Proceedings of the 4<sup>th</sup> International Conference Computational Linguistics And Intelligent Systems

## Model of Information System Aimed at Increasing Social Activity

## Mariyana Chenka, Tetiana Shestakevych

## Lviv Polytechnic National University, Lviv, Ukraine

In today's realities, the issue of social activity and involvement of society in the processes related to the social sphere is quite acute. The level of social activity can be changed by creating convenient, accessible, and reliable information technology solutions that will ensure involvement in volunteer and charitable processes. The purpose of the work is to develop an information system aimed at enhancing the level of social activity and social responsibility. This service is designed to create a comfortable environment for volunteering and charity. The project's ideology is based on the dreams of socially disadvantaged children. Crowdfunding is gaining popularity on social networks and media, which is why it is raising people's awareness of how to get involved in volunteering as a simple and accessible method [2]. Tasks that are to fulfill the purpose of the work:

- Conducting analysis of the phenomenon of volunteering and specialized information systems to support social projects.
- Developing a model of the information system workflow.
- Description and definition of platform functionality requirements.
- Forming roles for all members of the system.

There were several volunteer services: Mrii.in.ua (http://www.mrii.in.ua/wish), deals with the fulfillment of desires of HIV-infected children, Live the dream (https://wish.1plus1.ua) focuses mainly on raising funds for dream children-patients of hospitals, the Site of fulfillment of desires (http://mrii.at.ua/), life (https://ubb.org.ua/uk/projects/) raises funds for "Operators to help." Each of these information technologies were evaluated for the following characteristics: scalability, standardization, interoperability, scope, functionality, suitability for use, performance, reliability, portability, usability, user experience, accreditation Performers, the prevalence and accessibility, convenience for the volunteer organizations. Results of the comparison of existing systems and the needs of the participants of the process formulated a list of system requirements of an information system embodiment of dreams: availability for volunteer organizations and Artists; the veracity of published dreams; the transparency of information about finances and confirmation of fulfillment of dreams; easy to use; adaptation to different target audience; involvement of large corporations to use the system with the help of advertising campaigns. The designed information system will provide the interaction of three key stakeholders: volunteer organisations, philanthropist and artist. Voluntary organization (VO) will perform the function of collecting and publishing dreams. That is, having its own database of information on vulnerable children, collaborating

COLINS'2020, Volume II: Workshop. Lviv, Ukraine, April 23-24, 2020, ISSN 2523-4013 http://colins.in.ua, online Proceedings of the 4th International Conference Computational Linguistics And Intelligent Systems

with other agencies, organizations will collect the children's dreams. The contractor implements the chosen dreams must go through the accreditation process.

The simplified model of the information system is represented by a UML diagram, namely Use case, which shows the functionality of two actors - the volunteer organization and the Executant (Fig. 1).



Fig. 1. Use Case of designed IS "Dreaming"

The analysis of the studied subject area formed the list of analogues of information systems for volunteering, determined the functionality of the platform, which is necessary to ensure the innovativeness of the solution and the goal, and the requirements for the developed system. A simplified model of an information system was developed to support processes in the social sphere. Further research involves the development of a detailed model of the information system and an expanded list of information system functionalities.

## References

- Gorelov DM Volunteer Movement: World Experience and Ukrainian Civic Practices: An Analyte. ext. - K .: NISD, 2015. - 36 p.
- Characteristic peculiarities of the main crowdfunding websites. Ugolkova, O. [Electronic resource]. Access mode: http://ena.lp.edu.ua:8080/handle/ntb/34932
- Leshchenko, Y., Yelizeva, A., Rudchenko, Y.: The Web-Application Development for Analysis of Social Graph of the User in Network. In: Computational linguistics and intelligent systems, COLINS, 84-95. (2019)

382

COLINS'2020, Volume II: Workshop. Lviv, Ukraine, April 23-24, 2020, ISSN 2523-4013 http://colins.in.ua, online Proceedings of the 4th International Conference Computational Linguistics And Intelligent Systems

- Artemenko, O., Pasichnyk, V., Kunanets, N., Shunevych, K.: Using sentiment text analysis of user reviews in social media for e-tourism mobile recommender systems. In: Computational Linguistics and Intelligent Systems, COLINS, CEUR workshop proceedings, Vol-2604, 259-271. (2020).
- Piatykop, O., Pronina, O.: Model Selection of the Target Audience in Social Networks in Order to Promote the Product. In: Computational Linguistics and Intelligent Systems, COLINS, CEUR workshop proceedings, Vol-2604, 396-406. (2020).
- Ivaskiv, R., Neroda, T.: Enhancement of Conception and Embedding the Enterprise Social Network in Academy Information Space. In: Computational Linguistics and Intelligent Systems, COLINS, CEUR workshop proceedings, Vol-2604, 612-621. (2020).
- Maslova, N., Polovynka, O.: Associative Methods as a Tool to Improve the Quality of Knowledge Control. In: Computational Linguistics and Intelligent Systems, COLINS, CEUR workshop proceedings, Vol-2604, 778-787. (2020).
- Batiuk, T., Vysotska, V., Lytvyn, V.: Intelligent System for Socialization by Personal Interests on the Basis of SEO-Technologies and Methods of Machine Learning. In: Computational Linguistics and Intelligent Systems, COLINS, CEUR workshop proceedings, Vol-2604, 1237-1250. (2020).
- Leshchenko, Y., Yelizeva, A., Rudchenko, Y.: The Web-Application Development for Analysis of Social Graph of the User in Network. In: Computational linguistics and intelligent systems, COLINS, 84-95. (2019)
- Lytvynenko, V., Lurie, I., Radetska, S., Voronenko, M., Kornilovska, N., Daria P.: Content analysis of some social media of the occupied territories of Ukraine. In: 1st International Conference Computational Linguistics and Intelligent Systems, COLINS, 84–94. (2017)
- Chyrun, L., Vysotska, V., Kis, I., Chyrun, L.: Content Analysis Method for Cut Formation of Human Psychological State. In: International Conference on Data Stream Mining and Processing, DSMP, 139-144. (2018)
- Chyrun, L., Kis, I., Vysotska, V., Chyrun, L.: Content monitoring method for cut formation of person psychological state in social scoring. In: Proceedings of the International Conference on Computer Sciences and Information Technologies, CSIT, 106-112. (2018)
- Lytvyn, V., Vysotska, V., Rzheuskyi, A.: Technology for the Psychological Portraits Formation of Social Networks Users for the IT Specialists Recruitment Based on Big Five, NLP and Big Data Analysis. In: CEUR Workshop Proceedings, Vol-2392, 147-171. (2019)
- Anisimova, O., Vasylenko, V., Fedushko, S.: Social Networks as a Tool for a Higher Education Institution Image Creation. In: CEUR Workshop Proceedings, Vol-2392, 54–65. (2019)
- Fedushko, S., Trach, O., Kunch, Z., Turchyn, Y., Yarka, U.: Modelling the Behavior Classification of Social News Aggregations Users. In: CEUR Workshop Proceedings, Vol 2392. 95–110. (2019)
- Trach, O., Fedushko, S.: Determination of Measures of Counteraction to the Social-Oriented Risks of Virtual Community Life Cycle Organization. In: Advances in Intelligent Systems and Computing, 1080. Springer, Cham, 680-695. (2020)
- 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)

COLINS'2020, Volume II: Workshop. Lviv, Ukraine, April 23-24, 2020, ISSN 2523-4013 http://colins.in.ua, online