions are often accompanied by music. People listen to music at parties, in restaurants, in stores etc. However, when trying to create a music playlist that will satisfy the tastes of all members of a certain group, difficulties arise. The relevance of the research lies in the lack of a solution that would implement cross-service integration with the most popular music platforms, namely Spotify, Apple Music, YouTube Music [1]. Also, as a result of a comparative analysis of existing solutions (REKL.BE, sharedspotify, Mash Your Music, musictaste.space), it was found that none of the presented systems uses the user's listening history as a source of user's music taste. In addition, the question of the recommendations quality of such systems remains open.

The purpose of this research is to explore models, methods and software components to improve the recommendations quality for automated creation of a music playlist based on the analysis of the user's listening history.

As a result of the existing solutions analysis in the subject area, the following research tasks were set: to determine the indicators that will be used to assess the quality of the recommendations; analyze methods of obtaining information from the user's listening history; get acquainted with integration between various music platforms; design and develop corresponding software for generating recommendations based on the user's musical preferences; evaluate the results of using the developed software from the point of view of recommendations quality, comparing them with the previous version; draw conclusions of the experiment and the feasibility of implementing the developed solution.

The following music recommendation techniques were considered and compared in the research: collaborative filtering, content-based filtering, metadata-based filtering, emotion-based filtering, context-oriented model and some others.

References:

1. COVID-19 Accelerates Music Streaming Market Growth, Global Subscriptions Hit 394 Million in Q1 2020 / Counterpoint <https://www.counterpointresearch.com/music-subscriptions-394-million-q1-2020/>, Application date 22.11.2021