

Information System for Searching Music Tracks on the Internet

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Today, almost every person is interested in a certain kind of art. The art of music is one of the most common and popular in the world. It is extremely difficult to find a person who would never hear or listen to music. Music accompanies everywhere: on the streets, in the media, in shops and more. Over time, more and more people not only listen to music, but also start making it. Every day the emergence of new and talented composers develops the musical sphere.

Because of this, a lot of people spend a lot of time searching for a particular song to suit their tastes. There are some problems finding a particular song. One of them is the time spent searching for a song. The overwhelming amount of time spent searching for songs does not always match the desired results.

Thus, all of the above became the basis for defining the theme: "Components of an expert system for the selection of musical compositions by specified criteria."

The purpose of this work is to implement a disk-top program that will take minimal time to select songs that will satisfy the user's preferences. This program is economical. Significant time savings help to clearly identify a range of artists and songs that would fit the user's musical tastes. There is also a selection of ready-made playlists that significantly save time but do not fully meet the music preferences of the user.

The object of study is popular music from all ages and artists. The main task of the research is to implement a disk-top program, which will be based on the information system and the creation of ready playlists, to save user time.

The practical value of the research is to use the information obtained about the music taste of the user in the future and to find the appropriate music.

The main purpose of this system is to determine the individual music preferences of the user, as well as play selected songs.

Music (from the Greek. Μουσική - the art of music) - the art of organizing musical sounds, primarily in the timing (rhythmic), sound level and timbre scale. Musical can be almost any sound with certain acoustic characteristics that correspond to the aesthetics of a particular era, and can be played when playing music. The sources of such sound may be: human voice, musical instruments, electric generators, etc. [1]

Music for real musicians is nothing but a living soul, a playing melody (thought by many composers of the eighteenth century) [2].

In terms of art classification, music is:

- temporal art (musical work unfolds and is perceived in time, as well as in theater, literature, dance, poetry, song ...);

- performing arts (the mediator between creativity and the perceptor is the performer, as well as in dance, theater);
- unimaginable art (in most cases, musical images are free from a concrete reflection of reality, as well as architectural ones) [3].

At the same time, music can be combined with other arts, such as:

- with the word (vocal and vocal-instrumental works, opera and operetta, musical recitation);
- dramatic action (theater and film productions);
- dance and gesture (ballet, pantomime).

Like other arts, music has various socio-cultural functions, including:

- Hedonistic function - is determined by the ability of music to bring listeners enjoyment;
- Expressive function - is conditioned by a person's natural need for an external (for example, gestural, mimic, sound) expression of strong emotions and feelings;
- The communicative function of music is based on the symbolic use of sound forms. This gives every reason to consider music a special language;
- Cognitive function - associated with the natural attraction of a person to new information, new experience. In the process of developing the consciousness of the individual as a social being, stable motives of cognitive activity grow;
- Spiritually cathartic function - is conditioned by its ability to cause powerful emotional shocks, which are carried out "by compassion and fear of purification of passions".
- Magical suggestive function - is determined by the ability of music to introduce a person to a certain mental state. Many scholars have linked the emergence of music to this function. A therapeutic function is also considered as a kind of magic-suggestive. [4]

References

1. Aleksievtsiev LM Ukraine – Europe – World: an international collection of scientific works / [ch. ed. LM Alexievtsi; ed.: Yu. M. Alekseev, LM Aleksievts, MM Alexievts, etc.] // Ternopil: TNPU, 2010. - Issue. 4. P. 250-264.
2. O. Bugayeva, MD Leontovich Musical Society (1921-1931): biographical dictionary: Sciences. argument. / Olena Bugaeva; [Sciences. ed. V. I. Popic] // Nat. Acad. of Sciences of Ukraine, Nat. b-ka of Ukraine them. VI Vernadsky. - Kiev. - 2015. - 348 p.
3. M. Havrylyuk Ukrainian Composers of the Kiev School / Edited. M. Gavrilyuk. // Buenos Aires: [b. in.]. - 1970. - 85 p.
4. Humeniuk A. Instrumental music / A. Humeniuk // Kiev: Scientific Thought. –1972. - 487 sec.
5. Kubik, R., Ryshkovets, Y., Hrendus, M., Khudiy, A., Vysotskyi, A., Hryhorovych, V., Chyrun, S.: Development of an Intelligent System for Selecting Songs According to the User Needs. In: Computational Linguistics and Intelligent Systems, COLINS, CEUR workshop proceedings, Vol-2604, 1251-1279. (2020).

