ArcBotics
Igniting Open Robotics

Robots, Kickstarter, and Bootstrapping Across the Globe
Connie Hu D'11, ArcBotics, COO and Co-Founder

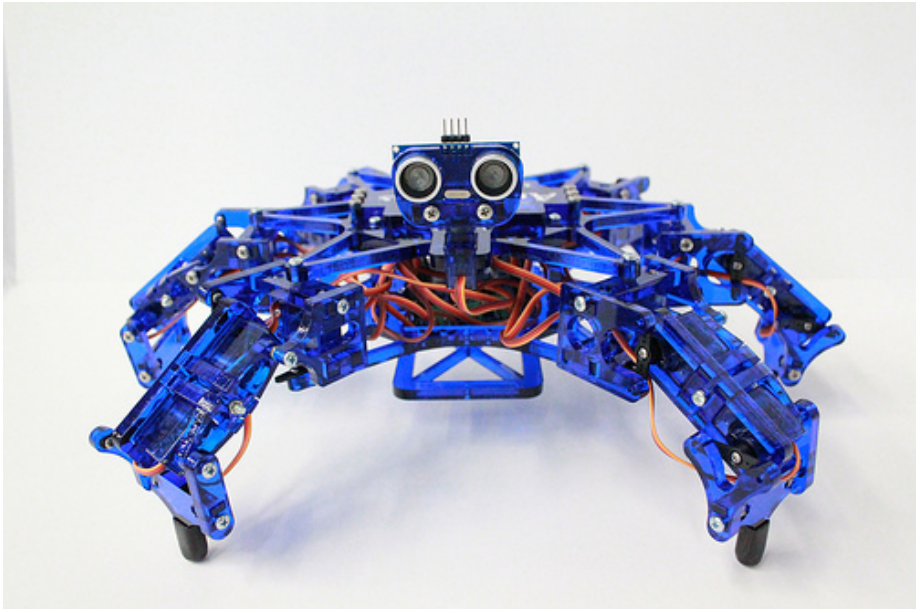
Dear Dartmouth friends,

I'd like to share with you the story of how I came to work on robots. And, to seek your advice on where we should go next.

I head up an open source robotics startup called ArcBotics. We believe that everyone should be able to access, learn from, and enjoy robotics, so we make robots that are affordable, useful for learning STEM, open-source, easy to use, and – last but not least – cute.

When I joined ArcBotics I was working as a consultant at Bridgespan, the nonprofit strategy group that spun out from Bain many years ago. It was wonderful but after two years, as is probably a common story for consultants, I wanted to use what I'd learned to help grow a social business from the ground up.

At that time my co-founder, Joe Schlesinger (Worcester Polytechnic Institute '10), had launched a Kickstarter for our first robot, Hexy the Hexapod (Hexy).



Hexy the Hexapod is a low-cost, Arduino hexapod kit that kids 15+ and adults use to explore advanced programming and kinematics. Our customers program

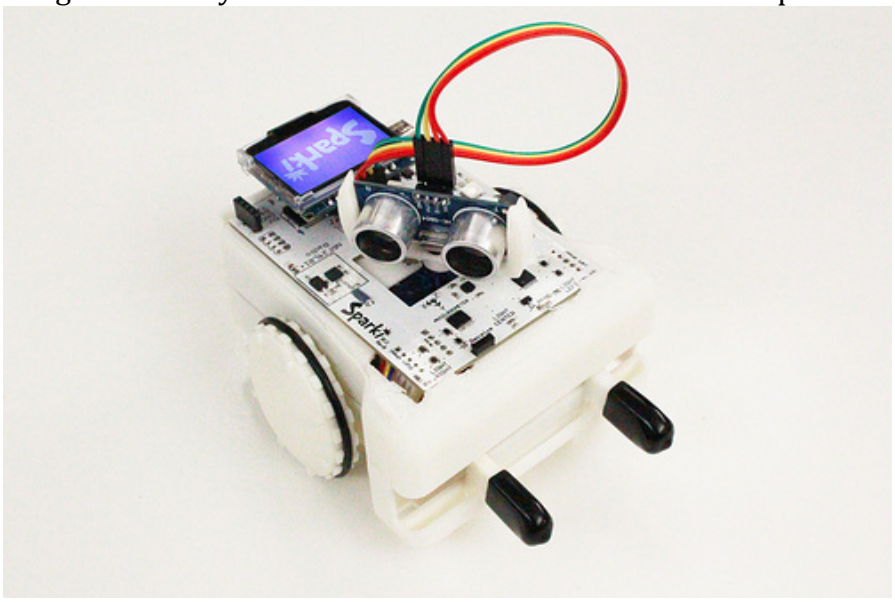
Hexy to dance Thriller, Saturday night Fever, Gangnam Style, crawl, draw, and write.

He still had a day job as an engineer, but when the campaign unexpectedly surpassed the goal of 50 robots to 800, raising $170K, he quit the job. He always jokingly/seriously says that the months to follow were when he "slept by the laser cutters" (and survived 2 laser cutter fires).

When he asked me to join as a co-founder and turn this Kickstarter success into a sustainable business, I said yes immediately. We carved up the company responsibilities into two halves: I would focus on growing the business, scaling operations, marketing, and education programs. He would focus on product development and manufacturing.

Those early months were exciting but also nerve wracking. We believe in keeping our products affordable since one of the reasons why so many people can't access robotics for their home or classrooms is the price. We also wanted to keep our products open-source, as we believe that is the best way for the most number of people to benefit. We made the careful decision to bootstrap instead of take a more traditional VC route, because we wanted to stay true to our educational mission and maintain greater autonomy over the strategy in the early years. Every decision we made had to be right, or nearly right. Truthfully, more than once did we polish off our resumes, unclear if we would be around the next month.

We got our lucky break with our second Kickstarter for Sparki.



Sparki is an Arduino robot that teaches kids and other beginners programming, electronics, and robotics. It can sense light, edges, angles, direction, talk with other Sparkis, write and bring you root beer with its grippers, among other things.

We kept our funding goal modest at $60K so we could front the minimum cost to manufacture. We ended up raising $190K from over 1600 people globally, many of whom are educators.

Because we were now manufacturing on a much larger scale, Joe and I moved from our Boston office to Shenzhen, China this summer to oversee production and sourcing. Shenzhen is a maker's heaven, and a large global hardware community is developing here to collaborate on projects. One of my favorite parts is navigating Chinese business relationships, which are never boring.

Myself (center) and Joe (right) visiting one of our manufacturing partners in Shenzhen

We can't believe how far we've come this past year. Sparki will be piloted in schools from the US to Norway and Taiwan, and we've tripled our global distributor base for Hexy. We've received nods from the New York Times, Fast Company, Wired, Boston Globe, and others. We are so happy to move out of the "polishing our resumes" phase and firmly into the scaling up phase.

But, we still have many strategic questions to tackle. What is the best way to work with schools, afterschool programs, and camps? How should we improve our operations and fulfillment to support our global distributor, customer, and educator base? We have several possible robots to launch in the next year – what should we focus on?

We would love your thoughts. We are seeking advisors to help us answer some of these questions, especially those who have experience in global business development, marketing, and operations. And we are always seeking ideas for people, schools, organizations, or distributors that might be interested in partnering with us.

You can contact me at connie@arcbotics.com. You can see what we are doing at www.arcbotics.com.

Thank you for reading our story.