

AI applied to agriculture in the role of surveyor

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SUMMARY

In recent years, artificial intelligence (AI) has become increasingly central to agricultural innovation, contributing to the development of sustainable, efficient, and precision agriculture. AI-based technologies such as machine learning, computer vision, automatic data processing, and predictive systems enable the collection, analysis, and interpretation of large amounts of data from sensors, satellites, drones, and intelligent machinery. This allows agricultural operators to make more informed and timely decisions, improving productivity and reducing the waste of natural resources.

Among the most widespread applications of AI in agriculture are real-time crop monitoring, early diagnosis of diseases and pests, yield forecasting, automated irrigation management, and the use of robots for planting, harvesting, and weeding. These innovations also contribute to reducing environmental impact and adapting to climate change.

In this technologically advanced context, surveyors play a key role. Thanks to their skills in topographic surveying, cartography, land management, and spatial data interpretation, surveyors are key figures in supporting the implementation of digital technologies in agriculture. Specifically, they are involved in land mapping, the design of smart irrigation systems, land registry management, and the reading and analysis of data from GPS sensors, drones, and satellite imagery. Furthermore, surveyors act as a bridge between farmers, technicians, and technology, ensuring the effective integration of digital solutions into the production environment.

Despite the opportunities offered, some challenges remain, such as the cost of accessing technology, operator training, and data protection. However, the collaboration of technical, agronomic, and territorial expertise, such as those of surveyors, represents a strategic element for a fair and sustainable digital transition in agriculture.