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GIS PROJECT DEVELOPMENT FOR UNIVERSITY'S CAMPUS: A CASE STUDY OF THE NATIONAL AVIATION ACADEMY IN AZERBAIJAN

Abstract

Geotechnology, which includes remote sensing, global positioning systems, and geographic information systems (GIS), is an example of a digital technology and it has a wide range of applications accross a variety of fields. One of the topics covered during the GIS practical training for undergraduate students majoring in Geodesy&Geomatics Engineering during the Fall 2022 semester at the Azerbaijan National Aviation Academy was the GIS project of the university's campus, that resulted in the creation of a startup team with the long-term objective of creating digital twins of universities in Azerbaijan. The development of a GIS project for an university campus can be related to the requirements of the modern world as it transforms to the digital era, as well as the challenges of integrating digital technologies into various aspects of educational activities, management, and planning. This paper discusses the results of the work on the development of a GIS project of the university's campus on the example of the National Aviation Academy in Azerbaijan. This project can be considered as the first of its kind because GIS projects of this type have not yet been implemented in the universities of our country. Scientific publications of related international projects served as the methodological basis for the research. The initial data was the university's area image with a spatial resolution of 0.3 m acquired by the Pléiades Neo satellite on October 4, 2022. The GIS project was developed using the ArcGIS Pro software. In conclusion, this paper demonstrated the successful development of a GIS project for the National Aviation Academy campus in Azerbaijan, which could serve as a model for future GIS projects in other universities in the country. The project's usefulness in campus management and planning, as well as its potential applications in research and education, highlights the importance of geospatial technologies in higher education. The project's success also highlights the potential of undergraduate students to contribute to GIS projects and develop innovative solutions for real-world problems.