

The Future of Business in Pittsburgh

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Bloomfield Robotics Lands Japanese Investor

Osaka, Japan-based farm equipment company Kubota Corporation is among the investors participating in the \$1.8 million initial funding round of Pittsburgh-based Bloomfield Robotics, a Carnegie Mellon University agtech spinout that makes use of sensors and artificial intelligence to monitor the health and status of crops.

According to their website, “Bloomfield combines custom hardware with computer vision and deep learning to deliver crop assessments that enhance growers’ understanding of every plant.” They capture images of plants with their custom FLASH stereo camera, resulting in “an AI-driven health and performance assessment of each plant and crop for optimal growing.” These cameras can be mounted on farm vehicles, including on Kubota’s tractors, to collect image data on crop conditions such as the color,



Bloomfield Robotics’ custom FLASH camera

maturity, size of fruits and leaves during operation. AI processes, analyzes, and assesses such image data to propose anti-pest measures and the optimal time to harvest crops. Bloomfield is currently working with growers in North America, South America, and Europe.

This \$1.8 million investment is in addition to grant money awarded by NASA, which will fund Bloomfield’s work to adapt their existing deep learning, camera-enabled, cloud-based plant assessment tool to design and build a self-contained, computing at the edge variant for Controlled Environment Agriculture (CEA) to meet NASA’s needs. A livestream of Bloomfield’s climate controlled growth chamber, which is growing four varieties of plants that have been identified by NASA to have potential for space flight, is available to view on their website at <https://bloomfield.ai/nasa-experiment-live-stream>.

Kubota’s investment was made possible through collaboration with the THRIVE Accelerator Program, which supports early-stage startups from all areas of the value chain whose technologies drive towards a more efficient, sustainable, and secure agriculture future. Bloomfield participated in the THRIVE VII international cohort and made connections with Kubota through that process. You can learn more at <https://bloomfield.ai/>.

PGH Lab Announces 7th Cohort of Companies

The City of Pittsburgh's PGH Lab program, which connects startup companies with the City of Pittsburgh and local authorities to test new products and services in a real-world environment, has announced its seventh cohort of companies. Through the program, startups are encouraged to test, gain valuable market feedback, and iterate. In turn, the program gives the Pittsburgh government the opportunity to explore new ways to use technology and services to make government more efficient, transparent, sustainable, and inclusive. PGH Lab was created in 2016 during the administration of Mayor Bill Peduto, and is continuing in the new administration of Mayor Ed Gainey. Alumni companies of the program include AI-enabled recycling company CleanRobotics, 3D scanning company KAARTA, and temperature control startup Hibersense.



The companies comprising the seventh cohort include:

- Robot Armin, LLC, which is building a dashcam for bikes and tools for Ranked-Choice Voting
- Doors Unhinged, LLC, which is “pioneering the sale of reclaimed building products”
- Farm to Flame Energy, which manufactures smokeless and odorless biomass-powered generators
- Komodo Analytics, which hopes to make the municipal bond market more efficient
- Royally Fit, LLC, a holistic health and wellness brand
- Kloopify, an “end-to-end sustainable procurement solution”
- Street Sense, which provides real-time transportation data for cities and drivers

You can read a summary of the results of the PGH Lab 6.0 cohort on the City of Pittsburgh Department of Innovation & Performance Medium (<https://medium.com/department-of-innovation-performance>), or learn more about PGH Lab on their website at <https://pittsburghpa.gov/innovation-performance/pghlab/index.html>.

Pittsburgh Business News and Updates

- Japanese venture fund invests in Pittsburgh materials technology startup (<https://www.nikkei.com/article/DGXZQOUC248ZF0U1A121C2000000/>)
- Data-driven waste management platform RoadRunner Recycling raises \$70M (<https://venturebeat.com/2022/01/07/data-driven-waste-management-platform-roadrunner-raises-70m/>)
- Bosch's space station tech tested by Pittsburgh hospitals to detect asthma in kids (<https://www.techrepublic.com/article/ces-2022-bosch-tests-deep-audio-ai-developed-on-the-iss-to-detect-asthma/>)
- Schell Games launches VR experience featuring ancient recipes (<https://lostrecipes.schellgames.com/>)
- Self-driving company Aurora launches pilot with Uber Freight (<https://www.reuters.com/markets/deals/self-driving-truck-company-aurora-launches-pilot-with-uber-freight-2021-12-15/>)



About Ryan

Ryan O'Shea is a JETRO Investment Advisor focused on connecting Japanese companies to opportunities in Pittsburgh, Pennsylvania. He is the host of Future Grind, a podcast that explores the ethics and impact of emerging science and technology. In 2017, Ryan co-founded an artificial intelligence startup that was named a Top 10 team in the IBM Watson AI XPRIZE. Ryan has represented NASA and CalTech's Jet Propulsion Laboratory as a Solar System Ambassador and serves both as a World Economic Forum Global Shaper and an ambassador for Pittsburgh AI. He is a graduate of the University of Pittsburgh & serves on the boards of multiple non-profit organizations. He can be reached at Ryan@futuregrind.org.