Acquisition of AI company validates rapid trend towards ag-robotics

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On April 8, 2021, an applied technology company, AppHarvest, announced that it acquired Root AI, an artificial intelligence start-up that develops robotic systems to help manage in-door farms. While the prospect of a greenhouse purchasing a tech company may seem unorthodox today, AppHarvest's proactive acquisition represents foresight in an industry on the cusp of what promises to be a near-complete transformation to meet lofty consumer expectations.

What you need to know

- AppHarvest is an applied technology company working to revolutionize farming by building large high-tech indoor farms that generate more produce and use less water.
- Root AI develops autonomous solutions designed to manage in-door farming activity. Its robotic universal harvester, Virgo, can effectively harvest produce while evaluating crop health, predicting crop yield, and most importantly, relieving human crop care specialists to focus on more challenging and complex tasks.
- Virgo is capable of harvesting multiple crops of varying sizes, including delicate produce like strawberries. Virgo's ability to use discretion and precise force to harvest produce without damaging the produce or the plant it is harvesting from represents a quantum leap forward in an industry that extensively relies on human labour to harvest produce.
- The disruptive impact of Virgo and similar autonomous systems to the agriculture industry cannot be understated. It means less waste, more safety, and improved yields. AppHarvest's acquisition validates the fast-moving trend toward further robotic integration into the agricultural sector. Industry players must be open-minded and capable of managing disruption in order to fully harness the benefits of technology like Virgo.

The future of autonomous farming

AppHarvest's acquisition represents foresight and proactivity in an industry rapidly progressing towards a near-complete transformation. Consumers want high quality, affordable farm products that have been produced with minimal environmental impact.

Despite these demands, the agriculture sector faces increasing biohazard threats like viruses, which coupled with greater levels of crop homogeneity raise the risk of crop damage and crop failure.

Embracing autonomy and artificial intelligence solutions can reconcile and achieve these often-competing demands while increasing crop health and resiliency. As the price of computational power continues to fall while internet speed and quality continues to increase, artificial intelligence solutions will get smarter and cheaper. As a result, artificial intelligence and autonomy solutions in farm operations will become a requirement to do business rather than a novel technology.

Finally, the introduction of “deep learning artificial intelligence”, which refers to machines capable learning in an unstructured or unsupervised manner, could mean that in the near future artificial intelligence systems capable of rapidly learning, assessing, responding to, and even predicting events may make completely autonomous farming/greenhouse operations an industry standard rather than science fiction.

Takeaways

Autonomous and artificial intelligence solutions (and the challenges stemming from their disruptive impact) require innovative thinking and a keen understanding of the risks and benefits associated with their use. A proactive approach to the rise of autonomous and artificial intelligence solutions in the agriculture industry will best position industry players looking to take advantage of the productivity and efficiency improvements offered by paradigm changing technology like those developed by Root AI.

Involving and working with legal advisors at an early stage can help improve outcomes and mitigate risks associated with utilizing autonomous equipment and machinery in the agriculture sector, which is positioned to experience greater levels of disruption than other industries as the pace of innovation in autonomy and artificial intelligence continues to accelerate.

BLG’s autonomy expertise

In any industry, taking action early is key to minimizing the disruptive impact of emerging technologies like autonomous and artificial intelligence. With broad industry experience and particular expertise in the development of autonomous solutions and the development of AI systems, BLG is here to help our clients navigate the opportunities and challenges that this revolutionary era of autonomy is already ushering in.

By

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Expertise

Construction, Technology, Agribusiness, Artificial Intelligence (AI)

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