6. Rusyn, B., Pohreliuk, L., Rzheuskyi, A., Kubik, R., Ryshkovets Y., Chyrun, L., Chyrun, S., Vysotskyi, A., Fernandes, V. B.: The Mobile Application Development Based on Online Music Library for Socializing in the World of Bard Songs and Scouts' Bonfires. In: *Advances in Intelligent Systems and Computing IV*, Springer, 1080, 734-756. (2020)
7. Korobchinsky, M., Vysotska, V., Chyrun, L., Chyrun, L.: Peculiarities of Content Forming and Analysis in Internet Newspaper Covering Music News, In: *Proceedings of the International Conference on Computer Sciences and Information Technologies, CSIT*, 52-57. (2017)
8. Lytvyn, V., Vysotska, V., Burov, Y., Veres, O., Rishnyak, I.: The Contextual Search Method Based on Domain Thesaurus. In: *Advances in Intelligent Systems and Computing*, 689, 310-319. (2018)
9. Rusyn, B., Lytvyn, V., Vysotska, V., Emmerich, M., Pohreliuk, L.: The Virtual Library System Design and Development. In: *Advances in Intelligent Systems and Computing*, 871, 328-349. (2019)
10. Kanishcheva, O., Vysotska, V., Chyrun, L., Gozhyj, A.: Method of Integration and Content Management of the Information Resources Network. In: *Advances in Intelligent Systems and Computing*, 689, Springer, 204-216. (2018)
11. Naum, O., Chyrun, L., Kanishcheva, O., Vysotska, V.: Intellectual System Design for Content Formation. In: *Proceedings of the International Conference on Computer Sciences and Information Technologies, CSIT*, 131-138. (2017)
12. Gozhyj, A., Kalinina, I., Vysotska, V., Gozhyj, V.: The method of web-resources management under conditions of uncertainty based on fuzzy logic. In: *Proceedings of the International Conference on Computer Sciences and Information Technologies, CSIT*, 343-346. (2018)
13. Gozhyj, A., Vysotska, V., Yevseyeva, I., Kalinina, I., Gozhyj, V.: Web Resources Management Method Based on Intelligent Technologies. In: *Advances in Intelligent Systems and Computing*, 871, 206-221. (2019)
14. Русин Б., Висоцька В., Погрелюк Л. Особливості проектування та розроблення інформаційної системи Virtual Library // Журнал «Методи та системи оптико-електронної і цифрової обробки зображень та сигналів», OEIET, vol 34, № 2, Сер 2018. – PP. 18-33. – <https://oeipt.vntu.edu.ua/index.php/oeipt/article/view/479>.
15. Rusyn, B., Vysotska, V., Pohreliuk, L.: Model and architecture for virtual library information system. In: *Proceedings of the International Conference on Computer Sciences and Information Technologies, CSIT*, 37-41. (2018)
16. Vasyl, Lytvyn, Victoria, Vysotska, Dmytro, Dosyn, Roman, Holoschuk, Zoriana, Rybchak: Application of Sentence Parsing for Determining Keywords in Ukrainian Texts. In: *Proceedings of the International Conference on Computer Sciences and Information Technologies, CSIT*, 326-331. (2017)
17. Lytvyn, V., Vysotska, V., Veres, O., Rishnyak, I., Rishnyak, H.: Classification methods of text documents using ontology based approach. In: *Advances in Intelligent Systems and Computing*, 512, 229-240. (2017)
18. Vysotska, V., Lytvyn, V., Burov, Y., Berezin, P., Emmerich, M., Fernandes, V. B.: Development of Information System for Textual Content Categorizing Based on Ontology. In: *CEUR Workshop Proceedings, Vol-2362*, 53-70. (2019)