



DataTribe Challenge Finalist Q&A: Tim Mueller-Sim, CEO of Bloomfield Robotics



DataTribe recently closed submissions to its second annual DataTribe Challenge, a global competition to identify and develop high-technology startups with a vision to disrupt cybersecurity and data science.

Three finalists [were announced](#), who will split \$20,000 in prize money, and the winner will be eligible to receive up to \$2 million in seed capital from DataTribe. The investment could also potentially include a follow-on investment up to \$6.5 million in Series A venture funding from DataTribe and AllegisCyber, a Silicon Valley-based cybersecurity venture capital firm.

In a new Q&A blog series, we are interviewing all three of the finalists to highlight their innovative business models, how they are disrupting their respective industries, and why they chose to participate in the DataTribe Challenge.

For this installment, we spoke with Tim Mueller-Sim, CEO and Co-Founder of [Bloomfield Robotics](#), an agricultural robotics and machine learning company, spun out of Carnegie Mellon University's Robotics Institute. Like another portfolio company [Blueridge.AI](#), Bloomfield Robotics is applying cutting-edge technology to a traditional industry to dramatically improve profits and efficiencies.

Q: What is your background?

Tim: I came to Carnegie Mellon University (CMU) in 2015 to pursue a master's degree in robotics, where I met Dr. George Kantor, a professor at CMU in the Robotics Institute.

At the time, he had a very interesting project that was just starting that involved developing ground robots for the agriculture sector. This allowed me to build new robots and learn about a new field, while working under a grant from the Department of Energy.

Question: Tell us about your business/idea.



Tim: We realized that there is a need in agricultural arena for high-resolution crop data that helps to breed better plants, create more consistency, and adhere to emerging standards. Our flagship product is a handheld device that directly improves cannabis cultivator revenue by identifying the optimal time to harvest each flower, optimizing the desirable compounds in the flower and allowing for previously unobtainable consistency from plant to plant.

Question: What was the original inspiration for your company/product?

Tim: During my time at CMU and in George's lab, I quickly discovered that there was enough technology that could be leveraged into a new and innovative company. The technology had also gotten to the point where we can deploy things quickly in the field. That's why we started the company and have been moving forward and growing ever since.

Question: What's your vision for future ... "What will the market you are pursuing look like in 5-10 years?"

Tim: That's a great and challenging question. Five to 10 years is a long time in this space, especially when it comes to innovation. First, we are focusing in on the cannabis market, which is rapidly evolving, and there is a shift happening now towards consistency, and producing quality cannabis.

Much like the advent of computers and PCs in the late '70s, early '80s, which ultimately ended up with just a handful of large manufacturers in the marketplace, we will see this type of consolidation in the cannabis sector.

Right now, there are lots of different growers, each pursuing a specialized or niche quality, and the production techniques are varied – some more home brew and others more scientific.

In the next several years, in addition to seeing a consolidation, we will see the rise of refinements and standardization of processes, which will include quality management and a tighter definition about what the market demands. Because of this shift towards standardization, there will be a demand for precision inspection solutions, which is where we fit in.

Question: How does your business address pressing cyber and data challenges for the commercial sector?

Tim: Today, inspection is still a manual process where you're using the judgment of trained experts to determine the condition of plants. Whether those plants are cannabis or corn, it doesn't matter – and it's been done this way for thousands of years.

Much like AI and data-driven systems helping radiologists to judging the condition of a patient from X-rays, we will be doing the same thing for agriculture. Our goal with data is to digitize all of the conditions of the plants – of every kind of crop you can think of – and create the world's largest database of plant knowledge.



It will have all the features that are observable to the human eye, as well as data about plant breeds, and all of the environmental conditions associated with those conditions. We will ultimately end up with a massive matrix of plant knowledge.

Question: What attracted you to the DataTribe Foundry, and why did you choose to participate in the DataTribe Challenge?

Tim: DataTribe has a really interesting business model. It's not quite a pure venture investment, nor a pure accelerator. It's somewhere in between. They have built a number of deep tech companies from the early stage, and really accelerated their early growth, which is when a lot of companies usually die, mostly because they can't get any velocity.

DataTribe brings their experience as operators to get that early velocity, so their companies can more quickly move from their seed round to A rounds.

Question: What's your long-term vision for the business?

Tim: There are plenty of solutions that we can bring to market once we have all the data digitized. In addition, we want to build plants that can be spread throughout the world, without requiring any other significant investment besides that initial breeding process.

For example, breeding plants that are tailored specifically for local environments will better enable and account for things like climate change, or areas that have been historically forgotten.

People have talked about mechanization of agriculture, particularly robotization for decades. Most people think of robots picking and harvesting crops, but few people think about the need to understand crop conditions.

This is an area that's not been addressed, mainly due to a shortage in trained labor and not enough young professionals seeking careers in agriculture. Given the rise in demand for food in the next 10 to 50 years, this is something that needs to be addressed.

We would like to thank Tim for speaking with us. Don't miss out on the opportunity to see the three finalists present and answer questions from judges on November 14th at City Garage, Baltimore MD. Click [here](#) to request an invitation to this event.