# CambridgeHOK launches AI crop-monitoring robot to transform indoor vertical farming



During the week spanning April 26 to May 5, 2025, several advancements in technology and research captured attention, particularly in areas related to agriculture, healthcare, and data accessibility. Key developments include the introduction of innovative tools and systems designed to improve efficiency, access, and safety across different sectors.

In the realm of agricultural technology, CambridgeHOK, based in England, has introduced CropCam, a robot specifically designed for monitoring indoor vertical farms. This robotic system utilises cameras and sensors to gather images of crops grown under artificial lighting. An AI component then analyses these images, providing farmers with insights about crop types, sizes, and overall health. This innovation aims to optimise productivity while minimising waste and the risk of pests, enabling farmers to make informed decisions regarding crop management.

In a bid to enhance digital access, the city of Philadelphia has launched two open-data tools with the assistance of Verizon. A Wi-Fi finder and a broadband dashboard will help residents locate free internet access across the city and aid officials in identifying areas in need of better connectivity. These tools are designed to facilitate plans for future broadband investments, particularly targeting underserved areas.

A noteworthy contribution to aquaculture comes from Coder’s Cafe, an Indian technology firm that has developed a solar-powered buoy for monitoring water quality in shrimp farms. Equipped with sensors that track critical indicators such as pH, turbidity, and oxygen levels, the buoy relays real-time data to a dashboard via cellular networks. This technology aims to reduce the stress and mortality rates of shrimp by providing farmers with early warnings of adverse changes in water quality, ultimately enhancing produce yield.

In cybersecurity, san Francisco-based startup Doppel has developed AI agents capable of detecting and mitigating social engineering scams. By scanning approximately 100 million phishing threats daily across various platforms, these agents utilise a “threat graph” to map out fraudulent networks. With an impressive accuracy rate of 90 percent, the system has significantly assisted clients, including Notion and United Airlines, in reducing their exposure to online attacks.

Healthcare technology has also seen advancements, particularly with Danish startup Teton, which has created an AI system that builds a “digital twin” of hospital rooms. By integrating real-time data from cameras and sensors, the system monitors patient behaviours such as posture and breathing, alerting healthcare professionals through an app in case of detected risks. Initial trials of this technology have reportedly led to a 25 percent reduction in night shift workloads for nurses.

A significant archaeological breakthrough has also emerged from Yamagata University in Japan and IBM, who partnered to utilise AI for the discovery of 303 new Nazca Lines in Peru. These ancient geoglyphs, etched into the desert over 2,000 years ago, were identified using satellite and drone imagery, which the AI system analysed for previously unnoticed shapes. While the exact purpose of the Nazca Lines continues to be debated, they are often associated with ritual paths intended for connecting with deities.

In a different field, Boston University researchers have unveiled BOSSA, a new algorithm for hearing aids, designed to enhance auditory experiences in noisy environments. By mimicking the brain’s natural sound filtering abilities, BOSSA can improve word recognition by up to 40 percent in loud settings, providing a significant advantage for individuals who struggle to hear in crowded places.

Innovation in detection technology is being led by scientists at the China Aerospace Science and Technology Corporation, who have developed a quantum sensor that can identify concealed submarines. This drone-mounted device measures minor disruptions in Earth's magnetic field, a challenge for traditional sensors at equatorial regions, overcoming blind spots through the use of quantum effects in rubidium atoms.

Finally, in the domain of sports technology, Hawk-Eye Innovations, a firm based in the UK and owned by Sony, has implemented a computer vision system in NBA arenas. This system combines high-speed cameras with artificial intelligence to track player and ball movements in three dimensions, providing crucial frame-by-frame analysis for officiating. The new technology is intended to improve the accuracy of in-game decisions, thereby enhancing fairness during competitive moments.

Source: [Noah Wire Services](https://www.noahwire.com)

## Bibliography

1. <https://cambridgehok.co.uk/vertical-farming/vertical-farming-concept> - This page details CambridgeHOK's automated vertical farming systems, including their innovative design and full automation, aligning with the article's mention of CropCam's AI-driven monitoring system for indoor vertical farms.
2. <https://www.phila.gov/2025-04-04-explore-the-philly-free-wi-fi-dashboard-the-office-of-innovation-and-technology-is-tracking-the-progress-of-the-verizon-inet-renewal-agreement-live/> - This announcement introduces the Philly Free Wi-Fi Dashboard, a tool developed by the City of Philadelphia and Verizon to monitor the progress of free Wi-Fi installations across city locations, supporting the article's claim about Philadelphia's open-data tools enhancing digital access.
3. <https://www.phila.gov/2025-03-31-locating-reliable-wi-fi-just-got-easier-with-the-philly-free-wi-fi-finder/> - This article discusses the Philly Free Wi-Fi Finder, a tool designed to help Philadelphia residents locate free Wi-Fi services across the city, corroborating the article's mention of Philadelphia's efforts to improve digital access with Verizon's assistance.
4. <https://cambridgehok.co.uk/news/why-is-automation-important-in-vertical-farming> - This article emphasizes the importance of automation in vertical farming for achieving high production levels and profitability, supporting the article's mention of CropCam's AI-driven monitoring system designed to optimize productivity in indoor vertical farms.
5. <https://www.phila.gov/departments/office-of-innovation-and-technology/resources/open-data-applications/> - This page outlines various open data applications developed by the City of Philadelphia, including the Philly Free Wi-Fi Finder and Dashboard, which aim to enhance digital access and connectivity for residents, aligning with the article's mention of Philadelphia's open-data tools.
6. <https://www.phila.gov/2021-11-15-city-of-philadelphia-releases-public-dashboard-for-residents-and-users-to-track-open-data-metrics/> - This press release announces the launch of the Open Data Dashboard, a tool that allows residents to track the city's open data metrics, supporting the article's mention of Philadelphia's efforts to enhance digital access through open-data tools.
7. <https://news.google.com/rss/articles/CBMieEFVX3lxTFBWeGR5Z2o0c1dTTG01Q1FQYkZDcTFFdHN5UGw1dTRSMGE5bjhWd0k1c2V5U3dWS1IwdXRMQy15RWVoXzhpNnZraGdaTE9YWXduc0VFRjdGRnlKaDdNRV9mZ2Yza2VMZnNmVFh3a3pDNEs2cUNlRUlzcw?oc=5&hl=en-US&gl=US&ceid=US:en> - Please view link - unable to able to access data