For Those in Industry, Teaching Bootcamps has Tangible Career Benefits

DAVID ZIGANTO | Former Metis Sr. Data Scientist | Currently Applied Machine Learning Engineer at arturo.ai

Going through a data science bootcamp is an intense experience for everyone involved. Students work at a breakneck pace unparalleled in other learning environments, absorbing new and difficult concepts and skills, and applying them to projects starting as early as week one. All the while, instructors shoulder the hopes and fears of their cohorts as they guide and teach them over the course of 12 weeks.

David Ziganto was one such instructor, working as a Senior Data Scientist at Metis for two years. Coming primarily from industry, when a recruiter reached out about the role, he wasn't sure he'd be the right fit.

"There are many traits that are required to do this job well," said Ziganto. "You have to know going in that there's going to be a steep learning curve, and you can't be afraid of the fact that you don't know everything."

And, he notes, you must love teaching, which is part of what drew him in. In addition to his industry roles at the Department of Defense (where he led multiple facets of a massive scale cybersecurity project) and HAVI (where he was the company's first data scientist, helping to establish, train, and grow the company's nascent Advanced Analytics group), he has more than six years of math and science tutoring under his belt. The opportunity to combine his love of teaching with his passion for data science represented a "perfect symbiosis," he said.

Additionally, he was attracted to the role for reasons beyond the potential challenges and promises of the bootcamp itself.

At Metis, all Sr. Data Scientists who teach the bootcamp get to work on a 12-week passion project after every two quarters during which they can work on any data science project that suits their fancy.

"My first reaction to having a paid sabbatical was: What's the catch?" said Ziganto. "Because nobody offers three uninterrupted months where you get paid to learn."

Throughout his two years at Metis, he was consistently recruited by companies large and small. The most notable are Tesla's autonomous driving division, Apple, Facebook, Microsoft Research, and Amazon.

But there was no catch, and his mind immediately began traveling to the many possibilities surrounding machine learning, his longtime passion. He started daydreaming of ways he could dig deeper into the topic for months at a time.

"From a data science perspective, I was doing machine learning back in grad school before I knew it was machine learning," said Ziganto. "I approached Metis as though it were a mini Ph.D. I had the basics under my belt. I knew the value I was able to bring in industry. In short, I had solid working knowledge of the key concepts, but I wanted to go very, very deep. I wanted this

time not only to deepen my working knowledge but to explore esoteric concepts I hoped to get to someday. "

He left Metis to pursue an opportunity he couldn't turn down at arturo.ai as an Applied Machine Learning Engineer. It's a spinoff originally started by American Family Insurance to explore projects involving deep learning and computer vision, among other cutting-edge technologies.

He says he jumped at the opportunity because "it's still very small, so there's a great opportunity for growth and the ability to steer things. We're poised to grow quickly, and we're doing some really cutting-edge work." In this new role, he's required to write production level code and have a deep working knowledge of machine learning.

"The production level code is something that I learned more on my own, and through my experience in industry.

But the deep knowledge I developed about machine learning was garnered at Metis through my own independent research, by interacting with the other Senior Data Scientists, and frankly, through teaching.

There were many times I'd think I really understood a concept and then a student would ask me something unexpected or come at it from an angle I had never considered. It led to many great learning moments for us both," said Ziganto.

In these ways, teaching a bootcamp can propel an industry career by enabling time for deep study and analysis, and by encouraging interaction with students and other instructors who are constantly questioning, pushing, and coming up with new ways to solve problems. Ziganto's professional development throughout the bootcamp caught the attention of many. Throughout his two years at Metis, he was consistently recruited by companies large and small. The most notable are Tesla's autonomous driving division, Apple, Facebook, Microsoft Research, and Amazon.

"At the time, I was learning so much at Metis, and I wasn't ready to make a move. I knew at some point I'd be ready to go back to industry, though I didn't know what that was going to look like," he said.

A large part of that learning experience at Metis revolved around digging into those machine learning concepts during his passion quarter, starting a blog and writing about data science regularly, expanding his network through speaking engagements (including a presentation before the National Academies of Sciences), and witnessing the oftentimes rapid evolution of bootcamp students.

For example, one of his students wanted to work for a particular company that was well-known for only considering Ph.D.-educated candidates. The student had a bachelor's degree, went through the bootcamp, and got the job. Another was a long-time professional musician who successfully transitioned to a data science career, and yet another originally studied social work, was employed as a nanny for many years,

and then forged her way into a data science role at a non-profit that works to protect children online.

"Seeing the success of my students, cohort after cohort, left me thinking, wow, we're doing something incredible here.," said Ziganto. "Having taught so many amazing students, it's fun to keep in touch and to watch them grow in their nascent careers."

In some cases, when skills and interests align, he'd like a front row seat to watch that growth. He's open to hiring current and future Metis graduates as his new company expands and builds out its applied machine learning team.

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Though now onto his next professional chapter, Ziganto considers his time as a Metis Sr. Data Scientist invaluable and encourages other data professionals to think about teaching a bootcamp as an opportunity for unparalleled growth. But at the same time, he understands that it's not for everyone.

"You have to love teaching. If you don't love teaching, the perks are meaningless", he said. "My advice is to visit one of the bootcamps, sit in for a day, or even a couple days. Get a feel for the culture. Get a feel for what a day looks like. Consider how would you feel standing up in front of incredibly smart people, and knowing a lot but not knowing everything. Can you admit when you don't know something? Will you go back and research it?"

He then added: "If you find your culture aligns with that of Metis, and if you sincerely enjoy teaching and learning things at a very deep level, there really is no other opportunity that comes close."

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