

Ege Sagduyu

This summer I had the privilege of working as a Research Intern at Vitruvian Science, an early stage deep learning startup founded by Markus Beissinger. I knew Markus from his days in the M&T program; in fact, our discussions about his experience and passion with deep learning was the first time I got exposed to this wonderful field. He even gave me advice on what classes to take in order to expose myself more to data science. So when I heard about his startup looking for interns on the M&T listserv, I didn't even hesitate to apply because I knew how great a learning experience this would provide for me, and after the summer, I am glad to say that I was right.

As a Research Intern, my internship consisted of two phases: education and application. Because the field of neural networks and deep learning require a lot of hard-coded prerequisites, Markus and Sherjil (the co-founder) created a list of resources for us to learn all the fundamentals of the field, namely key machine learning algorithms, linear algebra basics and the design process for deep learning algorithms on neural networks. Markus also created test servers for us so we could test our newly-obtained knowledge with actual code. We then focused our attention on OpenDeep, the open-source deep learning framework Vitruvian is currently working on. Specifically, we learned how to apply our newfound knowledge to real deep learning problems using the OpenDeep framework. Because of how extensive it needed to be, this whole process took us almost three quarters of the internship, but by then we finally had a solid foundation we can build upon. We then moved on to the application part of the internship, where we turned our attention to choosing our own projects to implement on OpenDeep, which meant that we were to spend quite some time reading through research papers about state-of-the-art deep learning applications. During this process, we also looked at the existing and potential competitors to OpenDeep and how we could improve open the product to gain a competitive edge.

Even though my personal project did not achieve completion, I learned an incredible amount on this amazing subfield of machine intelligence, and it definitely helped me understand where my personal strengths and weaknesses are when it came to software development and self-learning. Thanks to this great opportunity, I am now gearing my career more towards data science than software engineering, and I know I can't thank the M&T Fellowship Committee enough for making this amazing summer with Vitruvian Science happen.