

## RESEARCH OF METHOD AND DEVELOPMENT OF MOBILE APPLICATION FOR PLANT DISEASE RECOGNITION

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With the increasing use of mobile technologies in agriculture, the importance of timely and accurate detection of plant diseases is growing. This becomes particularly crucial due to the need for effective control of crop yields and prevention of disease spread. One of the key challenges is the complexity and heterogeneity of symptoms of various diseases, making their recognition difficult even for experienced professionals. In this context, there is a need for the development of an effective method for plant disease recognition based on modern technologies such as artificial intelligence and computer vision [1].

The project is aimed at researching and developing a mobile application for plant disease recognition, which is based on advanced methods of computer vision and machine learning [2]. Utilizing this technological platform will allow for the precise and rapid identification of various plant diseases based on their visual symptoms, facilitating timely implementation of necessary treatments and prevention of further spread.

During the development of the application, principles of synergy will be employed, enabling the creation of a comprehensive system for analysis and classification of plant disease symptoms. Such an approach will increase the accuracy and reliability of disease recognition and reduce the time required for diagnosis.

The results of the research and development of the mobile application for plant disease recognition are expected to make a significant contribution to the development of agriculture, promoting increased crop yields and ensuring the resilience of agricultural crops to diseases and pests.

**References:** 1. M. Kozlenko, V. Sendetskyi, O. Simkiv, N. Savchenko, and A. Bosyi, "Identity documents recognition and detection using semantic segmentation with convolutional neural network," *CEUR Workshop Proceedings*, vol. 2923, pp. 234-242, Jan. 28, 2021, <http://ceur-ws.org/Vol-2923/paper25.pdf>. 2. M. Slobodian and M. Kozlenko, "Machine learning based animal emotion classification using audio signals," 2022 International Conference on Innovative Solutions in Software Engineering (ICISSE), Vasyl Stefanyk Precarpathian National University, Ivano-Frankivsk, Ukraine, Nov. 29-30, 2022, pp. 277-281, doi: 10.5281/zenodo.7514137.