Artificial Intelligence in Florist Culture: The Revolution of the Flower Industry

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ABSTRACT

This technology has been carried over significantly in the Florist Culture Industry, which includes the production and sales of flowers and decorative plants. By improving harvest monitoring, artificial intelligence (AI) will dramatically change this industry with the perfection of precision agriculture, development of breeding technology, and automation of harvesting. In this article, we will explore how artificial intelligence (AI) can transform florist culture through advances in automation, computer views and machine learning. AI integration benefits manufacturers, consumers and ecosystems by increasing productivity, ensuring sustainability and improving the quality of floral products.

INTRODUCTION

The global horticultural business relies heavily on florist cultures that promote the economy around the world. However, traditional agricultural practices often face challenges such as workers shortages, pest invasion and climate attitudes. By fostering accurate data analysis, automation and predictive insights, AI-controlled technology provides a modern way of solving these obstacles.

AI and harvest monitoring in identifying AI diseases

Diagnosis and evaluation of early diseases of plant health is becoming increasingly

important in modern florist culture. AI-enabled drones and sensors with computer vision should keep an eye on plants due to insect activity, nutrient deficiency and symptoms of disease. These technologies allow producers to quickly examine recorded photos, recognize abnormalities, and make quick corrections. To ensure healthier plants and savings losses, AI-driven predictive models provide possible outbreaks and recommend precautions before obvious symptoms become apparent.

Precision Agriculture and Automation Artificial Intelligence

Optimizing agricultural practices through precision breeding. This technology-driven approach increases yields while maintaining resources and promoting sustainability in florist culture. AI-controlled greenhouse environments maintain optimal temperature, air humidity and light levels to support flower growth. Intelligent irrigation systems analyze soil moisture, weather and plant requirements to ensure efficient water and fertilizer consumption (Mejía-Resendiz *et al*., 2023).

Harvest and Sort Automatically

There is a lot of work in the process of developing new flower varieties with desirable properties(Asrar & Elhindi, 2011). By investigating large data records to find trends and predicting advantageous genetic combinations, artificial intelligence (AI) accelerates genetic research. Machine learning helps to create flowers with better colour, scent, durability, and disease and insect resistance. This ensures the production of excellent flower types, while simultaneously reducing the Brutz cycle (Rolaniya *et al*., 2017).

Supply -Chain -optimization and Market Prediction

By predicting market trends and tightening supply chain processes, artificial intelligence transforms the commercial and logistical aspects of florist culture. Artificial intelligence models provide insight into demand for demand by analyzing historical sales data, weather trends, and customer preferences. Producers can therefore adapt their production plans, reduce waste, and increase sales. AI-powered logistics further improve inventory management by ensuring fresh flower delivery is on time and reduce losses.

AI revolutionizes the retail industry

By supporting the choice of flower arrangements suitable for a variety of events, AI-enhanced chatbots and virtual assistants in interacting with retail and customers. AI-powered recommendation engines increase customer well-being by adapting recommendations according to previous purchases and preferences. Additionally, users may view flower arrangements online before purchasing thanks to digital tools with AI-operated(Dikr & Belete, 2017).

Use of AI in Sustainable Floral Culture

By supporting the choice of flower arrangements suitable for a variety of events, AI-enhanced chatbots and virtual assistants in interacting with retail and customers. AI-powered recommendation engines increase customer well-being by adapting recommendations according to previous purchases and preferences. Additionally, users may view flower arrangements online before purchasing thanks to digital tools with AI-operated.(Kaushal *et al*., 2024).

CONCLUSION

Producers can overcome traditional agricultural obstacles and simultaneously increase production as the AI-controlled development performance in monitoring, automation, breeding, harvesting and supply chain therapy is translated. The impact of AI technology on florist culture grows as it

develops further and doors open for more creativity.

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